monograph

CONTEMPORARY ISSUES OF INTERNATIONAL ENVIRONMENTAL LAW

GOLOVKO - MAREČEK (EDS.)



FACULTY OF LAW
Comenius University
Bratislava

CONTEMPORARY ISSUES OF INTERNATIONAL ENVIRONMENTAL LAW

LIUDMYLA GOLOVKO - LUKÁŠ MAREČEK (EDS.)



FACULTY OF LAW
Comenius University
Bratislava

Citation: GOLOVKO, Liudmyla – MAREČEK, Lukáš (eds.): *Contemporary Issues of International Environmental Law*. Bratislava: Comenius University, Faculty of Law, 2025, 488 p.

The edited book was prepared within the framework of, and supported by, project no. VEGA 1/0713/23 - International legal protection of environmental rights - quo vadis?

© Editors

doc. Mgr. Liudmyla Golovko, PhD.

JUDr. Lukáš Mareček, PhD.

Reviewers:

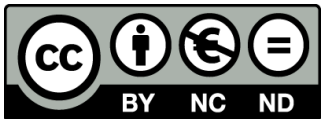
prof. dr. Viktor Ladychenko, PhD.

JUDr. Jiří Zicha, Ph.D.

Issued by Comenius University Bratislava, Faculty of Law in 2025

ISBN (printed): 978-80-7160-769-4

ISBN (online): 978-80-7160-770-0



This publication is distributed under a Creative Commons 4.0, Attribution-NonCommercial-NoDerivatives license. The work may be reused, provided that the authors' names are acknowledged and only for non-commercial purposes. It is not permitted to create any derivative works from the original work or any of its parts, whether by means of adaptation or other modifications.



Content

INTRODUCTION 5

I. PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW 8

1.1. Historical Development and Current Form of the Principles of International Environmental Law 9

1.2. Principle of Intergenerational Equity: The Bodyguard to the Environment 56

II. TRANSBOUNDARY ENVIRONMENTAL HARM AND LEGAL RESPONSIBILITY: STATES AND CORPORATIONS IN INTERNATIONAL LAW 76

2.1. Transboundary Environmental Harm and State Responsibility: Contribution of the International Law Commission 77

2.2. The Liability of European Companies for Environmental Damage in Supply Chains Involving Third Countries 106

2.3. Striking the Right Balance between Property Rights and the Public Interest in the Preservation of Natural Resources in International Law 135

III. THE ROLE OF INTERNATIONAL ORGANISATIONS AND FINANCIAL INSTITUTIONS IN SHAPING INTERNATIONAL ENVIRONMENTAL LAW 160

3.1. Ukraine's Cooperation with International Organisations in the Development of Environmental Law 161

3.2. The Role of Financial Institutions in Advancing International Environmental Protection Standards 183

IV. INTERNATIONAL PROTECTION OF ENVIRONMENTAL HUMAN RIGHTS 215

4.1. Human Rights in the Blue Lagoon: Environmental Rights Protection in Pacific Island State Frameworks 216

4.2. The Child's Right to a Healthy Environment in International Law – From Soft Law to Justiciable Rights 215

4.3. The Right to Food in the Context of Climate Change 264

V. RECONCILING ENERGY LAW AND ENVIRONMENTAL PROTECTION: INTERNATIONAL LEGAL DIMENSIONS 295

5.1. The Right to Clean Energy: The International Law Dimensions 296

5.2. The Energy Charter Treaty and International Environmental Law: Systemic Integration as a Tool for Treaty Reconciliation 315

VI. INTERNATIONAL LEGAL REGULATION OF ENVIRONMENTAL PROTECTION DURING ARMED CONFLICT 351

6.1. International Legal Aspects of Forest Protection from Fires on Radiation-Hazardous Lands Under Martial Law in Ukraine 352

6.2. Legal Regulation of Humanitarian Demining as a Tool for Ensuring Environmental Safety: The Case of Ukraine in the Context of International Law 381

6.3. International Legal Regulation of the Protection of Nuclear Power Plants during Armed Conflict 411

VII. INTERNATIONAL CRIMINAL LAW AND ENVIRONMENTAL PROTECTION 433

7.1. Strengthening Environmental Protection through Criminal Law: A New Legislative Step at the EU and Council of Europe Level 434

7.2. International Criminal Environmental Law 463

CONCLUSION 479

INTRODUCTION

International legal regulation of environmental protection is essential for ensuring sustainable development and preservation of our planet. International environmental law is one of the dynamically developing branches of international law. Currently, there are more than 3,500 international agreements aimed at environmental protection. These agreements cover a wide range of issues, such as atmospheric protection, water resources protection, combating climate change, protecting biological diversity, etc. Nowadays, the attention of the international community has changed from adopting new conventions to finding ways to better implement them. And this is a more complex problem that requires international cooperation, active activities of international organizations, as well as non-governmental organizations and the general public. Given modern environmental problems, the reduction of biodiversity, it is now important to develop practical mechanisms for implementing international legal standards in the field of environmental protection and responsibility for failure to comply with these standards. This is necessary to protect the natural environment, prevent climate change, ensure sustainable development and the rights of future generations.

The foundations of the functioning of international environmental law are manifested through its principles. Principles outline the key features and nature of this branch of law, form an idea of the fundamental provisions on which the system of international legal regulation in the field of environmental protection is based. The study of the principles of international environmental law is important, because they provide an understanding of the basic

principles of regulation and contribute to the effective application of norms in practice.

The study of institutional mechanisms for international cooperation in the field of environmental protection and international legal responsibility for its damage are the topics of key importance, as it allows to understand how states coordinate joint actions to protect the environment and what legal consequences arise in the event of a violation of environmental norms. The means of influence must be effective in order to force states to fully fulfill their obligations.

In recent decades, there has been a strengthening of international legal protection of environmental human rights, reflecting the global awareness of the importance of human right to a safe and healthy environment. The number of decisions of judicial institutions that recognize environmental human rights as an integral part of human rights is growing. This trend indicates the gradual formation of a new paradigm of international law, where environmental protection is becoming a key element in ensuring a decent life of everyone and sustainable development. A

Separate interesting trend that we have observed in recent years is the involvement of children in climate change litigation. The participation of children in this type of cases indicates the public's understanding of the need to ensure the right of future generations to a healthy environment. This trend is important and worth following, since climate change raises the acute issue of ensuring intergenerational justice.

Armed conflicts significantly contribute to environmental pollution. Military operations, movement of heavy equipment, construction of fortifications, mining of

territories, fires, detonation of enterprises with hazardous materials, etc. affect all components of the environment, not to mention the threats that can cause damage to nuclear power plants. All of the above requires proper international legal regulation of environmental protection during armed conflicts. The above mentioned requires high-quality international legal regulation of environmental protection during armed conflicts, both international and non-international. Nowadays, there are many gaps in this area, and those norms that require the prevention of widespread, long-term and severe damage to the environment, unfortunately, as evidenced by current and past armed conflicts, are not observed. A separate important issue is the international responsibility of individuals who have caused significant damage to the environment during armed conflict. Currently, this practice is absent, which also requires changes.

The proposed collective monograph attempts to find a way to find answers on how to improve international legal regulation of environmental protection. It was prepared as part of the project VEGA 1/0713/23 - International legal protection of environmental rights - quo vadis?

I. PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW

1.1. Historical Development and Current Form of the Principles of International Environmental Law

Prof. JUDr. Juraj Jankuv, PhD.

Institute of International Law and European law, Faculty of law, University of Pavol Jozef Šafárik in Košice

juraj.jankuv@upjs.sk

Introduction

The principles of international environmental law can be characterized as rules of conduct contained in some of its sources, which are of a highly general nature, and which arose within its framework. From the perspective of international environmental law, its principles are of particular importance, given the fact that their identification is also used as a way of approaching the content of this otherwise too extensive and fragmented branch of international law.

These principles have historically developed in connection with the customary practice of States, the treaty-based norm-making of States as well as the related case law of international judicial and arbitral bodies, in the given area. Many of them have also found their expression within the framework of a whole range of non-binding soft law instruments adopted by the bodies of international organizations or by major international conferences devoted to the issue of international legal protection of environment.

They can be divided into two groups, namely the principles of international environmental law based on the applicable rules *de lege lata* and the programmatic principles of international environmental law *de lege ferenda*. [1]

The aim of this chapter is the research of the historical development and current form of the above principles, by analysing

[1] ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání.* Praha: C. H. Beck, 2018. p.201.

existing customary rules, treaty rules, soft law rules and relevant case law in the given area, together with an outline of their possible development in the future.

1. Long term stabilized legally binding (*de lege lata*) principles of international environmental law

The most important long term stabilized legally binding principles *de lege lata* principles of international law are the principle of state sovereignty and non-harm to the environment beyond the jurisdiction of states, the principle of protection and conservation of the environment and natural resources, the principle of international cooperation in environmental protection, the principle of prevention, the precautionary principle, the principle of equitable use of natural resources shared by two or more states, the principle of international liability for environmental damage and the principle of sustainable development.

1.1. The principle of state sovereignty and non-harm to the environment beyond the jurisdiction of states

The principle of state sovereignty and non-harm to the environment beyond the jurisdiction of states primarily developed in connection with the jurisprudence of international arbitration and judicial bodies. However, the existence of this obligation in its customary form was already supported by an older arbitration *Trail Smelter case* (1941), [2]in which the Roman law principle *sic utere tuo ut alienum non laedas ("use your property so that you do not harm the property of others"*) was confirmed in relation to acts of states. This principle was later confirmed by the International Court of Justice, in the *Corfu Channel case* (1949)[3] as it is even evident from the views of science. [4]

---

[2] *Trail smelter case* (United States v Canada) 16 April 1938 and 11 March 1941. R.I.A.A. VOLUME III pp. 1905-1982.
[3] *Corfu Channel case (United Kingdom v Albania)* , Judgment of April 9th, 1949. I.C.J. Reports, 1949, p. 4.
[4] POTOČNÝ, Miroslav - ONDŘEJ, Jan. *Mezinárodní právo veřejné, zvláštní část, 6. doplněné a přepracované vydání.* Praha: C. H. Beck 2011. p.181.

The principle of state sovereignty and non-harm to the environment beyond the jurisdiction of states was later precisely formulated in principle 21 of the *UN Declaration on the Human Environment* (1972, further even Stockholm declaration)[5] in the form *"States have the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."*. The principle formulated in this way contains a long-standing customary norm enshrining the sovereign right of states to their natural resources as well as the obligation of the state to be vigilant in relation to all activities on its national territory to prevent damage to the environment beyond its borders.

This principle consists of two closed principles. The first one is the principle of permanent sovereignty over natural resources has been reaffirmed in many multilateral agreement, international declarations, and resolutions.[6] As for the other soft law documents we can mention the *Resolution "Permanent sovereignty over natural resources"* (1962) [7] of the United Nations General Assembly (further even UNGA). UNGA declared in this document that *"the rights of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development and of the wellbeing of the peoples concerned"*. As for binding treaties an example is the *Convention on Biological Diversity* (1992),[8] which anchored in its Article 15(1) formulation *"recognizing the sovereign rights of states over their natural resources..."*.

---

[5] *Declaration of the United Nations Conference on the Human* Environment (1972). U.N. Doc. A/Conf.48/14/Rev. 1(1973).
[6] ARUGU, Obugheni William - HALLIDAY, Chidi. Critical Appraisal of Principles and Concepts of International Environmental Law. In: *University of Port Harcourt Journal of Private Law*. Special Edition, Vol 3, June 2018. p.118.
[7] Resolution „*Permanent sovereignty over natural resources*." UNGA Resolution 1803 (XVII) December 14 1962.
[8] *Convention on Biological Diversity (1992). Rio de Janeiro, 5 June 1992,* 1760 UNTS 79.

The principle of non-harm to the environment, was confirmed by the International Court of Justice (further even ICJ) in several other cases, namely in its advisory opinion *Legality of the Threat or Use of Nuclear Weapons* (1996)[9] and in the judgment in the case of the *Gabčíkovo-Nagymaros Project* (1997),[10] in which it identified the aforementioned obligation as a rule of customary law of a fundamental nature.

This approach was later confirmed in ICJ case *Pulp Mills on the River Uruguay* (2010).[11] In this case ICJ confirmed that the duty to prevent significant harm to the environment is an obligation to act with due diligence. ICJ has explained, that due diligence *"entails not only the adoption of appropriate rules and measures, but also a certain level of vigilance in their enforcement and the exercise of administrative control"*. The customary character of the rule mentioned ICJ recently confirmed even in its advisory opinion *Obligations of States in Respect of Climate Change* (2025).[12] Ultimately, it can therefore be stated that the entire principle, including the obligation of vigilance, is part of binding international customary normativity. [13]

1.2. The principle of protection and conservation of the environment and natural resources

The principle of protection and conservation of the environment and natural resources represents a generalization of provisions aimed at protecting and preserving the environment contained in several sectoral international treaties and non-binding documents of international environmental law.

---

[9] *Legality of the Threat or Use of Nuclear Weapons,* Advisory Opinion, I. C.J. Reports, 1996, p. 226

[10] *Gabčíkovo-Nagymaros Project* (Hungary v Slovakia). Judgment of September 25th, I. C. J. Reports, 1997, p. 7.

[11] *Pulp Mills on the River Uruguay* (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010 (I), p. 56, para. 101

[12] *Obligations of States in Respect of Climate Change.* International Court of Justice. Advisory opinion of 23 July 2025. Available as for 4 August 2025 at the official ICJ webpage https://www.icj-cij.org/case/187.

[13] ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání.* Praha: C. H. Beck, 2018. p.202.

Provisions enshrining this undertaking was implemented in several binding treaties of international environmental law as is the *Convention on Wetlands of International Importance, Especially as Waterfowl Habitat* (1971),[14] the *Convention on the Protection of the World Heritage and Natural Heritage* (1972),[15] the *UN Convention on the Law of the Sea* (1982),[16] the *Convention on Biological Diversity* (1992) and the *Framework Convention on Climate Change* (1992).[17]

From the non-binding normativity, it is possible to mention the enshrining of this principle within Principle 2 of the Stockholm declaration which reads: *"The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate."*.

Formulation supplementing this provision we can find within Principle 4 of the UN Declaration on Environment and Development (1992, further even Rio Declaration),[18] which reads as it follows: *"In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it. "*.

In the case of this principle, it is not a generalization of customary rules of international law, but rather a more general

[14] *Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971).* 996 UNTS 245.
[15] *Convention for the Protection of the World Cultural and Natural Heritage (1972).* Paris, 16 November 1972, 27 UST 37, 11 ILM 1358 (1972).
[16] *United Nations Convention on the Law of the Sea (1982). Montego Bay, 10 December 1982,* 1833 UNTS 397.
[17] *United Nations Framework Convention on Climate Change* (1992). New York, 9 May 1992, 1771 UNTS 107.
[18] *United Nations Declaration on Environment and Development* (1992). UN Doc. A/CONF.151/26 (Vol. I). 12 August 1992.

expression of the content of treaty rules.[19] However, it is the principle firmly enshrined in the treaty form.

1.3. The principle of international co-operation in environmental protection

The principle of international cooperation in environmental protection, like the previous one, represents a generalization of provisions aimed at protecting and preserving the environment contained in several sectoral international treaties of international environmental law. In a general position, it was enshrined in Principle 24 of the Stockholm Declaration and Principle 7 of the Rio Declaration, but it also appears in binding conventions such as the *UN Convention on the Law of the Sea* (1982) and the *Framework Convention on Climate Change* (1992) or various regional and bilateral conventions.[20]

The subject of co-operation may be scientific research, technology transfer, exchange of information and knowledge, and mutual consultations. A special aspect of this co-operation may be co-operation in a critical or urgent situation. Such a rule is enshrined, for example, in principle 18 of the Rio Declaration and includes both the obligation to aid in eliminating or mitigating the consequences of a disaster or accident.[21]

There is even the international case law confirming customary form of this principle. The latest one is the mentioned advisory opinion *Obligations of States in Respect of Climate Change* (2025). ICJ in this case stated that *"the duty to co-operate in so far as it finds expression in many binding and non-binding instruments relating specifically to the environment. The duty to co-operate is a central obligation under the climate change treaties and other environmental treaties…".*

[19] ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání.* Praha: C. H. Beck, 2018. p.203.
[20] See ŠTURMA, Pavel. Zásady mezinárodního práva životního prostředí. In: *Acta Universitatis Carolinae Iuridica*, č.2-3, 2002. p.15.
[21] Ibid, p.15

Under ICJ the other examples of anchoring this principle include Principle 24 of the Stockholm Declaration and Principle 7 of the Rio Declaration, which both recognize co-operation as an essential element in the protection of the environment. In view of the related practice of States, the ICJ considered that the duty of States to co-operate for the protection of the environment is a rule whose customary character has been established.

The same opinion we can find in advisory opinion of International Tribunal for the Law of the Sea namely in the case *Climate Change* (2024)[22] and in the *MOX Plant Case* (2001).[23]

1.4. The principle of prevention

The principle of prevention, according to the poetically conceived opinion of Pavel Šturma, runs like a *"red thread"* through the entire international environmental law. According to Pavel Šturma, it is one of the basic methods of legal regulation, which has a clear priority in this branch of international law. [24]

The principle contains two separately conceived institutes, namely the institute of continuous monitoring of the state of the environment and the institute of carrying out a preliminary assessment of the impact of planned activities on the environment.

The existence of the principle of prevention and both mentioned institutes, which are part of it, is indisputable, contained in international law in both treaty and customary forms. The treaty enshrinement of this principle is confirmed by several treaties in the field of international environmental law. Both institutes are contained, for example, in the *UN Convention on the Law of the Sea* (1982) and the *Framework Convention on Climate Change* (1992).

---

[22] *Climate Change*, Advisory Opinion, ITLOS Reports 2024, p. 110, para. 296.
[23] *MOX Plant* (Ireland v. United Kingdom), Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001, p. 110, para. 82).
[24] ŠTURMA, Pavel. Zásady mezinárodního práva životního prostředí. In: *Acta Universitatis Carolinae Iuridica*, č.2-3, 2002. p.16.

The customary nature of the given principle was definitively confirmed by the judgment of the International Court of Justice in the *Pulp Mills on the River Uruguay case* (2010).

1.5. The precautionary principle

The precautionary principle is closely related to the principle of prevention. In its best-known form, it was formulated in principle 15 of the Rio Declaration as it follows: *"States should, in accordance with their capabilities, adopt precautionary approaches to protect the environment. Where there is a threat of serious or irreparable damage, lack of scientific certainty shall not be used as a pretext for postponing effective measures to prevent environmental damage."* This principle later appeared in most of the new, subsequently adopted international treaties in the field of environmental protection[25] and is a generalization of their provisions in this area. In the theory of international law, the view is gradually being promoted that this principle has in the meantime become part of customary normativity. [26]

According to other opinions, its definitive establishment as a customary rule of international law is hindered by its inconsistent interpretation and economic implications for states and business entities. The principle is interpreted in practice in two ways. The first interpretation corresponds to the wording of principle 15 of the Rio Declaration and assumes that lack of scientific certainty must not lead to the postponement of measures for environmental protection. This way of interpretation was confirmed in the case of the *Gabčíkovo-Nagymaros Project* (1997). The second, significantly more radical way of interpretation is based on the approach that a state must refrain from activities that could cause damage to the environment even if existing scientific means do not

[25] ŠTURMA, Pavel. Zásady mezinárodního práva životního prostředí. In: *Acta Universitatis Carolinae Iuridica*, č.2-3, 2002. p. 21.
[26] MCINTYRE, Owen - MOSEDALE, Thomas. The Precautionary Principle as a Norm of Customary International Law. In: *Journal of Environmental Law*, Volume 9, Issue 2, 1997. p. 241.

allow to demonstrate to what extent these activities could be harmful. [27]

Such a concept also results in the burden of proof being shifted to the State, which is the alleged source of the damage, that it has taken all conceivable preventive measures, regardless of their necessity justified by current scientific knowledge. [28] This way of interpreting the precautionary principle was used by the International Tribunal for the Law of the Sea (ITLOS) in the *Southern Bluefin Tuna case* (1999). [29] ITLOS in this case resolved a dispute between Australia and New Zealand, on the one hand, and Japan, on the other, concerning the application of the *Convention for the Conservation of Southern Bluefin Tuna* (1993), [30] which was concluded between the above-mentioned states. Commission for the Conservation of Southern Bluefin Tuna created under this convention established the total allowable catching limits for the Parties. Japan increased this limit on the grounds that catching above the limit is of an experimental nature. Australia and New Zealand disagreed with this approach, invoking the precautionary principle. ITLOS granted the plaintiff states and applied a broader concept of the precautionary principle, in the spirit of which it shifted the burden of proof of taking all conceivable preventive measures, regardless of their necessity justified by current scientific knowledge, to Japan[31] and adopted a provisional measure in the matter, the purpose of which was to stop overfishing by Japan. ITLOS also confirmed that the precautionary principle is part of general customary law. [32]

---

[27] ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání.* Praha: C. H. Beck, 2018. p.207.
[28] ŠTURMA, Pavel et al. *Mezinárodní právo životního prostředí, I. část (obecná).* Beroun: IFEC – Iveta Rozkotová, 2004. p.96.
[29] *Bluefin Tuna Cases*, New Zealand v Japan, Australia v Japan, Order, Request for Provisional Measures, ITLOS Cases No 3 and 4, (ITLOS 1999), 27th August 1999, International Tribunal for the Law of the Sea (ITLOS). http:// www.itlos.org.
[30] *Convention for the Conservation of the Southern Bluefish Tuna (1993).* UNTS 1994, Vol. 1819, 1-31155
[31] KAZHDAN, Daniel. Precautionary Pulp: Pulp Mills and the Evolving Dispute Between International Tribunals over the Reach of the Precautionary Principle. In: *Ecology Law Quarterly*, Vol.38,2011. p. 534.
[32] Ibid. p. 533.

1.6. The principle of equitable utilization of natural resources shared by two or more states

The principle of equitable utilization of natural resources shared by two or more states represents a generalization of rules concerning specific conditions of utilization and associated protection of natural resources used by two or more states (shared natural resources). Due to the nature of the matter, this usually concerns the use of international watercourses. The basic idea on which this principle is based is the so-called community of interests between several states. [33]

The above principle was confirmed in the judgment of the Permanent Court of International Justice in the *Territorial Jurisdiction of the International Commission of the Oder River case* (1929) [34] and in the arbitration award in the *Lake Lanoux case* (1957). [35] This principle arose at that time from bilateral agreements on the use of rivers and lakes. Its existence in treaty form was also confirmed by the International Court of Justice in the *Gabčíkovo-Nagymaros Project case* (1997). [36]

This principle was codified even in Article 5 of the *Convention on the Law of the Non-Navigational Uses of International Watercourses* (1997). [37] In this article, the convention states that riparian states must use an international watercourse in their territories in an equitable and rational manner. This rule presupposes perfect equality of all Riparian states throughout the course of the river, excluding any preferential privilege of any Riparian state. [38] Riparian States must use and develop the

[33] ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání.* Praha: C. H. Beck, 2018. p.205.
[34] Ibid, p.205.
[35] *Lake Lanoux Case*. R.I.A.A. (1957), vol. XII, s.281 a nasl.
[36] *Gabčíkovo-Nagymaros Project*, Hungary v Slovakia, Judgment, I. C. J. Reports 1997, s. 7 a nasl.
[37] *Convention on the Law of the Non-navigational Uses of International Watercourses* (1997). UN Doc A/RES/51/229 (1997).
[38] GURUSWAMY, Lakshman - ZEBROWSKI LEACH, Mariah. *International Environmental Law in a Nutshell*. 5th Edition. St. Paul: West Academic Publishing, 2017. p. 586.

watercourse primarily with a view to its optimal and sustainable use and benefit, considering the interest of the State concerned, consistent with adequate protection of the watercourse. [39] This principle later, according to Joseph Delapenna, also became a customary principle. [40]

1.7. The principle of international responsibility (liability) for environmental damage

The principle of international responsibility (liability) for environmental damage has historically developed, following the case law indicating the need for compensation for environmental damage caused outside their jurisdiction, since the 1940s, as evidenced by the often-cited arbitration case of *Trail Smelter* (1941). However, this case law did not provide a precise answer to the question of what type of responsibility or liability should be applied in each case.

By the time, in international law developed itself two specific types of responsibility for subjects of international law - responsibility for unlawful conduct and liability for harmful consequences of activities that are not prohibited by international law. Within the liability for harmful consequences of activities that are not prohibited by international law, there are specific subtypes, namely absolute liability and strict liability. As a specific subtype of liability for harmful consequences of activities that are not prohibited by international law, internationally unified civil liability has also developed.

This principle was implemented within the framework of international environmental law following the Stockholm Declaration. [41] Principle 22 of this declaration states that States

---

[39] Ibid, p.586.
[40] See DELLAPENNA, Josph William. The Customary International Law of Transboudary Fresh Waters. In*: International Journal of Global Environmental Issuess*, Vol. 1, Nos.3/4, 2001. pp. 271-272 and GURUSWAMY, Lakshman - ZEBROWSKI LEACH, Mariah. *International Environmental Law in a Nutshell.* 5th Edition. St. Paul: West Academic Publishing, 2017. p. 586.
[41] *Declaration of the United Nations Conference on the Human Environment (1972).* U.N. Doc. A/Conf.48/14/Rev. 1(1973).

shall cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

The English term *"liability"* indicates that it should not be about the responsibility of states for unlawful conduct, but about responsibility for the harmful consequences of activities that are not prohibited by international law. However, the specific implementation of the content of this principle was consciously left to the further international legal practice of states.[42]

Impetus for the development of liability was the adoption of Rio Declaration. Essentially, Principle 13 of this declaration stipulates that *„States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also co-operate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction. "*.

In connection with the above-mentioned documents and relevant practice of states, it is possible to apply both responsibility for unlawful conduct and liability. The responsibility for unlawful conduct of subjects of international law was codified in the *Draft Articles on Responsibility of States for Internationally Wrongful Acts with Commentaries* (2001),[43] *Draft Articles on Responsibility of International Organizations* (2011)[44] and as for the States even in customary form. This type of responsibility has a subjective nature and assumes a violation of an international legal obligation by the subject of international law and its attribution to that

[42] ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání.* Praha: C. H. Beck, 2018. p.206.
[43] *Draft articles on Responsibility of States for Internationally Wrongful Acts*. UN Doc. A/RES/56/85 (2001)
[44] *Draft Articles on Responsibility of International Organizations*. UN Doc. A/CN.4/L.778 (2011).

subject. Both documents were prepared by the International Law Commission.

Liability for harmful consequences of activities that are not prohibited by international law codified in the *Draft articles on Prevention of Transboundary Harm from Hazardous Activities (*2001)[45] and in *Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, with Commentaries* (2006).[46] Both the documents were prepared by the International Law Commission. This type of liability has an objective character and the presumed liability of the subject regardless of fault.

The liability for harmful consequences of activities that are not prohibited by international law was regulated even in several binding international treaties enshrining liability of States and domestic operators of hazardous activities. The regulation of State liability in binding treaty form is enshrined, for example, in the *Convention on International Liability for Damage Caused by Space Objects* (1972).[47]

The liability of domestic operators of hazardous activities is enshrined in international agreements relating to the field of nuclear energy and environmental protection in terms of civil liability towards domestic operators of these activities, with possible subsidiary liability of the state. These liability concepts are contained for example in the *Paris Convention on Third Party Liability in the Field of Nuclear Energy* (1960),[48] the *Vienna Convention on Civil Liability for Damage Caused by Nuclear*

[45] *Draft articles on Prevention of Transboundary Harm from Hazardous Activities* (2001). Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10 (A/56/10).
[46] International Law Commission, *Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities*, *with Commentaries*, Yearbook of the International Law Commission, Vol. II, Part Two, 2006, p. 115.
[47] *Convention on International Liability for Damage Caused by Space Objects* (1972). 961 UNTS 187
[48] *Paris Convention on Third Party Liability in the Field of Nuclear Energy* (1960). 956 UNTS 263.

Incidents (1963),[49] the *Brussels Convention on Liability of Operators of Nuclear Ships* (1962),[50] *International Convention on Civil Liability for Oil Pollution Damage* (1969)[51] or the *Brussels Convention on Civil Liability in the Field of Maritime Transport of Nuclear Materials* (1971).[52] The first mentioned two agreements regarding liability for nuclear damage as amended also foresee possible subsidiary liability of the state.

Within the framework of liability for harmful consequences of activities that are not prohibited by international law, in the context of environmental damage there are also special subspecies, namely absolute liability and strict liability. As a specific subspecies of responsibility for harmful consequences of activities that are not prohibited by international law, civil liability, unified under international law, has also developed in the context of environmental damage.

As it was shown above, the principle of international responsibility (liability) for environmental harm is evidently a principle *de lege lata*. As for the responsibility of subjects of international law exists in customary form at least in relation to States. The liability is anchored in a treaty form as for States and domestic operators. Customary rules of general international law have not been formed that would establish the liability for harmful consequences of activities not prohibited by international law. Similarly, there are no customary rules that would establish liability for harmful consequences of activities not prohibited by international law by entities other than States.

[49] *Vienna Convention on Civil Liability for Nuclear Damage (1963)*. 1063 UNTS 265
[50] *Brussels Convention on the Liability of the Operators of Nuclear Ships* (1962). 57 AJIL 268.
[51] *International Convention on Civil Liability for Oil Pollution Damage* (1969). 973 UNTS 3.
[52] *Convention Related to Civil Liability in the Field of Maritime Carriage of Nuclear Material* (1971). 974 UNTS 255.

1.8. The principle of sustainable development

The principle of sustainable development began to develop in international law following the report entitled *"Our Common Future"* of the World Commission on Environment and Development (the Brundtland report). [53] In this report, the Commission proposed that environmental problems on a global scale be solved by a new type of economic development, which was called sustainable development, which should be such a development of human society that can meet the needs of the present generation without jeopardizing the needs of future generations or being at the expense of other countries.

It therefore includes aspects of solidarity within one current generation of humanity at the national and international levels, as well as intergenerational solidarity in relation to the interests of future generations of mankind. [54]

This principle as invented in the scope of the Brundtland report (1987) was implemented into international environmental law and international development law by plethora of non-binding soft law documents, declarations of states, resolutions of international organizations, and, crucially, international multilateral treaties. The precise international legal enshrinement of this principle is evident mainly in principles 3 and 4 of the *UN Declaration on Environment and Development* (1992) or *Declaration of the Earth summit* (1997), but also in newer international treaties in the field of environmental protection, such as the *Convention on Biological Diversity* (1992) or the *Framework Convention on Climate Change* (1992).

[53] Report *„Development and International Economic Co-operation: Environment“.* UN Doc. A/42/427, 4 August 1987,
[54] ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání.* Praha: C. H. Beck, 2018. p.207.

The science of international law reacted to this development since the second part of 1980s of the twentieth century.[55]

The relevance for international law of sustainable development has been acknowledged by judicial or arbitral decisions. Sustainable development was recognised as an international legal term by the ICJ in the *Project Gabčíkovo - Nagymaros case* (1997), and as having practical legal consequences by the WTO Appellate Body in the *Shrimp/Turtle case* (1998). Since then, other cases have sought to give effect to the concept, including the *Iron Rhine case* (2005) and the ICJ decision in *Pulp Mills case* (2010).[56]

As the case law of international judicial and arbitral bodies shows, the principle of sustainable development is undeniably a very powerful hermeneutical tool in the hands of judges, as it can be used to weigh on the interpretation of existing norms. Having resort to sustainable development in the interpretation process may not only legitimize a dynamic interpretation of treaty rules, but in certain circumstances lead the judge to go as far as to revise the treaty. These outcomes are the result of the integration of, generally, environmental norms into a treaty that did not necessarily take them into account, as well as of the balancing exercise between conflicting norms and interests that sustainable development requires. Sustainable development's interpretative function is thus particularly significant for the power and degree of liberty it grants judges. [57]

Judges and arbitrators have not gone so far as to clearly recognize its customary nature, although they came close to it on one occasion. Namely, the status of principle of sustainable development as customary rule is directly supported by an arbitral

[55] SINGH, Naghendra. Right to Environment and Sustainable Development as a Principle of international Law. In: *Studia Diplomatica*. Vol. 41, No. 1 (1988), pp. 45-61.
[56] SANDS, Philippe - PEEL, Jacqueline - FABRA, Adriana - MACKENZIE, Ruth. *Principles of International Environmental Law. Third Edition*. Cambridge: Cambridge University Press, 2012, pp. 9-10.
[57] See BARRAL, Virginie. Sustainable Development in International Law: Nature and Operation of an Evolutive Legal Norm. In: *The European Journal of International Law*, No.2, Vol. 23, 2012, p.398.

decision in the *Iron Rhine case* (2005). Virginie Barral in this sense states, that there is general state practice as for the principle of sustainable development shown by great number of resolutions, declarations, gentlemen's agreements, programmes of action, international and national judicial decisions, national legislation, and conventional provisions referring to it, at least in so far as these formulations are in the form of sufficiently similar legal rules. Clearly provisions relating to sustainable development vary sometimes greatly from one instrument to another. However, there is still an overarching coherence between them as sustainable development is almost always defined as an objective to aspire to. These many legal acts also constitute useful precedents in the formation of a general practice relating to this *opinio juris*, to the extent that states' conduct is in line with them. [58]

Because of these reasons it is logical to agree with the view of Virginie Barral that, despite clear judicial confirmation, it can be concluded that the principle of sustainable development, as an objective, already constitutes a principle of customary law, even if this principle is a very general one, with a high degree of abstraction and which requires case by case substantiation.[59]

International environmental law science identified even related international environmental law customary principles supporting application of this principle. These principles include the precautionary principle and the environmental impact assessment as the most important means of contribution the practical application the principle of sustainable development.

The founding international law texts, and particularly the Rio Declaration (1992) and the Declaration of the Earth summit (1997), lay out the core conceptual content of sustainable development. Taking in account provisions of these documents and approaches of the international law science, under our opinion, the conceptual

[58] Ibid, p.388.
[59] Ibid, p. 388.

content of the principle of sustainable development contains elements as it follows:

1 *The principle of intergenerational equity* based at the idea of the need to preserve natural resources for the benefit of future generations;

2 *The principle of intragenerational equity or equitable use* coming up from the idea of the *"equitable"* use of natural resources, which implies that use of natural resources by states must take account of the needs of own generation as internally (within one national society) as internationally (between developed and developing states);

3 *The principle of sustainable use* based on the aim of exploiting natural resources in a manner which is *"sustainable", "prudent", "rational", "wise" or "appropriate"* ;

4 *The principle of integration* which stipulates the need to ensure that environmental considerations are integrated into economic and social development plans, programmes and projects, and that economic and social development needs are taken into account in applying environmental objectives. By the other words the sustainable development has three levels which should by coordinated to each other – environmental, economic and social level.

The later accepted non-binding United Nations Millenium Summit Declaration (2000) fixed Millenium Development Goals to supplement concept of the sustainable development by practical goals. These goals were changed by the other non-binding Resolution "Agenda 2030" (2015) which fixed new version of so-called Sustainable Development Goals (SDGs). It seems that the international community has guidelines how to realize the principle of sustainable development in practice. However, if we will analyse the SDGs one by one it is not sure if all of them are realistic to be implemented to the practice.

2. Recently stabilized legally binding (*de lege lata*) principles of international environmental law

Some of the *de lege lata* principles of international environmental law were established by international law science only recently. The academic debate about their inclusion among the principles *de lege late* may still be ongoing. These principles include the *"polluter pays"* principle and the principle of human right to the environment.

2.1. The *"polluter pays"* principle

The *"polluter pays"* principle was until recently considered by science to be a principle *de lege ferenda*.[60] The *"polluter pays"* principle, or in other words, the principle of compensation for damage to polluters, is a long-standing economic and legal principle firstly recognized at the level of the Organization for Economic Cooperation and Development (OECD) in 1972 in the scope of the three recommendations of the Council of the Organization for Economic Co-operation and Development.[61]

It is a principle that transfers the costs of environmental protection from the level of states to the actual polluters who, through their production or actual economic activity, burden the environment.

Later this principle was recognized even within the legal norms of European Union law in the scope of the Article 191 section 2, of the *Treaty of European Union* (1992)[62] in the form *"Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that*

[60] ŠTURMA, Pavel. Zásady mezinárodního práva životního prostředí. In: *Acta Universitatis Carolinae Iuridica*, č.2-3, 2002. p. 24.
[61] *OECD Recommendation on Guiding Principles concerning International Economic Aspects on Environmental Policies* (May 26, 1972); *OECD Recommendation on the Implementation of the Polluter Pays Principle* (November 14, 1974); *OECD Recommendation on the Application of the Polluter Pays Principle to Accidental Pollution* (July 23, 1989).
[62] *Treaty on European Union. OJ C 191, 29.7.1992, pp. 1–112*

environmental damage should as a priority be rectified at source and that the polluter should pay.“.

At the universal international legal level, this principle has so far been enshrined in general form within the framework of principle 16 of the Rio Declaration in the form *“national authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.”*. This wording, reflecting the definition provided by the OECD Recommendations, is rather soft than absolute and obligatory. [63]

This principle has been incorporated numerous environmental treaties, particularly those on marine pollution. These conventions include e.g. the *Convention on the Protection of the Marine Environment of the Baltic Sea Area* (Helsinki Convention) firstly adopted in 1974 and changed in 1992, the *International Convention on Oil Pollution Preparedness, Response and Co-operation* (1990),[64] adopted by the International Maritime Organisation, the *Convention on the Transboundary Effects of Industrial Accidents* (1992),[65] adopted by the United Nations Economic Commission for Europe,[66] *Convention on the Protection and Use of Transboundary Watercourses and International Lakes*

[63] CHEN, Chen-Yu. The Liability and Compensation Mechanism under International Marine Environmental Law. Adopting the Polluter Pays Principle to Control Marine Pollution under International Law from the Aspect of International Cooperation. In: SHREIBER, Harry (ed.) *Proceedings from the 2012 LOSI-KIOST Conference „Securing the Ocean for the Next Generation“. Papers from the Law of the Sea Institute, UC Berkeley–Korea Institute of Ocean Science and Technology Conference, held in Seoul, Korea, May 2012. p.12.*
[64] *International Convention on Oil Pollution Preparedness, Response and Co-operation* (1990). 1891 UNTS 78.
[65] *Convention on the Transboundary Effects of Industrial Accidents* (1992). 2105 UNTS 457
[66] Ibid, p.12.

(1992),[67] *Stockholm Convention on Persistent Organic Pollutants* (2001),[68] etc.[69]

The *Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters* (2003, not in force)[70] to the *Convention on the Protection and Use of Transboundary Watercourses and International Lakes* (1992) and to the *Convention on the Transboundary Effects of Industrial Accidents* (1992) in its preamble refers to the polluter pays principle as a general principle of international environmental law accepted also by the Parties to the above mentioned Conventions from 1992 amended by this protocol.

Later, the International Law Commission mentioned this principle in the *Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, with Commentaries* (2006),[71] by commenting Principle 3 devoted to topic of the prompt and adequate compensation to victims of transboundary damage.[72]

Under these conventions and documents the polluter pays principle consists of two component elements, namely the right to

---

[67] *Convention on the Protection and Use of Transboundary Watercourses and International Lakes* (1992).1936 UNTS 269.
[68] *Stockholm Convention on Persistent Organic Pollutants* (2001). 2256 UNTS 119.
[69] For more detailed survey of these conventions see FITZMAURICE, Malgosia - WONG, Megan - CRAMPIN, Joseph. *International Environmental Law. Texts, Cases and Materials*. Cheltenham, Northampton: Edward Elgar Publishing, 2022. pp. 92-95. ISBN 978-1-78536-791-5 and document *International Law Commission, Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, with Commentaries*, Yearbook of the International Law Commission, Vol. II, Part Two, 2006. p.74.
[70] *Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes and to the 1992 Convention on the Transboundary Effects of Industrial Accidents*. UN Doc. ECE/MP.WAT/11, New York & Geneva, 2004., 50 p.
[71] *International Law Commission, Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, with Commentaries*, Yearbook of the International Law Commission, Vol. II, Part Two, 2006.
[72] Ibid. p. 74.

equal access to national remedies for determining the illegality of domestic and transboundary pollution and civil liability regimes, which have been used in dealing with the pollutions resulting from nuclear power, organic or the other pollutants and oil spills.

Due to this more precise normative content and even numerous international universal and regional treaties including this principle, we can formulate the opinion that this principle was shifted to the group of *de lege lata* principles of international environmental law. However, this principle exists only in the treaty form. There is a general view that this principle is not a part of international customary law.[73]

2.2. The principle of the human right to the environment

The principle of the human right to the environment was first enshrined in Principle 1 of the *UN Declaration on the Human Environment* (1972).[74] In the spirit of this provision, *"Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations."*

On the other hand, there are opinions of the international law science, that this formulation recognizes the fundamental right of man to freedom, equality and adequate conditions of life, but not a right to a healthy environment *per se*.[75] In our opinion, however, this right can be identified by a broader interpretation of the given provision, or its enshrining in an indirect form can be established.

However, the enactment of this form of substantive human right to environment in the Declaration of the Stockholm Conference on

[73] FITZMAURICE, Malgosia - WONG, Megan - CRAMPIN, Joseph. *International Environmental Law. Texts, Cases and Materials*. Cheltenham, Northampton: Edward Elgar Publishing, 2022. pp. 90-91.
[74] *Declaration of the United Nations Conference on the Human Environment*, U.N. Doc. A/Conf.48/14/Rev. 1 (1973).
[75] BAUMRUK, Petra. Linking Human Rights and the Environment: Is There a Human Right to a Healthy Environment? In: *Czech Yearbook of International Public & Private Law,* Vol. 15, 2024. p.129.

the Human Environment (Stockholm declaration) has influenced lately adopted international public law normativity and even the case law of the international quasi-judicial and judicial bodies.[76]

This right was implemented in various other international conventions and instruments adopted within the framework of the United Nations, conferences organized by the United Nations, international organizations associated to the United Nations as well as in conventions and documents of international regional organizations.[77]

The science of international law started to react to this development in the second part of 1980s of the twentieth century.[78]

As for the binding conventions at the UN level, the right to environment was enshrined by the *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* (1998, the Aarhus Convention), which was adopted by the UN Economic Commission for Europe.[79] For the first time, substantive human right to environment has been explicitly recognized in the international convention in the operative provisions of the international legal instrument at the European level.[80] The need to implement the right to environment resonate even in the scope of international legal arrangement on climate change, indirectly. The member states of the *Paris Agreement* (2016),[81] amending a supplementing the *United Nations Framework Convention on Climate Change*

[76] JANKUV, Juraj. Enshrining Human Right to Environment in International Law and European Law: Successful Story or Never-Ending story? KLUČKA, Ján, SISÁK, Ľuboslav - GAZDAGOVÁ, Laura. (eds.): *20 rokov v Európskej únii z pohľadu práva a éra udržateľnosti.* Košice: ŠafárikPress, 2024. pp.96.
[77] Ibid, p. 96.
[78] SINGH, Naghendra. Right to Environment and Sustainable Development as a Principle of International Law. In: *Studia Diplomatica*. Vol. 41, No. 1 (1988), pp. 45-61.
[79] *Convention on Access to Information, Public Participation on Decision-making and Access to Justice in Environmental Matters* (1998), United Nations, Treaty Series, vol. 2161, p. 447.
[80] DE JANT-PONS, Maguelonne - PALLEMAERTS, Marc. *Human Rights and the Environment*. Strasbourg: Council of Europe, 2002, p.16-17.
[81] *Paris Agreement* (2016), 3156 UNTS 79.

(1992),[82] included to its preamble provision of the human right character which reads *"Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights…"*. Very similar provisions as the Aarhus convention contain *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean* (2018). [83]

As for non-binding instruments we have to mention UN Human Rights Council landmark *Resolution 48/13 "The human right to a clean, healthy and sustainable environment"*.[84] The existence of this right as a human right was then once more formally recognized definitively in *Resolution no. 6/300 of the UN General Assembly* dated July 28, 2022, entitled "*The human right to a clean, healthy and sustainable environment"* in the form of *"the right to a clean, healthy and sustainable environment"*.[85]

The right to the environment was also enshrined at the regional level within the framework of binding regional international human rights conventions of international regional organizations. As for these conventions we can mention the *African Charter on Human and Peoples' Rights* (1981, hereinafter referred to as the African Charter),[86] adopted within the framework of the African Unity Organization, later transformed into the African Union, binding *Additional Protocol to the American Convention on Human Rights in the area of Economic, Social, and Cultural*

[82] *United Nations Framework Convention on Climate Change* (1992), 1771 UNTS 107.
[83] *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean* (2018). UNTS, Vol. 3388C.N.195.2018. TREATIES-XXVII.18 of 9 April 2018 (Opening for signature)
[84] Resolution adopted by the Human Rights Council on 8 October 2021, 48/13. *"The human right to a clean, healthy and sustainable environment"*.
[85] Resolution adopted by the General Assembly on 28 July 2022 No. 76/300 *„The human right to a clean, healthy and sustainable environment"*. UN Doc. A/RES/76/300 (1 August 2022).
[86] *African Charter on Human and Peoples' Rights (1981)*, OAU Doc. CAB/LEG/67/3 rev. 5, 21 I.L.M. 58 (1982).

Rights (1988),[87] to the *American Convention on Human Rights (1969)*,[88] which was adopted within the framework of the Organization of American States, the *Arab Charter on Human Rights* (2004), [89] binding international treaty adopted in the scope of the League of Arab States. Multilateral not yet binding *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean* (2018),[90] includes this right as well.

The process of constitutionalising of the right to environment is evident especially as for mentioned *Additional Protocol to the American Convention on Human Rights in the area of Economic, Social, and Cultural Rights* (1988), to the *American Convention on Human Rights* (1969). The Inter-American Court on Human Rights produced ground-breaking *Advisory Opinion on the Environment and Human Rights* (2017),[91] perhaps the most significant ruling on environmental issues of any international tribunal to date. The request for this opinion was made by Chile and Colombia and concerned the environmental dimension of several substantive human rights, the human right to the environment, procedural environmental rights, as well as the protection of environmental defenders, women, indigenous peoples, Afro-descendant and peasant communities, as well as other vulnerable

[87] *Additional Protocol to the American Convention on Human Rights in the area of Economic, Social, and Cultural Rights* (1988**),** O.A.S. Treaty Series No. 69 (1988) reprinted in Basic Documents Pertaining to Human Rights in the Inter-American System, OEA/Ser. L.V/II.82 doc.6 rev.1 at 67 (1992).
[88] *American Convention on Human* Rights (1969), O.A.S. Treaty Series No. 36 (1969).
[89] League of Arab States, *Arab Charter on Human Rights*, 15 September 1994, available at: https://www.refworld.org/docid/3ae6b38540.html (accessed 11 February 2019)
[90] *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean* (2018). *United Nations, Treaty Series,* vol. 3398 C.N.195.2018.TREATIES-XXVII.18 of 9 April 2018 (Opening for signature) and C.N.196.2018.TREATIES-XXVII.18 of 9 April 2018 (Issuance of Certified True Copies).
[91] *Advisory Opinion OC-23/17 of November 15, 2017 Requested by the Republic of Colombia: The Environment and Human Rights*, Inter-American Court of Human Rights (IACrtHR), 15 November 2017, https://www.refworld.org/jurisprudence/caselaw/iacrthr/2017/en/123157 [accessed 31 August 2025]

population groups in the context of the climate emergency in the context of the Inter-American Convention on the Protection of Human Rights. A detailed analysis of this opinion already goes beyond the scope of this chapter of the monograph. It suffices to state that the Inter-American Court's Advisory Opinion profoundly analysed all these questions. As for the right to environment court stated that under this right States must protect nature and its components from the impacts of climate change and establish a strategy to move towards sustainable development. It has constitutionalized the right to a healthy environment as a basic right.[92]

As for the non-binding documents anchoring this right of a regional character we can mention the *ASEAN Human Rights Declaration* (2012),[93] adopted in the scope of the Association of Southeast Asian Nations or higher number of recommendations of the Parliamentary Assembly of the Council of Europe, which approved the latest recommendation in this regard in the form of Recommendation 2211 (2021) *"Anchoring the right to a healthy environment: need for enhanced action by the Council of Europe"* from 29 September 2021.

However, the right to the environment as a substantive right can is in fact be protected indirectly mainly through universal and regional human rights conventions, which are not anchoring this right, by a broader interpretation of the provisions of enshrining the right to life and the right to respect for private and family life and home. This fact is as evidenced by the case law of international quasi-judicial and judicial bodies created by these conventions. At the universal level we can mention individual communications procedure established in the scope of the system of the *International Covenant on Civil and Political Rights* (1966). The cases *E.H.P. v Canada* (No. 67/1980) and *Lubicon Lake Band v Canada* (No. 167/1984) of the Human Rights Committee

[92] Ibid, p. 76
[93] Association of Southeast Asian Nations (ASEAN), ASEAN Human Rights Declaration, 18 November 2012, available at: https://www.refworld.org/docid/50c9fea82.html [accessed 21 January 2019]

confirmed that the right to the environment can be protected by an extensive interpretation of the right to life enshrined in Article 6 (right to life) and Article 27 (rights of persons belonging to minorities) of the International Covenant on Civil and Political Rights (1966) and is encompassed in the scope of range of these rights. As a good example of this attempt at the regional level can serve the individual complaints procedure under the European Convention for the Protection of Human Rights and Fundamental Freedoms (1950), in proceedings before the European Court of Human Rights (EctHR), within which this right is protected through a broader interpretation of Article 8, which enshrines the right to respect for private and family life, home and correspondence. This has already been confirmed by the earlier case law of the ECtHR. A key case in this respect is the case *López Ostra v. Spain* (No 16798/90).[94] ECtHR later developed rich case law in this respect. The recent *Case of Verein KlimaSeniorinnen Schweiz and Others v. Switzerland* (No. 53600/20) shows the court derived from Article 8 a new conception of *"right for individuals to effective protection by the State authorities from serious adverse effects on their life, health, well-being and quality of life arising from the harmful effects and risks caused by climate change"*.[95] This right is evidently closely related to the right to environment, whose international legal regulation mentioned above was explicitly referred to in the judgement of the ECtHR, in this case. ECtHR linked the new right even to the above-mentioned human rights provision of the *Paris Agreement* (2016) in this judgement as well.

According to some scientific opinions, the normativity regarding the human right to the environment is generally recognized[96] and, probably, in a relatively short time, can also be

[94] *López Ostra v Spain*, Judgement, Merits and just satisfaction, App. No 16798/90, 9th December 1994, European Court of Human Rights.
[95] *Verein KlimaSeniorinnen Schweiz and Others v. Switzerland*, Merits and Just Satisfaction, App. No. 53600/20, 9th April 2024, European Court of Human Rights, point. 544
[96] ŠTURMA, Pavel et al. *Mezinárodní právo životního prostředí, I. část (obecná)*. Beroun: Eva Rozkotová - IFEC, 2004. p. 37.

enshrined in a customary form binding *erga omnes*. Astrid Puentes Riaño, UN Special Rapporteur on the human right to a clean, healthy, and sustainable environment argued that the International Court of Justice (ICJ), now discussing on the advisory opinion in the *Obligations of States in respect of Climate Change Case*[97] will most likely address the issue of whether the human right to a healthy environment is recognized by custom among States and, therefore, is an obligation under international law.

During the proceedings before the Court, which culminated in public hearings last December in The Hague, more than 60 States emphasized that the human right to a clean, healthy, and sustainable environment is internationally recognized, imposing specific obligations in the context of the climate emergency. In contrast, only ten States (Australia, Canada, China, Germany, Kuwait, Saudi Arabia, New Zealand, Serbia, the UK, and the US) opposed this overwhelming majority by arguing that the UN recognition of such a right is merely political and lacking legal relevance.[98]

As the former UN Special Rapporteur on the human right to a clean, healthy, and sustainable environment David Boyd pointed out in his report form 2019 a supporting factor for confirming the existence of the customary nature of the human right to the environment is the fact that there are 110 States where this right enjoys constitutional protection. 101 States where this right has been incorporated into national legislation. In total, more than 80 percent of States Members of the United Nations (156 out of 193, including those bound by a treaty) legally recognize the right to a safe, clean, healthy and sustainable environment. Moreover, 19 out of 27 EU countries have enshrined this right in their constitutions (some only implicitly) and 17 in their national law. Austria,

---

[97] *Obligations of States in respect of Climate Change Case*. Request for advisory opinion transmitted to the Court pursuant to General Assembly resolution 77/276 of 29 March 2023.

[98] PUENTES - RIAŇO, Astrid. *Healthy Environment: A Human Right and Customary International Law. 29 January 2025.* https://sdg.iisd.org/commentary/guest-articles/healthy-environment-a-human-right-and-customary-international-law/ (Available as of 12.5.2025)

Denmark, Germany, Luxembourg, Malta, Netherlands, Poland, Sweden have done neither but are parties to the Aarhus Convention.[99]

The International Court of Justice delivered Advisory opinion *Obligations of States in Respect of Climate Change* on 23 July 2025.[100] ICJ stated in this respect that the human right to a clean, healthy and sustainable environment is inherent in the enjoyment of other human rights. The Court thus concludes that, under international law, the human right to a clean, healthy and sustainable environment is essential for the enjoyment of other human rights.

3. Programming *(de lege ferenda)* principles of international environmental law

The most important programmatic principles of international environmental law *de lege ferenda*, the principle of the common interest of humanity, the principle of common but differentiated responsibilities, [101] the principle of non-regression [102] and, by our opinion, the principle of protection of the climate system and other parts of the environment from anthropogenic greenhouse gas emissions**.**

[99] BOYD, David. *Human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*. Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. UN Doc. A/74/161. New York: UN, 15 July 2019. 25 p. https://digitallibrary.un.org/record/3814570?ln=en&v=pdf#files (Available as of 12.5.2025)

[100] *Obligations of States in Respect of Climate Change*. International Court of Justice. Advisory opinion of 23 July 2025. Available as for 4 August 2025 at the official ICJ webpage https://www.icj-cij.org/case/187.

[101] ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání.* Praha: C. H. Beck, 2018. pp.207-209.

[102] GANESAN, Pranav - RODRIGUEZ, José. *Non-regression in Climate action and the Rights of Present and Future Generations*. Official webpage of World's Youth for Climate Justice, 2025. https://www.wy4cj.org/legal-blog/non-regression-in-climate-action-and-the-rights-of-present-and-future-generations. Available as for 09.05. 2025.

3.1. The principle of the common interest of humanity

The principle of the common interest of humanity expresses in abstract form the scientifically and socially justified necessity of environmental protection. In the case of this principle, it is not so much a generalization of specific rules as a general objective in the light of which it is necessary to interpret individual rules of international environmental law. This principle is identifiable in particular in more recent treaties in the field of international environmental law, such as the *Convention on Biological Diversity* (1992) or the *Framework Convention on Climate Change* (1992). It is also a concept formulated by the International Court of Justice in the case of the *Legality of the Threat and Use of Nuclear Weapons (*1996)[103] and the case of the *Gabčíkovo-Nagymaros Project* (1997). [104]

The environment is not an abstraction, but a space where human beings live and on which the quality of their lives and health depends, even for future generations. The concept of the common interest of humanity must therefore be interpreted in relation to specific facts. According to this interpretation, it has both spatial dimensions, which presents this as a common heritage of humanity, as well as the temporal dimension manifested in the concept of the rights of future generations.[105]

The international legal regime of the *"common heritage of all mankind"* is applied within the framework of the seabed and subsoil of the high seas under the *UN Convention on the Law of the Sea* (1982),[106] on celestial bodies in outer space under the

[103] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I. C. J. Reports 1996, p. 226
[104] *Gabčíkovo-Nagymaros Project* (HungarylSlovakia), Judgment, I. C. J. Reports 1997, p. 7
[105] ŠTURMA, Pavel. Zásady mezinárodního práva životního prostředí. In: *Acta Universitatis Carolinae Iuridica*, č.2-3, 2002. pp.21-22.
[106] *United Nations Convention on the Law of the Sea (1982).* 1833 UNTS p. 3

Agreement governing the Activities of States on the Moon and Other Celestial Bodies (1979).[107]

The content of this principle, however, does not express the character of extra disposition (prohibition of appropriation) of these areas, which is regulated by customary rules of general international law. In contrast, the common heritage of mankind is a programmatic principle that postulates a certain way of utilizing - and at the same time protecting - natural resources found in these areas. The primary goal of this concept, however, lies in the effort to enforce a certain way of managing, utilizing, and distributing natural wealth for the benefit of a broader group of states than just the most economically and technologically developed countries in the world. According to the opinions generalizing the characteristics of the concept in all its modifications "common heritage of mankind" can be characterized by three features: (1) exclusive use for peaceful purposes, (2) reasonable use of resources in the spirit of their protection, and (3) good governance and transfer to future generations. The second dimension of the principle of the common interest of mankind is related to the last-mentioned aspect, which is intergenerational solidarity. The rights of future generations are referenced in the *Stockholm Declaration*, principle 3 of the *Rio Declaration*, and some treaties, such as Article 3, paragraph 1 of the *UN Framework Convention on Climate Change* (1992). However, they are mostly mere declarations of goals that lack specific normative content. [108]

The mentioned principle was mentioned in the latest advisory opinion *Obligations of States in Respect of Climate Change* of International Court of Justice delivered on 23 July 2025.[109] ICJ in this advisory opinion stated that certain rules of international law relating to global common goods, such as the climate system, may

[107] *Agreement governing the Activities of States on the Moon and Other Celestial Bodies* (1979). 1363 UNTS p.3
[108] ŠTURMA, Pavel. Zásady mezinárodního práva životního prostředí. In: *Acta Universitatis Carolinae Iuridica*, č.2-3, 2002. p.23.
[109] *Obligations of States in Respect of Climate Change.* International Court of Justice. Advisory opinion of 23 July 2025. Available as for 4 August 2025 at the official ICJ webpage https://www.icj-cij.org/case/187.

produce *erga omnes* obligations of customary character. In the present context, the Court considered that all States have a common interest in the protection of global environmental commons like the atmosphere and the high seas. Consequently, States' obligations pertaining to the protection of the climate system and other parts of the environment from anthropogenic GHG emissions, in particular the obligation to prevent significant transboundary harm under customary international law, are obligations *erga omnes*. In the treaty context, the ICJ recalled that the *UN Framework Convention on Climate Change* (UNFCC) in its first preambular paragraph and *Paris Agreement* (Article 2) acknowledge that climate change is *"a common concern of humankind"*.

However, given the fact that the entire principle does not have a detailed normative content specified in the above documents, it remains a principle *de lege ferenda*.

3.2. The principle of common but differentiated responsibilities

The principle of common but differentiated responsibilities is one of the most recent programmatic principles of international environmental law. It is a principle that was first formulated in principle 7 of the *Rio Declaration* (1992).[110] According to this provision, States shall cooperate in a spirit of global partnership to preserve, protect and restore the health and integrity of the Earth's ecosystem. Given the different degrees to which States contribute to global environmental degradation, these States have common but differentiated responsibilities. Developed countries recognize their responsibility in international efforts for sustainable development in view of the pressures on the global environment caused by their societies and the technical and financial resources at their disposal.

[110] ŠTURMA, Pavel. Zásady mezinárodního práva životního prostředí. In: *Acta Universitatis Carolinae Iuridica*, č.2-3, 2002. p.23.

In a similar or slightly different form, this principle has been enshrined in several binding conventions of international environmental law, such as the *Basel Convention on the Control and Transboundary Movement of Hazardous Wastes and their Disposal* (1989)[111] or the *Framework Convention on Climate Change* (1992), which also envisage technology transfers and financial assistance from developed countries to developing countries. [112]

This principle was noted even in the latest advisory opinion *Obligations of States in Respect of Climate Change* of International Court of Justice delivered on 23 July 2025[113] in the form „*the principle of common but differentiated responsibilities and respective capabilities*". International Court of Justice stated in this respect that the principle of common but differentiated responsibilities and respective capabilities is a manifestation of the principle of equity and guides the interpretation of obligations under international environmental law beyond its express articulation in different treaties. The principle of common but differentiated responsibilities and respective capabilities does not establish new obligations but is relevant for the interpretation of treaties and the determination of rules of customary law relating to the environment.

However, this principle does not have detailed normative content and therefore remains a *de lege ferenda* principle.

3.3. The principle of non-regression

The principle of non-regression is a new emerging principle within specific branches of international public law - international trade law, international investment law and international environmental law, as well. Use in a shortened for as so-called

[111] *Basel Convention on the Control and Transboundary Movement of Hazardous Wastes and their Disposal* UN Doc. UNEP/BRS/2014/3
[112] See ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání.* Praha: C. H. Beck, 2018. pp.208-209.
[113] *Obligations of States in Respect of Climate Change*. International Court of Justice. Advisory opinion of 23 July 2025. Available as for 4 August 2025 at the official ICJ webpage https://www.icj-cij.org/case/187.

principle of *"non-regression"* means non-regression from environmental protections. According to this principle, States are prohibited from weakening their domestic levels of environmental protection.[114]

In *international investment law* this principle first emerged in the North America Free Trade Agreement (NAFTA) signed in 1992. Its original rationale in international investment law was to prevent the relocation of industry to states with weakened environmental protection as potential so-called "pollution havens". Clauses enshrining a principle of non-regression from domestic environmental protections have become a part of large numbers of international investment agreements (IIA). Over 150 States have subscribed to a non-regression clause in at least one IIA. [115]

In *international trade law* this principle emerged as a part of preferential trade agreements (PTAs). First one of these PTAs was the *United States–Jordan PTA* signed in 2000. More recently, it has become a feature of PTAs involving the United States (US), the European Union (EU), and China as State parties. The principle's original rationale in international trade law was preventing the promotion of exports through the weakening of environmental protections, with the underlying concern grounded in the potential use of environmentally harmful processing and production methods (PPMs) as an element of competitive advantage in trade relations.[116]

In *international environmental law* the principle has only begun to emerge in the past few years out of growing concerns about lack of progress over major environmental challenges like climate change and biodiversity. Advocates of this principle have drawn on the human right to a clean, healthy and sustainable

[114] MITCHELL, Andrew, MUNRO, James. An International Law Principle of Non-Regression from Environmental Protections. In: *International and Comparative Law Quarterly*. Vol 72, January 2023. p. 35.
[115] MITCHELL, Andrew, MUNRO, James. An International Law Principle of Non-Regression from Environmental Protections. In: *International and Comparative Law Quarterly*. Vol 72, January 2023, p. 37.
[116] Ibid, p. 36.

environment—from which no derogation would ordinarily be permitted under international human rights law—to justify a general principle of non-regression from existing levels of domestic environmental protections. The principle's first iteration in international environmental law appeared in a recent mentioned *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean* (2018).

Moreover, the mentioned ECtHR *Case of Verein KlimaSeniorinnen Schweiz and Others v. Switzerland* (No. 53600/20) which has shown a new conception of *"right for individuals to effective protection by the State authorities from serious adverse effects on their life, health, well-being and quality of life arising from the harmful effects and risks caused by climate change"*[117] derived by ECtHR from Article 8, could support the slow stabilization of this principle in the human rights dimension of international environmental law.

In the other major environmental treaties like the Paris Agreement, we can also find clauses with similar importance. However, clauses in those treaties, which preclude weakening environmental protection, are understood rather as pragmatic responses to policy problems rather than enshrining a general principle prohibiting regression from domestic environmental protections.[118] Therefore, the whole principle belongs to *de lege ferenda* principles of international environmental law, under our opinion.

3.4. The principle of protection of the climate system and other parts of the environment from anthropogenic greenhouse gas emissions

[117] *Verein KlimaSeniorinnen Schweiz and Others v. Switzerland*, Merits and Just Satisfaction, App. No. 53600/20, 9th April 2024, European Court of Human Rights, point. 544

[118] MITCHELL, Andrew, MUNRO, James. An International Law Principle of Non-Regression from Environmental Protections. In: *International and Comparative Law Quarterly*. Vol 72, January 2023. p. 70.

The historical development of this principle was preceded by the development of a whole series of international legal regulations relating to the protection of the atmosphere. Key in this direction were mainly international treaties such as the *Convention on Long-Range Transboundary Air Pollution* (1979)[119] of the United Nations Economic Commission for Europe, amended and supplemented by a total of eight protocols, the *Vienna Convention for the Protection of the Ozone Layer* (1985) [120] as amended by the *Montreal Protocol on Substances that Deplete the Ozone Layer* (1987),[121] the *UN Framework Convention on Climate Change* (1992), supplemented by the *Kyoto Protocol to the Framework Convention on Climate Change* (1997)[122] and amended by the *Doha Amendment to the Kyoto Protocol* (2012)[123] and the *Paris Agreement* (2015), as well as *Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Methods* (1976).[124]

The principle as such was later addressed as for the international law of the sea in the *Climate Change* (2024)[125] advisory opinion of International Tribunal for the Law of the Sea (further even ITLOS). Request for this advisory opinion was transmitted to ITLOS by the Co-Chairs of the Commission of Small Island States on Climate Change and International Law by letter dated 12 December 2022. ITLOS was asked to answer questions *"What are the specific obligations of State Parties to the United Nations Convention on the Law of the Sea ('UNCLOS'), including*

---

[119] *Convention on Long-Range Transboundary Air Pollution* (1979). Geneva, 13 November 1979, 1302 UNTS 217. *Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Methods* (1976). 1108 UNTS 152.

[120] *Convention for the Protection of the Ozone Layer* (1985). Vienna, 22 March 1985, 1513 UNTS 293.

[121] *Montreal Protocol on Substances that Deplete the Ozone Layer* (1987). 1522 UNTS 3.

[122] *Kyoto Protocol to the Framework Convention on Climate Change* (1997). 2303 UNTS 162.

[123] *Doha Amendment to the Kyoto Protocol* (2012). UN Doc. C.N.718.2012.TREATIES-XXVII.7.c.

[124]

[125] *Climate Change*, Advisory Opinion, ITLOS Reports 2024, p. 110, para. 296.

under Part XII: (a) to prevent, reduce and control pollution of the marine environment in relation to the deleterious effects that result or are likely to result from climate change, including through ocean warming and sea level rise, and ocean acidification, which are caused by anthropogenic greenhouse gas emissions into the atmosphere? (b) to protect and preserve the marine environment in relation to climate change impacts, including ocean warming and sea level rise, and ocean acidification?" ITLOS has provided a comprehensive legal opinion on the link between climate change and ocean pollution under *UN Convention of the Law of the Sea* (1982). ITLOS in this case concluded that anthropogenic greenhouse gas (GHG) emissions, including those absorbed by the oceans, constitute pollution of the marine environment. The opinion clarifies that States are obligated under the UN Convention on the Law of the Sea (UNCLOS) to take "all necessary measures" to prevent, reduce, and control this pollution, protect marine ecosystems, and cooperate with each other in their efforts to combat the climate crisis.

The principle in question as a whole was then addressed by the International Court of Justice in the scope its advisory opinion *Obligations of States in Respect of Climate Change* delivered on 23 July 2025.[126] Based on the activity of the Pacific state of Vanuatu, the UN General Assembly, in *Resolution 77/276* adopted on 29 March 2023[127] decided, in accordance with Article 96 of the Charter of the United Nations, to request the International Court of Justice, pursuant to Article 65 of the Statute of the Court, to render an advisory opinion on two questions.

The first question was *"What are the obligations of States under international law to ensure the protection of the climate system and other parts of the environment from anthropogenic emissions*

[126] *Obligations of States in Respect of Climate Change*. International Court of Justice. Advisory opinion of 23 July 2025. Available as for 4 August 2025 at the official ICJ webpage https://www.icj-cij.org/case/187.
[127] *Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change*. UN GA Resolution 77/276 adopted on 29 March 2023. UN Doc. A/RES/77/276 (2023)

of greenhouse gases for States and for present and future generations?". The second one was *"What are the legal consequences under these obligations for States where they, by their acts and omissions, have caused significant harm to the climate system and other parts of the environment, with respect to: (i) States, including, in particular, small island developing States, which due to their geographical circumstances and level of development, are injured or specially affected by or are particularly vulnerable to the adverse effects of climate change? (ii) Peoples and individuals of the present and future generations affected by the adverse effects of climate change?"*.

As regards the first question put by the General Assembly ICJ stated that is of the opinion that the climate change treaties set forth binding obligations for States parties to ensure the protection of the climate system and other parts of the environment from anthropogenic greenhouse gas emissions.

These obligations include the following: (a) States parties to the *United Nations Framework Convention on Climate Change* have an obligation to adopt measures with a view to contributing to the mitigation of greenhouse gas emissions and adapting to climate change; (b) States parties listed in Annex I to the United Nations Framework Convention on Climate Change have additional obligations to take the lead in combating climate change by limiting their greenhouse gas emissions and enhancing their greenhouse gas sinks and reservoirs; (c) States parties to the United Nations Framework Convention on Climate Change have a duty to co-operate with each other in order to achieve the underlying objective of the Convention; (d) States parties to the *Kyoto Protocol* must comply with applicable provisions of the Protocol; (e) States parties to the *Paris Agreement* have an obligation to act with due diligence in taking measures in accordance with their common but differentiated responsibilities and respective capabilities capable of making an adequate contribution to achieving the temperature goal set out in the Agreement; (f) States parties to the Paris Agreement have an obligation to prepare, communicate and maintain successive and progressive nationally determined contributions

which, inter alia, when taken together, are capable of achieving the temperature goal of limiting global warming to 1.5°C above pre-industrial levels; (g) States parties to the Paris Agreement have an obligation to pursue measures which are capable of achieving the objectives set out in their successive nationally determined contributions; and (h) States parties to the Paris Agreement have obligations of adaptation and co-operation, including through technology and financial transfers, which must be performed in good faith.

ICJ further stated that is of the opinion that customary international law sets forth obligations for States to ensure the protection of the climate system and other parts of the environment from anthropogenic greenhouse gas emissions. These obligations include the following: (a) States have a duty to prevent significant harm to the environment by acting with due diligence and to use all means at their disposal to prevent activities carried out within their jurisdiction or control from causing significant harm to the climate system and other parts of the environment, in accordance with their common but differentiated responsibilities and respective capabilities; (b) States have a duty to co-operate with each other in good faith to prevent significant harm to the climate system and other parts of the environment, which requires sustained and continuous forms of co-operation by States when taking measures to prevent such harm.

ICJ further declared that is of the opinion that States parties to the *Vienna Convention for the Protection of the Ozone Layer* and to *the Montreal Protocol on Substances that Deplete the Ozone Layer* and its *Kigali Amendment*, the *Convention on Biological Diversity* (1992) and the *United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa* (1994), have obligations under these treaties to ensure the protection of the climate system and other parts of the environment from anthropogenic greenhouse gas emissions;

ICJ stated also that is of the opinion that States parties to the *United Nations Convention on the Law of the Sea* (1982) have an obligation to adopt measures to protect and preserve the marine environment, including from the adverse effects of climate change and to co-operate in good faith and that States have obligations under international human rights law to respect and ensure the effective enjoyment of human rights by taking necessary measures to protect the climate system and other parts of the environment;

As regards the second question put by the General Assembly ICJ declared that is of the opinion that a breach by a State of any obligations identified in response to question (a) constitutes an internationally wrongful act entailing the responsibility of that State. The responsible State is under a continuing duty to perform the obligation breached. The legal consequences resulting from the commission of an internationally wrongful act may include the obligations of: (a) cessation of the wrongful actions or omissions, if they are continuing; (b) providing assurances and guarantees of non-repetition of wrongful actions or omissions, if circumstances so require; and (c) full reparation to injured States in the form of restitution, compensation and satisfaction, provided that the general conditions of the law of State responsibility are met, including that a sufficiently direct and certain causal nexus can be shown between the wrongful act and injury.

In addition, ICJ stated that certain rules of international law relating to global common goods, such as the climate system, may produce *erga omnes* obligations of customary character. In the present context, the Court considered that all States have a common interest in the protection of global environmental commons like the atmosphere and the high seas. Consequently, States' obligations pertaining to the protection of the climate system and other parts of the environment from anthropogenic GHG emissions, in particular the obligation to prevent significant transboundary harm under customary international law, are obligations *erga omnes*.

In the treaty context, the ICJ recalled that the UNFCCC and Paris Agreement acknowledge that climate change is *"a common concern of humankind"* (UNFCCC, first preambular paragraph; Paris Agreement, eleventh preambular paragraph), requiring "a global response" (Paris Agreement, Article 2). They seek to protect the essential interest of all States in the safeguarding of the climate system, which benefits the international community as a whole. As such, the ICJ considered that the obligations of States under these treaties are obligations *erga omnes partes*.

In this context it is to say that the ICJ stated that the rule in question is of customary nature and, moreover, it is a new rule of international law of a peremptory nature – *ius cogens*.

Based on the existing treaty regulations, possible existing customary rules in the given area as well as the conclusions of the ICJ and ITLOS advisory opinions, it is possible to generalize them and formulate the principle of protection of the climate system and other parts of the environment from anthropogenic greenhouse gas emissions as such.

In connection with the existing treaty regulations and advisory opinions of ICJ and ITLOS it is necessary to mention, that they are is based on the scientific opinions and reports of the Intergovernmental Panel on Climate Change (IPCC). However, there are alternative scientific views arguing that climate change and global warming are not primarily caused by human activity, but by natural influences, in particular increased solar activity. For example, Czech geophysicist Pavel Kalenda, spokesman for the international group of scientists and experts CLINTEL, states that the claim that global warming is mainly the result of human-caused carbon dioxide (CO2) emissions is wrong. According to him, glaciers have been melting for 11,700 years, since the end of the Ice Age.

Kalenda claims that the IPCC hypothesis that CO2 concentration controls the temperature on Earth is wrong. Instead, based on the data, he supports the hypothesis of the prominent American atmospheric scientist Murry Salby, who came up with the

idea that the temperature of the atmosphere depends on the increase in ocean temperature, which is in turn influenced by the sun, with the effect of humans on the temperature of the atmosphere being negligible. According to him, human activity is responsible for 5–7% of the CO2 content in the atmosphere. According to Kalenda, the temperature on Earth will rise if there is above-average solar activity, which has been continuously increasing for the last 200 years.

The US Department of Energy (DOE) has published a new report evaluating existing peer-reviewed literature and government data on climate impacts of Greenhouse Gas (GHG) Emissions and providing a critical assessment of the conventional narrative on climate change. This comprehensive report entitled "*A Critical Review of Impacts of Greenhouse Gas Emissions on the U.S. Climate"* was made of group of experts made for U.S. Energy Secretary Christopher Wright from July 23, 2025. Among the key findings, the report concludes that CO2-induced warming appears to be less damaging economically than commonly believed, and that aggressive mitigation strategies could be more harmful than beneficial. Additionally, the report finds that US policy actions are expected to have undetectably small direct impacts on the global climate and any effects will emerge only with long delays.

The report was developed by the 2025 Climate Working Group, a group of five independent scientists assembled by US Energy Secretary Chris Wright with diverse expertise in physical science, economics, climate science and academic research. The authors are: John Christy, Ph.D., Judith Curry, Ph.D., Steven Koonin, Ph.D., Ross McKitrick, Ph.D., and Roy Spencer, Ph.D.[128]

These alternative scientific approaches weaken the legal force of the principle of protection of the climate system and other parts of the environment from anthropogenic greenhouse gas emissions and raise the question of more detailed research into the issue of climate change. Because of this reason, by our opinion, it is

[128] *DOE publishes new critical review of GHG impacts on US climate,* 30 July 2025. https://www.greencarcongress.com/2025/07/20250730-climate.html

necessary, to consider the principle of protection of the climate system and other parts of the environment from anthropogenic greenhouse gas emissions like a *de lege ferenda* principle.

It is also to say that advisory opinions od ITLOS and ICJ are not formally legally binding. They possess considerable legal and moral weight and play a role in shaping and clarifying international law by outlining states' legal responsibilities. However, in our opinion, it is necessary to wait for how the practice of states and the science of international law will address the content of this advisory opinion.

Conclusion

The principles of international environmental law are the rules of conduct contained in some of its sources, which are of a highly general nature, and which arose within its framework. These principles have historically developed in connection with the customary practice of States, the treaty-based norm-making of States as well as the related case law of international judicial and arbitral bodies, in the given area. Many of them have also found their expression within the framework of a whole range of non-binding soft law instruments adopted by the bodies of international organizations or by major international conferences devoted to the issue of international legal protection of environment.

From the perspective of international environmental law, its principles are of particular importance, given the fact that their identification is also used as a way of approaching the content of this otherwise too extensive and fragmented branch of international law.

The greatest number of principles of international environmental law exist within its applicable rules *de lege ferenda*. The long term legally binding established principles in this regard are the principle of state sovereignty and non-harm to the environment beyond the jurisdiction of states, the principle of protection and conservation of the environment and natural resources, the principle of international cooperation in

environmental protection, the principle of prevention, the precautionary principle, the principle of equitable use of natural resources shared by two or more states, the principle of international liability for environmental damage and the principle of sustainable development.

Some of the *de lege lata* principles of international environmental law were established by international law science only recently. These principles include the *"polluter pays"* principle and the principle of human right to the environment. The academic debate about their inclusion among the principles *de lege lata* may still be ongoing.

The most important principles of international environmental law *de lege ferenda* include the principle of the common interest of humanity, and the principle of common but differentiated responsibilities. Recently the academic debate started about a new *de lege ferenda* principle of non-regression in international environmental law. By our opinion it is necessary to start the academic debate about another *de lege lata* principle of international environmental law – the principle of protection of the climate system and other parts of the environment from anthropogenic greenhouse gas emissions.

List of bibliography:

ARUGU, Obugheni William, HALLIDAY, Chidi. Critical Appraisal of Principles and Concepts of International Environmental Law. In: *University of Port Harcourt Journal of Private Law*. Special Edition, Vol 3, June 2018. pp. 108-134. ISSN 2616-1125.

BARRAL, Virginie. Sustainable Development in International Law: Nature and Operation of an Evolutive Legal Norm. In: *The European Journal of International Law*, No.2, Vol. 23, 2012, pp.377-400. ISSN 0938-5428.

BAUMRUK, Petra. Linking Human Rights and the Environment: Is There a Human Right to a Healthy Environment?

In: *Czech Yearbook of International Public & Private Law,* Vol. 15, 2024. pp.128-141. ISSN 1805-0565.

BOYD, David. *Human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*. Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. UN Doc. A/74/161. New York: UN, 15 July 2019. 25 p. https://digitallibrary.un.org/record/3814570?ln=en&v=pdf#files (Available as of 12.5.2025)

DELLAPENNA, Joseph. The Customary International Law of Transboudary Fresh Waters. In*: International Journal of Global Environmental Issuess*, Vol. 1, Nos.3/4, 2001. pp. 271-272. ISSN 1741-5136

DE JANT-PONS, Marguelonne - PALLEMAERTS, Marc. *Human Rights and the Environment*. Strasbourg: Council of Europe, 2002. 400p. ISBN 92-871-4777-6.

ČEPELKA, Čestmír - ŠTURMA, Pavel. *Mezinárodní právo veřejné. 2. vydání*. Praha: C. H. Beck, 2018. 584p. ISBN 978-80-7400-721-7.

FERIA-TINTA, Monica - MILNES, Simon C. International Environmental Law for the 21st Century: The Constitutionalization of the Right to a Healthy Environment in the Inter-American Court of Human Rights Advisory Opinion No. 23", In: *Anuario Colombiano de Derecho Internacional (acdi),* 2019, 12, pp. 43-84. Doi: dx.doi.org/10.12804/revistas.urosario.edu.co/acdi/a.7568

FITZMAURICE, Malgosia - WONG, Megan, CRAMPIN, Joseph. *International Environmental Law. Texts, Cases and Materials*. Cheltenham, Northampton: Edward Elgar Publishing, 2022. 604p. ISBN 978-1-78536-791-5.

GURUSWAMY, Lakshman, ZEBROWSKI LEACH, Mariah. *International Environmental Law in a Nutshell*. 5th Edition. St.

Paul: West Academic Publishing, 2017. s. 586. ISBN 978-1-68328-096-5.

INWANG, Christopher. Polluter pays principle. A jus cogens or customary international law. In: *International Journal of Law*. Vol. 7, Issue 1, 2021. pp. 132-136. ISSN: 2455-2194;

JANKUV, Juraj. Enshrining Human Right to Environment in International Law and European Law: Successful Story or Never-Ending story? KLUČKA, Ján - SISÁK, Ľuboslav – GAZDAGOVÁ, Laura. (eds.): *20 rokov v Európskej únii z pohľadu práva a éra udržateľnosti*. Košice: ŠafárikPress, 2024. pp. 94-110. ISBN 978-80-574-0367-8 DOI: https://doi.org/10.33542/RVE-0367-8

KAZHDAN, Daniel. Precautionary Pulp: Pulp Mills and the Evolving Dispute Between International Tribunals over the Reach of the Precautionary Principle. In: *Ecology Law Quarterly*, Vol.38,2011. s. 534. ISSN 0046-1121.

MCINTYRE, Owen - MOSEDALE, Thomas. The Precautionary Principle as a Norm of Customary International Law. In: *Journal of Environmental Law*, Volume 9, Issue 2, 1997**.** p. 241**.** ISSN 0952-8873.

MITCHELL, Andrew - MUNRO, James. An International Law Principle of Non-Regression from Environmental Protections. In: *International and Comparative Law Quarterly*. Vol 72, January 2023. Pp. 35–71. ISSN 1471-6895 (online). doi:10.1017/S0020589322000483.

POTOČNÝ, Miroslav - ONDŘEJ, Jan. *Mezinárodní právo veřejné, zvláštní část, 6. doplněné a přepracované vydání*. Praha: C. H. Beck 2011. 533p. ISBN 978-80-7400-398-1.

PUENTES - RIAÑO, Astrid. *Healthy Environment: A Human Right and Customary International Law. 29 January 2025*. https://sdg.iisd.org/commentary/guest-articles/healthy-environment-a-human-right-and-customary-international-law/ (Available as of 12.5.2025)

SANDS, Philippe - PEEL, Jacqueline, FABRA, Adriana, MACKENZIE, Ruth. *Principles of International Environmental Law. Third Edition*. Cambridge: Cambridge University Press, 2012, pp. 9-10., ISBN 978-0-521-14093-5.

SINGH, Naghendra. Right to Environment and Sustainable Development as a Principle of international Law. In: *Studia Diplomatica*. Vol. 41, No. 1 (1988), pp. 45-61. ISSN 2593-0702.

ŠTURMA, Pavel et al. *Mezinárodní právo životního prostředí, I. část (obecná)*. Beroun: IFEC – Eva Rozkotová, 2004. 193p. ISBN 80-903409-2-X.

ŠTURMA, Pavel. Zásady mezinárodního práva životního prostředí. In: *Acta Universitatis Carolinae Iuridica*, č.2-3, 2002. pp. 9-25. ISSN 0323-0619.

VORDERMAYER - RIEMER, Markus. *Non-Regression in International Environmental Law. Human Rights Doctrine and the Promises of Comparative International Law*. Cambridge: Intersentia, 2020. 578p. ISBN 978-1839-701-22-1.

1.2. Principle of Intergenerational Equity: The Bodyguard to the Environment

JUDr. Ľudmila Elbert, PhD.

Pavol Jozef Šafárik University in Košice, Faculty of Law, Institute of International Law and European Law

ludmila.elbert@upjs.sk

1. What is the principle of intergenerational equity?

The principle of intergenerational equity means that every generation holds the Earth in common with members of the present generation and with other generations, past and future.[129] In international law, we can define the sources of the principle of the intergenerational equity. We can mention the concept of fairness among generations in the use and conservation of the environment and its natural resources. Based on work of Aristoteles and Grotius, the roots of the principle of intergenerational equity may be built on the use of equity as synonymous with justice.[130] According to Brown Weiss,[131] author of the legal doctrine of intergenerational equity, the equity was used as basis to provide standards for allocating and sharing resources and for distributing the burdens of caring for the resources and the environment in which they are found, what we can be seen as a foundation for the principle of intergenerational equity. Moreover, Boyle and Redgwell[132] follow up and add that the theory of intergenerational equity has been advanced to explain the optimum basis for the relationship between one generation and the next. It requires each generation

[129] BROWN WEISS, Edith: Intergenerational Equity. In: R Wolfrum (ed.) *The Max Planck Encyclopedia of Public International Law*. Oxford: Oxford University Press, 2012, p. 287. ISBN 978-0-19-929168-7.
[130] See: *North Sea Continental Shelf*, Judgment, I.C.J. Reports 1969, p. 3, para. 85, 88.
[131] BROWN WEISS, Edith: Intergenerational Equity. In: R Wolfrum (ed.) *The Max Planck Encyclopedia of Public International Law*. Oxford: Oxford University Press, 2012, p. 287. ISBN 978-0-19-929168-7.
[132] BOYLE, Alan - REDGWELL, Catherine: *Birnie, Boyle & Redgwell´s International Law and the Environment*, Fourt Edition. Oxford: Oxford University Press, 2021, p. 121. ISBN 978-0-19-959401-6.

to use and develop its natural and cultural heritage in such manner that it can be passed on to future generations in no worse condition than it was received.

To understand the principle more, Brown Weiss[133] formulates three normative principles (elements) of intergenerational equity, principles of options, quality and access. First, principle of options means that each generation must conserve options - the diversity of the natural and cultural resource base. Second, principle of quality requiring the maintenance of the quality of the planet comparable to that enjoyed by previous generations. Third, principle of access providing for members of every generation equitable rights of access to the legacy of past generations and conserve this access to future generations. It is important to mention that these principles were also recognized in 2013 by UN Secretary General.[134] Following these elements of the principle of intergenerational equity, five duties of use of natural system can be derived: the duty to conserve resources, the duty to ensure equitable use, the duty to avoid adverse impacts, the duty to prevent disasters, minimize damage, and provide emergency assistance, and the duty to compensate for environmental harm.[135] As Spijkers[136] stated it is up to the people of the present what kind of the world we leave to the people of the future. There are various ideas about what exactly the present people owe to future people, and that is what intergenerational equity is all about. To sum up, the principle of intergenerational equity is shaped by two

[133] BROWN WEISS, Edith: In Fairness to Future Generations and Sustainable Development. In: *American University International Law Review* 8, no. 1, 1992, p. 22-23. Online: https://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1498&context=auilr (accessed on 31 August 2025).

[134] *UN*: Report of the Secretary-General: Intergenerational solidarity and the needs of future generations, 15 August 2013 (A/68/322), para. 24.

[135] For more see: REDGWELL, Catherine: Principles and Emerging Norms in International Law: Intra- and Inter- Generational equity. In: CLARLARNE, Cinnamon P., GRAY, Kevin R., TARASOFSKY, Richard G. (eds.): *The Oxford Handbook of International Climate Change Law*. Oxford: Oxford University Press, 2016, p. 190. ISBN 978-0-19-968460-1.

[136] SPIJKERS, Otto: Intergenerational Equity and the Sustainable Development Goals. In: *Sustainability*. 2018, 10, no.11, 3836, ISSN 2071-1050. Online: https://doi.org/10.3390/su10113836 (accessed on 31 August 2025).

relationships, between human species and natural system, and between past, present and future generations of people in their relation to natural system.[137]

The principle of intergenerational equity is the foundation of sustainable development. World Commission on Environment and Development in in its report[138] defined intergenerational equity as meeting the needs of the present without compromising the ability of future generations to meet their own needs, confirmed by the Stockholm Declaration (1972)[139] and by Rio Declaration (1992).[140] We can refer to the 2030 Agenda for Sustainable Development[141] from 2015 when the General Assembly reaffirm the importance of the Universal Declaration of Human Rights, as well as other international instruments relating to human rights and international law. The resolution also emphasized the responsibilities of all States, in conformity with the Charter of the United Nations, to respect, protect and promote *human rights and fundamental freedoms for all*, without distinction of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, disability or other status. Although, it is not specified if the notion "for all" covers present and future generations, but we can conclude that the connection

[137] BROWN WEISS, Edith: Implementing intergenerational equity. In: FITZMAURICE, Malgosia- ONG, David, M., MERKOURIS, Panos: *Research Handbook on International Environmental Law*. Cheltenham: Edwar Elgar, p. 102. ISBN 978-1-84720-124-9.

[138] *UN General Assembly: Report of the World Commission on Environment and Development: Our Common Future,* 4 August 1987 (A/42/427) p. 24, para. 27.

[139] The Stockholm Declaration of The UN Conference on the Human Environment: principle 1, 2, 5, 11. UN: *Report of the UN Conference on the Human Environment, Stockholm, 5- 16 June 1972* (A/CONF.48/14/Rev.1), for more see: *UN:* United Nations Conference on the Human Environment, 5-16 June 1972, Stockholm. Online: https://www.un.org/en/conferences/environment/stockholm1972 (accessed on 31 August 2025).

[140] Rio Declaration on Environment and Development: principle 3, for more see: *UN*: *United Nations Conference on Environment and Development, Rio de Janeiro*, Brazil, 3-14 June 1992. https://www.un.org/en/conferences/environment/rio1992 (accessed on 31 August 2025).

[141] *UN General Assembly*: Transforming Our World: The 2030 Agenda for Sustainable Development, 25 September 2015 (A/RES/70/1).

between human rights and the principle of the intergenerational equity is strong. In the very heart of the principle of intergenerational equity is the protection of the human rights.

But sustainable development, as notified by Brown Weiss,[142] is inherently an intergenerational question as well as intragenerational question. Although we can find some agreement about the elements of the intergenerational equity (although at the same time we any binding international legal instrument defining it), there is no general agreement on the definition of intragenerational equity, as equity among the peoples today.

2. Human rights in core of the principle of intergenerational equity

The European Convention on Human Rights (ECHR)[143] does not cover any specific environmental human rights. However, European Court of Human rights (ECtHR) based on specific rights as prohibition of inhuman or degrading treatment or right to respect for private and family life has interpreted different rights to provide for some kinds of environmental protection.[144] The ECtHR has found a positive obligation to take preventive measures against environmental disasters resulting from the right to life granted in the art. 2 ECHR,[145] however, without reference to the principle of intergenerational equity.

Just recently, the principle of intergenerational equity was in core of the ECtHR decision in case Verein KlimaSeniorinnen

---

[142] BROWN WEISS, Edith: In Fairness to Future Generations and Sustainable Development. In: *American University International Law Review* 8, no. 1, 1992, p. 19.

[143] *Convention for the Protection of Human Rights and Fundamental Freedoms*, 1950. Online: https://www.echr.coe.int/documents/d/echr/Convention_ENG (accessed on 31 August 2025).

[144] ECtHR: Factsheet - Environment and the European Convention on Human Rights, April 2024. Online: https://www.echr.coe.int/documents/d/echr/fs_environment_eng (accessed on 31 August 2025).

[145] See: Öneryıldız v. Turkey, application no. 48939/99, 30 November 2004, para. 101; or Özel and others v. Turkey, applications no. 14350/05, 15245/05 and 16051/05, para. 173.

Schweiz and Others v. Switzerland.[146] In this case, the applicants[147] have argued for a violation of arts. 2, 8, 6 and 13 of the European Convention on Human Rights concerning their rights to life, respect for private and family life, a fair trial and an effective remedy. The arguments laid on three main complaints. First, Switzerland's inadequate climate policies violate the women's right life and health under arts. 2 and 8 of the ECHR; second, the Swiss Federal Supreme Court's rejected their case on arbitrary grounds, in violation of the right to a fair trial under art. 6; and the third, the Swiss authorities and courts did not deal with the content of their complaints (authorities failed to address claims), in violation of the right to an effective remedy according to the art. 13. The applicants argued that based on the failure to adopt the necessary legislative and administrative framework to do its share to prevent a global temperature increase of more than 1.5°C above pre-industrial levels, the Swiss government failed to protect their rights to life and private life (arts. 2 and 8 ECHR). The core of the argument was that the Switzerland is failing to fulfil its positive obligations under the ECHR, since the state is not doing everything in its power to prevent a global temperature rise of more than 1.5°C and thereby is also failing to effectively protect the applicants. Increasing temperatures owed to climate change result in severe health risks and increased mortality, especially for older women, including the applicants. From the view of the international environmental law, the subject matter of the proceedings was a complaint concerning the failure of the Swiss national authorities to implement international conventions responding to climate change.

In the position of the applicants was the group of four individual elderly women (over 80) and an association of senior women (Senior Women for Climate Protection Switzerland) who argued

[146] *Verein KlimaSeniorinnen Schweiz and Others v. Switzerland* [GC], no. 53600/20, 9 April 2024.
[147] Ettlersuter: New application: Klimaseniorinnen v Switzerland and request under Rule 41, Zurich, 26 November 2020 (application form). Online: https://www.klimaseniorinnen.ch/wp-content/uploads/2020/11/201126_Application_ECtHR_KlimaSeniorinnen_extract_anonymised-2.pdf (accessed on 31 August 2025).

that climate change increases health risks and mortality. Their key argument was that Switzerland failed to adopt laws and measures to help prevent temperature rise beyond 1.5°C, breaching arts. 2 and 8., so the Switzerland allegedly failed to meet its duty under the ECHR to protect applicants from climate change effects as the Swiss authorities didn't implement relevant international climate agreements. On the other side, the Switzerland denied causality between its actions and climate impacts. Causality was the main argument for the qualification of the victim status of the applicants under Art. 34 ECHR, mainly causal link between the alleged omissions of Switzerland and the effects of global warming. Such required causal link was denied by Switzerland, due to climate change being a global phenomenon and the State's low intensity of greenhouse gas emissions. In relation to admissibility, the Switzerland argued that the claim constituted an *actio popularis* and that the ECHR regime was not suited to offer general protection against climate change.

The case was examined by the ECtHR's Grand Chamber of 17 judges on account of the fact that the case raises a serious question affecting the interpretation of the Convention (Art. 30 ECHR). [148] The Court found that Article 8 of the Convention encompasses a right to effective protection by the State authorities from the serious adverse effects of climate change on lives, health, well-being and quality of life. Therefore, the Switzerland failed to comply with its positive obligations under the Convention concerning climate change, with critical gaps in establishing a relevant domestic regulatory framework, including through a carbon budget or national GHG emissions limitations. Switzerland had also failed to meet its past GHG emission reduction targets. Moreover, national authorities enjoy wide discretion concerning the implementation of legislation and measures. The Court held that the Swiss authorities had not acted in time and in an appropriate way to devise, develop,

[148] *Columbia Law School: Sabin Center for Climate Change Law*: Climate Litigation Database: KlimaSeniorinnen v Switzerland (ECtHR). Online: https://climatecasechart.com/non-us-case/union-of-swiss-senior-women-for-climate-protection-v-swiss-federal-council-and-others/ (accessed on 31 August 2025).

and implement relevant legislation and measures in this case. In the para. 104 of the judgment, the Court pointed out that according to the preamble of Paris Agreement, climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity. In this light, the damaging effects of climate change raise an issue of intergenerational burden-sharing and impact most heavily on various vulnerable groups in society, who need special care and protection from the authorities (para. 410). In the specific context of climate change, intergenerational burden-sharing assumes particular importance both regarding to the different generations of those currently living and regarding to future generations. While the legal obligations arising for States under the ECHR extend to those individuals currently alive who, at a given time, fall within the jurisdiction of a given Contracting Party, it is clear that future generations are likely to bear an increasingly severe burden of the consequences of present failures and omissions to combat climate change and that, at the same time, they have no possibility of participating in the relevant current decision-making processes. By their commitment to the United Nations Framework Convention on Climate Change (UNFCCC),[149] the States Parties have undertaken the obligation to protect the climate system for the benefit of present and future generations of humankind (Art. 3 UNFCCC). This obligation must be viewed in the light of the already existing harmful impacts of climate change, as well as the urgency of the situation and the risk of irreversible harm posed by climate change. In the present context, having regard to the prospect of aggravating consequences arising for future generations, the

[149] *UN: United Nations Framework Convention on Climate Change, 1992* (FCCC/INFORMAL/84. GE.05-62220 (E) 200705). Online: https://unfccc.int/resource/docs/convkp/conveng.pdf (accessed on 31 August 2025).

intergenerational perspective underscores the risk inherent in the relevant political decision-making processes, namely that short-term interests and concerns may come to prevail over, and at the expense of, pressing needs for sustainable policy-making, rendering that risk particularly serious and adding justification for the possibility of judicial review (para. 420).

3. Principle of intergenerational equity in international case law

The protection environment is consistently strengthened by the judicial activities of the International Court of Justice. Although ICJ did not explicitly referred the principle of intergenerational equity as legal basis within its dispute resolution activities, in its advisory opinion *Nuclear Weapons*,[150] ICJ stated that the environment is the living space, the quality of life and the very health of human beings, including generations unborn. ICJ has explicitly paid attention the rights of the future generations when assessing the ability of the nuclear weapons to cause damage to generations to come (para. 36). However, the principle of intergenerational equity or the reference to its significance is often within the core of argumentation of ICJ judge´s declarations, separate or dissenting opinions. Judge Weeramantry in his dissenting opinion[151] to the judgment in case *Nuclear Weapons* stressed out important role of ICJ as principal judicial organ of the United Nations empowered to state and apply international law with an authority matched by no other tribunal which must, in its jurisprudence, pay due recognition to the rights of future generations. He also mentioned couple of international treaties that expressly incorporate the principle of protecting the natural environment for future generations and states obligations (p. 455).

[150] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I. C.J. Reports 1996, p. 226.
[151] *ICJ:* Threat or Use of Nuclear Weapons (Diss. Op. Weeramantry), p. 455. Online: https://www.icj-cij.org/sites/default/files/case-related/95/095-19960708-ADV-01-12-EN.pdf (accessed on 31 August 2025).

In other case, *Nuclear Tests*,[152] judge Weeramantry continued again in his dissenting opinion[153] by identifying the concept of intergenerational rights based on the "important and rapidly developing principle of contemporary environmental law. the principle of intergenerational equity... Having regard to the information ... that the half-life of a radioactive by-product of nuclear tests can extend to over 20,000 years, this is an important aspect that an international tribunal cannot fail to notice ...this Court must regard itself as a trustee of those rights in the sense that a domestic court is a trustee of the interests of an infant unable to speak for itself. If this Court is charged with administering international law, and if this principle is building itself into the corpus of international law, or has already done so, this principle is one which must inevitably be a concern of this Court... New Zealand's complaint that its rights are affected does not relate only to the rights of people presently in existence. The rights of the people of New Zealand include the rights of unborn posterity. Those are rights which a nation is entitled, and indeed obliged, to protect." Moreover, judge Palmer is his dissenting opinion[154] quoted Brown Weiss noting that "each generation is both a custodian or trustee of the planet for future generations and a beneficiary of its fruits. This imposes obligations upon us to care for the planet and gives us certain rights to use it."[155]

Obligations of states in relation to our planet are in the heart of discussion of international community over last decade. In 2023,

---

[152] *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Courts Judgment of 20 December 1974 in the Nuclear Tests* (New Zealand v. France) Case, I. C. J. Reports 1995, p. 288.
[153] *ICJ:* Request for an examination (Diss. Op. Weeramantry), p. 341. Online: https://www.icj-cij.org/sites/default/files/case-related/97/097-19950922-ORD-01-05-EN.pdf (accessed on 31 August 2025).
[154] ICJ: Request for an examination (Diss. Op. Palmer), p. 420. Online: https://www.icj-cij.org/sites/default/files/case-related/97/097-19950922-ORD-01-07-EN.pdf (accessed on 31 August 2025).
[155] For more references to principle of intergenerational equity in ICJ case law see: *Pulp Mills on the River Uruguay* (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010, p.14; or *Whaling in the Antarctic (Australia v. Japan: New Zealand intervening), Judgment*, I.C.J. Reports 2014, p. 226.

General Assembly requested ICJ for advisory opinion on following questions:

a) What are the obligations of States under international law to ensure the protection of the climate system and other parts of the environment from anthropogenic emissions of greenhouse gases for States and for present and future generations?

(b) What are the legal consequences under these obligations for States where they, by their acts and omissions, have caused significant harm to the climate system and other parts of the environment, with respect to:

(i) States, including, in particular, small island developing States, which due to their geographical circumstances and level of development, are injured or specially affected by or are particularly vulnerable to the adverse effects of climate change?

(ii) Peoples and individuals of the present and future generations affected by the adverse effects of climate change?".

In the request, the General Assembly[156] specifically identified the sources to be taken into account: Charter of the United Nations, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the United Nations Framework Convention on Climate Change, the Paris Agreement, the United Nations Convention on the Law of the Sea, the duty of due diligence, the rights recognized in the Universal Declaration of Human Rights, the principle of prevention of significant harm to the environment and the duty to protect and preserve the marine environment.

In 2025, ICJ delivered its advisory opinion[157] unanimously in each part of its decision. Without need to examine the whole opinion of the court, in relation to the principle of intergenerational

[156] *UN General Assembly:* Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change, 4 April 2023 (A/RES/77/276).
[157] *Obligations Of States in Respect of Climate Change*, 23 July 2025, General List No. 187, I.C.J. Advisory Opinion.

equity could be mentioned part of the opinion discussing its role as the applicable law. Firstly, ICJ clarified the function of the principle of equity. It is to derive an equitable solution as appropriate from applicable law, not to displace the law or to exceed its limits (equity *infra legem*) (para. 153). Subsequently, as many participants on proceedings invoked intergenerational equity, the ICJ noted undisputable relevance for the obligations in respect of climate change, although stressing out its different understandings between the parties to the proceedings. In the field of climate change, ICJ interconnected principle of intergenerational equity to principle formulated in the art. 3 para.1 of UNFCCC ("*The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities*.") and acknowledgement of the state parties of Paris Agreement in its preamble that *the climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity*. (para. 155)

In the court´s view, the principle of intergenerational equity embodies the idea that present generations are trustees of humanity tasked with preserving dignified living conditions and transmitting them to future generations. Climate change, especially the effects of the global warming, threatens ecosystems, biodiversity and livelihood, health and well-being of current and future generations (para. 156). According to considerations of ICJ, intergenerational equity is a manifestation of equity in the general sense with the legal significance as a guide for the interpretation of applicable rules. Same as the equity, intergenerational equity must play role *infra legem*. Due regard for the interests of future generations and the long-term implications of conduct are

equitable considerations that need to be considered where States contemplate, decide on and implement policies and measures in fulfilment of their obligations under the relevant treaties and customary international law (para. 157). Therefore, the ICJ conclude that the principle of intergenerational equity, together with the principles of sustainable development, common but differentiated responsibilities and respective capabilities, equity and the precautionary approach are applicable as guiding principles for the interpretation and application of the most directly relevant legal rules (para. 161).[158] Moreover, the ICJ stressed out that the principle of intergenerational equity (together with the principles of common but differentiated responsibilities and respective capabilities, the precautionary approach, sustainable development, equity as guiding principles of climate change treaties- UNFCCC, Kyoto Protocol and Paris Agreement[159]) although does not constitute standalone obligations within the climate change treaty framework, guides the interpretation of the treaty obligations (para. 178). The principle of intergenerational equity should be therefore in minds of state parties when fulfilling obligations in relation to climate change.

4. Principle of intergenerational equity in national case law

Intergenerational equity has already been in the core of the national cases of some countries dealing with activities with environmental impact in connection with the protection of life. For example, in 1987, in case *Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh*,[160] the Supreme Court of India states that

[158] These relevant legal rules are identified in para. 172, including the Charter of the United Nations, the UNFCCC, the Kyoto Protocol, the Paris Agreement, UNCLOS, the ozone layer treaties, the Biodiversity Convention, the Desertification Convention, the customary duty to prevent significant harm to the environment and the duty to co-operate for the protection of the environment, and international human rights law.

[159] See art. 3 para 1. of UNFCCC and preambulas of the Kyoto Protocol and Paris Agreement.

[160] *Supreme Court of India*: Rural Litigation And Entitlement ... vs State Of U.P. & Ors on 12 March, 1985 (1985 AIR 652, 1985 SCR (3) 169, AIR 1985 SUPREME

it has always to be remembered that environmental assets are permanent assets of mankind and are not intended to be exhausted in one generation. Ten years later, in 1997, in case *S. Jagannath v. Union of India*,[161] known as a shrimp farming culture case, the same Supreme Court of India ruled in relation to pollution caused by shrimp farming culture industries in coastal areas that there must be an Environmental Impact Assessment (EIA) before granting permission to install commercial shrimp farms with the consideration of the inter-generational equity.

However, one of the most interesting of current times is the case of *Do-Hyun Kim et al. v. South Korea*[162] delivered on 29 August 2024. It´s significance lies in fact that it was the decision of the South Korean Constitutional Court whose judges creatively linked the constitutional principle of statutory reservation to the international environmental law principle of intergenerational equity. The case begun in 2020 when a group of 19 young South Koreans filed a constitutional complaint against the government's climate policies. In the heart of the case was Framework Act on Carbon Neutrality and Green Growth for Coping with Climate Crisis (Carbon Neutrality Framework Act), first introduced in 2010 and later revised to align with the Paris Agreement's goal of pursuing efforts to limit global warming to 1.5°C above pre-industrial levels.[163] The South Korean Constitutional Court's ruling addressed Art. 8, Sec. 1 of the Carbon Neutrality Framework Act which prescribes that the government shall set a national mid- and

COURT 652, 1985 UJ (SC) 594, (1985) 2 CURCC 70, 1985 (2) SCC 431). Online: https://indiankanoon.org/doc/1949293/ (accessed on 31 August 2025).

[161] *Supreme Court of India*: S. Jagannath vs Union Of India & Ors on 11 December, 1996 (AIR 1997 SUPREME COURT 811, 1997 (2) SCC 87, 1997 AIR SCW 635, (1997) 1 KER LT 32, 1997 (1) CRIMES 189, (1997) 1 JT 160 (SC), 1997 (1) JT 160, (1997) 1 SUPREME 575). Online: https://indiankanoon.org/doc/507684/ (accessed on 31 August 2025).

[162] *Columbia Law School*: Sabin Center for Climate Change Law: Climate Litigation Database: Do-Hyun Kim et al. v. South Korea. Online: https://www.climatecasechart.com/document/do-hyun-kim-et-al-v-south-korea_2dd5 (accessed on 31 August 2025).

[163] *EJIL:Talk!* NISSEN, Aleydis: Green Court – South Korean Constitutional Court Rules Landmark Climate Judgement (April 29, 2025). Online: https://www.ejiltalk.org/green-court-south-korean-constitutional-court-rules-landmark-climate-judgement/ (accessed on 31 August 2025).

long-term greenhouse gas reduction target to reduce national greenhouse gas emissions by a ratio prescribed by Presidential Decree not less than 35 percent from the 2018 level by 2030. The key issue was whether the greenhouse gas reduction targets and plans infringe upon complainants' right to live in a healthy and pleasant environment, as outlined in Art. 35 of South Korea's Constitution from 1948.

The main argument of complainants was that the climate policies and targets of government were insufficient and addressed no clear measures for emissions reductions beyond 2030, although the commitment of the South Korea to carbon neutrality by 2050. They argued that the targets and plans excessively shift the burden of reduction onto future generations.

The Constitutional Court unanimously ruled in favour of the complainants on this point, agreeing that the absence of clear emissions reduction targets beyond 2030 violated Art. 35 of the Constitution. The lack of legally binding measures to reduce emissions between 2030 and 2049 placed an excessive burden on future generations. The Court explained that two principles in South Korean constitutional law were violated by Art. 8, Sec. 1 of the Carbon Neutrality Framework Act. These were the principle of prohibition of insufficient protection, means that the legislature and executive powers should provide appropriate and enough protective measures at a minimum. Court accounted for international standards and scientific facts. The Court referred to UNFCCC, the Paris Agreement and other relevant international standards and the principle of statutory reservation. It directly referred to international law to assess both principles. According to Won,[164] this was rather exceptional, as the Court usually prefers to incorporate international law as interpretative tools. The Court

[164] WON, Yoomin: The role of international human rights law in South Korean constitutional court practice: An empirical study of decisions from 1988 to 2015. In*: International Journal of Constitutional Law*, Vol. 16, No. 2, April 2018, p. 596–624. ISSN 1474-2659. Online: https://academic.oup.com/icon/article/16/2/596/5036484 (accessed on 31 August 2025).

decided that the Carbon Neutrality Framework Act would need to be amended accordingly by March 2026. As a response, in February 2025 the South Korean government, under former acting President Choi Sang-mok, announced its ambition to design a long-term plan to achieve carbon neutrality by 2050.[165]

We can agree with opinion of Nissen, that we can see the trend where courts increasingly connect climate change and human rights, to fill voids left by the international agreements. National court cases do not allow one country to blame other countries for a global climate issue. Moreover, in comparison with the ECtHR willing to hear the climate claim from the organisation, not from individual claimants, the South Korean Constitutional Court was willing to hear the case filled by the individuals. It´s decision confirms and justifies direct impact of climate change on fundamental rights (constitutional and international) of present and future generations, breaching the principle of intergenerational equity.

Conclusion

In summary, despite states' official commitments to climate neutrality, the reliance on vague or "soft law" commitments has made enforcing critical climate action difficult. This judicial vacuum is now being rapidly filled by national and international courts. The burgeoning field of climate litigation effectively links the physical impacts of climate change to the violation of fundamental human rights, confirming that the protection of human rights is the central principle of climate action. The landmark judgment by the South Korean Constitutional Court exemplifies a powerful global trend: courts are actively stepping in to uphold accountability where international political agreements fall short. By consistently applying the principle of intergenerational equity—a concept now recognized as a key

[165] For more see: KEI: JONES, Randall S.: South Korea's Efforts to Adapt to the Impact of Climate Change (February 27, 2025). Online: https://keia.org/the-peninsula/south-koreas-efforts-to-adapt-to-the-impact-of-climate-change/ (accessed on 31 August 2025).

guiding principle by the International Court of Justice—judicial systems are providing the necessary clarity to states' climate obligations. Ultimately, the growing body of national and international case law underscores the profound and growing importance of intergenerational equity as the crucial framework for measuring state compliance. It is undeniable that the judiciary has become a vital catalyst in shaping global environmental governance, ensuring that the rights of present and future generations are protected against the undeniable threats posed by the climate crisis.

List of bibliography

1. BOYLE, Alan - REDGWELL, Catherine: *Birnie, Boyle & Redgwell´s International Law and the Environment*, Fourt Edition. Oxford: Oxford University Press, 2021, 866 p. ISBN 978-0-19-959401-6.

2. BROWN WEISS, Edith: Implementing intergenerational equity. In: FITZMAURICE, Malgosia- ONG, David, M., MERKOURIS, Panos: *Research Handbook on International Environmental Law*. Cheltenham: Edwar Elgar, pp. 100- 116. ISBN 978-1-84720-124-9.

3. BROWN WEISS, Edith: In Fairness to Future Generations and Sustainable Development. In: *American University International Law Review* 8, no. 1, 1992, pp. 19-26.

4. BROWN WEISS, Edith: Intergenerational Equity. In: R Wolfrum (ed.) The Max Planck Encyclopedia of Public International Law, Oxford: Oxford University Press, 2012, pp. 287-294. ISBN 978-0-19-929168-7.

5. *Columbia Law School*: Sabin Center for Climate Change Law: Climate Litigation Database: Do-Hyun Kim et al. v. South Korea. Online: https://www.climatecasechart.com/document/do-hyun-kim-et-al-v-south-korea_2dd5 (accessed on 31 August 2025).

6. *Columbia Law School: Sabin Center for Climate Change Law*: Climate Litigation Database: KlimaSeniorinnen v Switzerland (ECtHR). Online: https://climatecasechart.com/non-us-case/union-of-swiss-senior-women-for-climate-protection-v-swiss-federal-council-and-others/ (accessed on 31 August 2025).

7. *Convention for the Protection of Human Rights and Fundamental Freedoms*, 1950.

8. ECtHR: Factsheet - Environment and the European Convention on Human Rights, April 2024. Online: https://www.echr.coe.int/documents/d/echr/fs_environment_eng (accessed on 31 August 2025).

9. *EJIL:Talk!* NISSEN, Aleydis: Green Court – South Korean Constitutional Court Rules Landmark Climate Judgement (April 29, 2025). Online: https://www.ejiltalk.org/green-court-south-korean-constitutional-court-rules-landmark-climate-judgement/ (accessed on 31 August 2025).

10. Ettlersuter: New application: Klimaseniorinnen v Switzerland and request under Rule 41, Zurich, 26 November 2020 (application form). Online: https://www.klimaseniorinnen.ch/wp-content/uploads/2020/11/201126_Application_ECtHR_KlimaSeniorinnen_extract_anonymised-2.pdf (accessed on 31 August 2025).

11. ICJ: Request for an examination (Diss. Op. Palmer), p. 420. Online: https://www.icj-cij.org/sites/default/files/case-related/97/097-19950922-ORD-01-07-EN.pdf (accessed on 31 August 2025).

12. *ICJ:* Request for an examination (Diss. Op. Weeramantry), p. 341. Online: https://www.icj-cij.org/sites/default/files/case-related/97/097-19950922-ORD-01-05-EN.pdf (accessed on 31 August 2025).

13. *ICJ:* Threat or Use of Nuclear Weapons (Diss. Op. Weeramantry), p. 455. Online: https://www.icj-

cij.org/sites/default/files/case-related/95/095-19960708-ADV-01-12-EN.pdf (accessed on 31 August 2025).

14. KEI: JONES, Randall S.: *South Korea's Efforts to Adapt to the Impact of Climate Change* (February 27, 2025). Online: https://keia.org/the-peninsula/south-koreas-efforts-to-adapt-to-the-impact-of-climate-change/ (accessed on 31 August 2025).

15. *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I. C.J. Reports 1996, p. 226.

16. *North Sea Continental Shelf*, Judgment, I.C.J. Reports 1969, p. 3.

17. *Obligations Of States in Respect of Climate Change*, 23 July 2025, General List No. 187, I.C.J. Advisory Opinion.

18. Öneryıldız v. Turkey, application no. 48939/99, 30 November 2004, para. 101.

19. Özel and others v. Turkey, applications no. 14350/05, 15245/05 and 16051/05, para. 173.

20. *Paris Agreement* adopted 12 December 2016, UN Treaty Series, vol. 3156, p. 150.

21. *Pulp Mills on the River Uruguay* (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010, p.14.

22. REDGWELL, Catherine: Principles and Emerging Norms in International Law: Intra- and Inter- Generational equity. In: CLARLARNE, Cinnamon P., GRAY, Kevin R., TARASOFSKY, Richard G. (eds.): *The Oxford Handbook of International Climate Change Law*. Oxford: Oxford University Press, 2016, pp. 190- 201. ISBN 978-0-19-968460-1.

23. *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Courts Judgment of 20 December 1974 in the Nuclear Tests* (New Zealand v. France) Case, I. C. J. Reports 1995, p. 288.

24. SPIJKERS, Otto: Intergenerational Equity and the Sustainable Development Goals. In: *Sustainability*. 2018, 10, no.11, 3836, ISSN 2071-1050.

25. *Supreme Court of India*: Rural Litigation And Entitlement ... vs State Of U.P. & Ors on 12 March, 1985 (1985 AIR 652, 1985 SCR (3) 169, AIR 1985 SUPREME COURT 652, 1985 UJ (SC) 594, (1985) 2 CURCC 70, 1985 (2) SCC 431).

26. *Supreme Court of India*: S. Jagannath vs Union Of India & Ors on 11 December, 1996 (AIR 1997 SUPREME COURT 811, 1997 (2) SCC 87, 1997 AIR SCW 635, (1997) 1 KER LT 32, 1997 (1) CRIMES 189, (1997) 1 JT 160 (SC), 1997 (1) JT 160, (1997) 1 SUPREME 575).

27. The *Legal Quotient*: Hemant More: Intergenerational Equity Principle of Sustainable Development (September 14, 2024). Online: https://thelegalquotient.com/social-laws/environmental-laws/intergenerational-equity-principle/4819/ (accessed on 31 August 2025).

28. *UN*: Report of the Secretary-General: Intergenerational solidarity and the needs of future generations, 15 August 2013 (A/68/322), para. 24.

29. *UN*: Report of the UN Conference on Environment and Development, Rio de Janeiro, 3- 14 June 1992 (A/CONF.151/26/Rev.1(vol. I).

30. UN: *Report of the UN Conference on the Human Environment, Stockholm, 5- 16 June 1972* (A/CONF.48/14/Rev.1)

31. *UN*: *United Nations Conference on Environment and Development, Rio de Janeiro*, Brazil, 3-14 June 1992. https://www.un.org/en/conferences/environment/rio1992 (accessed on 31 August 2025).

32. *UN:* United Nations Conference on the Human Environment, 5-16 June 1972, Stockholm. Online: https://www.un.org/en/conferences/environment/stockholm1972 (accessed on 31 August 2025).

33. *UN General Assembly*: Report of the World Commission on Environment and Development: "Our common future", 4 August 1987 (A/42/427).

34. *UN General Assembly:* Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change, 4 April 2023 (A/RES/77/276).

35. *UN General Assembly: Report of the World Commission on Environment and Development: Our Common Future,* 4 August 1987 (A/42/427) p. 24, para. 27.

36. *UN General Assembly*: Transforming Our World: The 2030 Agenda for Sustainable Development, 25 September 2015 (A/RES/70/1).

37. *United Nations Framework Convention on Climate Change, 1992* (FCCC/INFORMAL/84. GE.05-62220 (E) 200705).

38. *Verein KlimaSeniorinnen Schweiz and Others v. Switzerland* [GC], no. 53600/20, 9 April 2024.

39. *Whaling in the Antarctic (Australia v. Japan: New Zealand intervening), Judgment*, I.C.J. Reports 2014, p. 226.

40. WON, Yoomin: The role of international human rights law in South Korean constitutional court practice: An empirical study of decisions from 1988 to 2015. In*: International Journal of Constitutional Law*, Vol. 16, No. 2, April 2018, pp. 596–624. ISSN 1474-2659.

II. TRANSBOUNDARY ENVIRONMENTAL HARM AND LEGAL RESPONSIBILITY: STATES AND CORPORATIONS IN INTERNATIONAL LAW

2.1. Transboundary Environmental Harm and State Responsibility: Contribution of the International Law Commission

Prof. JUDr. Pavel Šturma, DrSc.

Charles University, Faculty of Law, and CEVRO University in Prague

sturma@prf.cuni.cz

Introduction

The contribution attempts to show how the extremely complex theoretical problem of international and civil liability for environmental damage is reflected in the practical codification efforts undertaken by the UN International Law Commission. It starts from the explanation of distinction between two concepts, i.e., State responsibility for internationally wrongful acts and International liability for injurious consequences of activities not prohibited by international law. In this context, the author recalls the origins of the concept of "international liability" and its subsequent development. The brief survey of applicable sources of international law and State practice aims at explaining why and how the originally ambitious project of the International Law Commission evolved over time. Next, the chapter presents two outcomes of the ILC´s work, i.e., Draft articles on prevention of transboundary harm and Draft principles on allocation of harm. The relatively modest and general nature of the outcomes of the long-term work of the ILC thus opens the question on whether State responsibility for wrongful acts could better serve the purpose of remedy for transboundary environmental harm. Therefore, the discussion includes the concept of due diligence.

1. Distinction between State responsibility and international liability

Before addressing the key issues of responsibility or liability for transboundary environmental harm, it is important to explain the difference between two concepts, i.e., State

responsibility and international liability for injurious consequences of acts not prohibited by international law. The latter topic, as well as the distinction between the concepts of "responsibility" and "liability", was the result of the work of the International Law Commission. It has been the subject of a number of scholarly studies and critical commentaries since its inclusion on the ILC agenda in 1978.[166]

In short, the distinction between "responsibility" and "liability" refers back to the discussion of the ILC on its older and classical topic, which is the responsibility of States for internationally wrongful acts, in 1973. At that time, the Commission, under the guidance of professor Roberto Ago, then Special Rapporteur for the topic, decided to delimitate the terms. In connection with the discussion of the draft articles on State responsibility, the Commission agreed to use the term "State responsibility" for responsibility for unlawful conduct, while retaining "international liability" to designate responsibility for the harmful consequences of activities not prohibited by international law. Consequently, the term "responsibility" has been reserved to State responsibility for wrongful acts. It is governed by rules of general, customary international law. The nature of State responsibility is that the commission of internationally wrongful acts gives rise to secondary obligations. These obligations include the obligation of cessation of an internationally wrongful conduct and full reparation of all material and non-material (moral) damage caused by that act.

By contrast, international liability is based on primary obligations, set by special treaty regimes. The key elements are that it concerns damage arising from not prohibited, i.e., lawful

[166] See BOYLE, Alan, Liability for Injurious Consequences of Acts Not Prohibited by International Law, in: CRAWFORD, James, and others (eds.), *The Law of International Responsibility*, Oxford: Oxford University Press, 2021, p. 95; AKEHURST, Michael, International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law, *Netherlands Yearbook of International Law*, vol 16 (1985), p. 3; HANDL, Günter, Liability as an Obligation Established by a Primary Rule of International Law, *Netherlands YIL*, vol. 16 (1985), p. 49; MAGRAW, Daniel, Transboundary Harm: the ILC' s Study of International Liability, *American Journal of International Law*, vol. 80 (1986), p. 305.

activities, which implies the possibility of continuation (rather than cessation) of such activities. The obligations of States under this regime (liability) include, in addition to prevention and mitigation of harm, only partial compensation for material damage.

The original idea was to elaborate draft articles on "strict" liability in parallel with the codification of rules on State responsibility in Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA). It also appeared in the context of circumstances precluding wrongfulness, which is one chapter of Part One of ARSIWA, in particular in relation to Article 35 of draft articles adopted on first reading.[167] In fact, this article was just saving clause (reservation) on compensation in the event of certain circumstances precluding wrongfulness. In spite of this general wording, its plausible interpretation is that preclusion of preclusion of the given act means that compensation would not be paid as a legal consequence of responsibility but rather as a matter of a primary obligation (liability).

2. International liability: origins of the concept and its changes

While the "liability" topic was conceived in broad terms (any activities not prohibited by international law), its main area of application is seen in addressing transboundary environmental harm. At the beginning of its work, the ILC aimed at drafting general rules.[168] Facing difficulties, the ILC decided to concentrate on prevention of and compensation for transboundary harm to persons or property or to the environment of another State.[169]

The first Special Rapporteur, R.Q. Quentin-Baxter, sought to avoid basing the draft articles on the concept of "causal" or *strict liability* (*responsabilité causale*), since such a rule does not yet

[167] See Yearbook of the ILC, 1980, vol. II (Part Two), p. 34: Article 35. Reservation as to compensation for damage: "Preclusion of the wrongfulness of an act of a State by virtue of the provisions of articles 29, 31, 32 or 33 does not prejudge any question that may arise in regard to compensation for damage caused by that act."
[168] See Yearbook of the ILC, 1980, vol. II (Part One), p. 160, paras. 138-139.
[169] Draft Article 2, in Report of the ILC, 2001, doc. A/56/10, p. 151.

exist in general international law, or - at best - its existence is questionable.[170] The Special Rapporteur attempted to circumvent this objection, which was also voiced more than once in the Commission, by taking as a starting point the obligation of the source State to eliminate, minimize and compensate for transboundary harm.[171] According to this concept, States were to provide each other with information on activities in which the possibility of transboundary damage could be assumed and to negotiate a regime acceptable to both parties, but failure to comply with these obligations did not lead to responsibility for wrongful conduct.

The second Special Rapporteur, J. Barboza, adopted the basic conceptual framework of the proposal, but his approach differed in two important respects: by placing greater emphasis on causal liability as the primary obligation, which is "just a legal technique to achieve a certain result",[172] and by recognizing the parallel responsibility of States for violations of the obligations of notification, negotiation and prevention of damage.[173] J. Barboza decided to base his proposal not on a single basis, but on the following three premises: (1) Each State must have freedom of action within its territory compatible with the sovereignty of other States; (2) States must respect the sovereignty and equality of other States; (3) the innocent victim of harmful consequences crossing borders should not be left alone to bear the losses.[174]

The basic idea in placing the topic of "international liability" on the ILC agenda and in the Draft Articles (1996) was the obligation of a State to provide compensation to other States for significant transboundary harm. Such an obligation (primary) should apply precisely where State responsibility for internationally unlawful acts cannot be inferred because the activity in question is not

[170] See BARBOZA, Julio, La responsabilité „causale" à la Commission du Droit International, *AFDI*, vol. XXXIV, 1988, p. 516.
[171] See YILC, 1983, vol. II (Part One), p. 220, § 63.
[172] BARBOZA, Julio, op. cit., p. 516.
[173] See YILC, 1986, vol. II (Part One), s. 152-154, §§ 34-41.
[174] UN Doc. A/CN.4/413 (1988), §§ 85-86.

prohibited, the conduct of business entities is not attributable to the State, or unforeseeable damage has occurred despite the usual prevention and due diligence on the part of the State. This model of strict liability of States is embodied in the Convention on International Liability for Damage Caused by Space Objects (1971).[175]

The first version of 22 draft articles was provisionally adopted in 1996.[176] They were based on three elements: prevention, cooperation, and strict liability for damage. Already in the first phase of its work on the original project, the International Law Commission had to narrow down the overly broad and vague category of "activities not prohibited by international law" and decide whether or which consequences of "international responsibility" (i.e. the rights and obligations of States) would arise already with the risk of damage or only with its actual occurrence, or to define this damage in more detail. The result was a certain compromise, which was presented by the Commission's working group in the form of a consolidated draft of articles in 1996. According to the then proposed article 1, the articles apply to (a) activities not prohibited by international law that involve the risk of causing significant transboundary harm, but also (b) other activities not prohibited by international law that do not involve the risk referred to in sub (a) but nevertheless cause such harm. In both cases, it is only the damage that the said activities cause through their *physical consequences*.

The definitions of risk and damage contained in Article 2 of the proposal (1996) are also important. According to them, the "risk of causing significant transboundary harm" includes a low probability of disastrous harm and a high probability of other significant harm. In this case, the Commission was inspired by the Code of Conduct on Accidental Transboundary Pollution of Inland Waters, adopted by the United Nations Economic Commission for Europe (UNECE)

[175] See UN GA Res. 2777 (XXVI), 1971.
[176] See Report of the working group and their draft articles, in: Yearbook of the ILC, 1996, vol. II (Part One), pp. 100-132.

in 1990.[177] "Transboundary harm" then means damage caused in the territory or other places under the jurisdiction or control of a State other than the State of origin, whether or not the States concerned share a common border.[178]

Unlike the State responsibility for failure to prevent a certain harmful event, the State will not be relieved of its obligation to compensate even if it proves that it was not in its power to prevent the damage by using all the means at its disposal. This follows from the existence of two parallel primary obligations, where the impossibility of fulfilling one does not affect the duration of the other. At the same time, this shows the difference between liability based on *strict liability* and State responsibility based on the duty of prevention (*due diligence*), which some authors argue against the validity of the Commission's proposal.[179]

3. Law and practice relating to liability for transboundary environmental harm

Even though the Commission narrowed the initially very broad concept of international liability for damage resulting from acts not prohibited by international law to the issue of transboundary environmental harm, it still had to face problems with identifying relevant sources of law and State practice.

The UN Declaration of the Conference on the Human Environment (Stockholm, 1972) already stated in its Principle 22 that "States shall cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction."[180] If we disregard the legally non-binding,

[177] UN Doc. E/ECE/1225-ECE/ENVWA/16.
[178] YILC, 1996, vol. II (Part Two), pp. 101 (text) and 107-108 (commentary).
[179] See BOYLE, Alan, State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction?" *The International and Comparative Law Quarterly*, vol. 39, no. 1, 1990, pp. 22-23.
[180] Report of the United Nations Conference on Human Environment, A/CONF.48/14/Rev.1 (1972).

recommendatory nature of this declaration, it can be concluded from the wording itself that it is at best a *pactum de contrahendo*. This means that States have yet to develop and adopt the relevant new rules.

3.1. International case law

When examining the development of international liability for damage arising from non-prohibited activities, it is necessary to take into account sources other than treaties in the given area, in particular relevant case law. There are only a few judicial and arbitration decisions, which are, however, all the more often cited in support of the so-called strict liability in international law.

(a) Corfu Channel Case

First, the *Corfu Channel* case,[181] a judgment delivered by the International Court of Justice (ICJ) in 1949, concerns the question of Albania's liability for damage caused to British warships by mines laid across the Corfu Channel in Albanian territorial waters. Since the perpetrators of the minelaying remained unknown, the ICJ focused on whether Albania knew of the existence of the minefield, which was the key issue in the case.[182] The ICJ concluded that (1) the laying of the mines could not have been carried out without Albania's knowledge, (2) that knowledge gave rise to a duty to notify the British naval force of the danger to international navigation, and (3) the failure to warn the British navy gave rise to Albania's liability under international law as internationally wrongful conduct. It is therefore clear that the often-cited statement of the obligation of each state "not to knowingly allow its territory to be used for acts contrary to the rights of other states", contained in this ICJ judgment,[183] does not necessarily constitute evidence for the existence of absolute (strict) liability for the harmful consequences of legal conduct.[184]

---

[181] I.C.J. Reports, 1949, p. 4 ff.
[182] Ibid., p. 18.
[183] Ibid., p. 22.
[184] See PINTO - DOBERNING, I.R., Liability for the Harmful Consequences of Instances of Transfrontier Pollution Not Prohibited by International Law, *Österr.*

The conclusion that the Albanian state authorities knew about the minefield does not mean accepting the theory of "fault", but rejecting the theory of "risk" or strict liability, which was clearly stated in the ICJ judgment itself.[185] In any case, however, it is not possible to infer from the analysed case that there are rules on liability for harmful consequences of non-prohibited acts in customary international law in general and for environmental harm in particular.

(b) Trail Smelter

Another case that has attracted considerable attention is the Trail Smelter arbitration award. This is probably the first international environmental dispute. It concerned agricultural and forestry damage in the United States caused by the discharge of sulphur dioxide by the private Canadian company Consolidated Mining and Smelting Co. of Canada, Ltd., headquartered in Trail, British Columbia. The US claim for damages was first raised in 1927, with a request that the dispute be referred to a joint commission under the United States-Canada Boundary Waters Treaty (1909). However, this did not reach a satisfactory result, and therefore an international arbitration tribunal was established in 1935 to decide: (a) whether damages occurred in Washington State after the date on which the original compensation was paid; (b) whether the Trail Smelter should be required to refrain from causing such damage and to what extent; (c) whether a regime for

Zeitschrift f. öffent. Recht u. Völkerrecht, vol. 38, No. 1-3, 1987, p. 116; but cf. GOLDIE, L.F.E., Concepts of strict and absolute liability and the ranking of liability in terms of relative exposure to risk, *Netherlands Yearbook of Int'l Law*, vol. 16, 1985, p. 214; GOLDIE, L.F.E. view of international environmental law. A survey of capabilities, trends and limits, in: KISS, Alexandre-Charles (ed.), *The Protection of the Environment and International Law*, Leiden, 1975, p. 70.

[185] I.C.J. Reports, 1949, p. 18: „... it cannot be concluded from the mere fact of the control exercised by a State over its territory and waters that that State necessarily knew, or ought to have known, of any unlawful act perpetrated therein, nor yet that it necessarily knew, or should have known, the authors. The fact, by itself, and apart from other circumstances, neither involves *prima facie* responsibility nor shifts the burden of proof."

monitoring emissions of pollutants should be established; and (d) whether and what compensation should be provided.[186]

It is clear that this case is directly related to environmental issues. According to the 1941 arbitration award, "under the principles of international law, as well as of the law of the United States, no State has the right to use or to permit the use of its territory of another or the properties or persons therein, when the case is of serious consequences and the injury is established by clear and convincing evidence."[187] There is no dispute that this is an important principle. On closer inspection, the Trail Smelter case no longer appears so unambiguous. First of all, the arbitral tribunal applied both international law and US domestic law (including a reference to the Supreme Court decision) on the basis of the agreement that established its jurisdiction. Furthermore, the tribunal was not supposed to rule on Canada's liability itself, but could limit itself to determining whether actual damage was caused by the smoke (in today's terminology, emissions) and determining the amount of such damage.[188] The fundamental issue of the origin of liability was already resolved by the arbitration agreement between the two States,[189] and not by an arbitration decision based on customary international law.

However, the Tribunal also established a special regime to reduce and monitor future harmful emissions and an obligation for Canada to pay compensation for accidental emissions exceeding the tolerable level. This is indeed liability for the harmful consequences of legal acts, whereas an obligation to compensate for damage caused by failure to comply with the regime would be ordinary responsibility for unlawful conduct.[190]

(c) Lac Lanoux Case

[186] See PINTO - DOBERNING, I.R., op. cit., p. 116-117
[187] R.I.A.A. (1941), vol. III, p. 1965.
[188] See GOLDIE, L.F.E., Concepts ..., op. cit., p. 215.
[189] See PINTO - DOBERNING, I.R., op. cit., p. 117.
[190] R.I.A.A. (1941), vol. III, p. 1980.

The third frequently cited case is Lac Lanoux,[191] in which an arbitral tribunal in 1957 addressed the question of whether the exploitation of the waters of the lake of the same name by France and the resulting change in the quantity of water in the Carol River in Spanish territory constituted internationally wrongful conduct and gave rise to France's responsibility for the said consequences. This case is also quite specific, as the resolution of the dispute was based on the existing Treaty of Bayonne, Article 9 of which determined that the exploitation of the waters of Lac Lanoux was permitted, provided that it did not exceed the extent necessary to satisfy actual needs. This article further stipulated that public works could be carried out by either party, provided that adequate compensation was provided.[192]

The Tribunal concluded that France would be in breach of international law only if it had failed to take all necessary preventive measures and if Spanish rights were actually affected. It further stated that "France is entitled to exercise its rights; it cannot ignore Spanish interests. Spain is entitled to demand that its rights be respected and its interests taken into account."[193] This statement is also in line with the approach of the International Law Commission on the subject under discussion.

In conclusion, it can be stated that none of the analysed cases has proven the existence of generally applicable rules on international liability for non-prohibited activities in customary international law.[194]

3.2. Other State practice

When examining whether certain customary rules already exist in a given area, it is also necessary to take into account the analysis of some relevant cases from the practice of States that have not been resolved by international judicial or arbitral bodies.

---

[191] R.I.A.A. (1957), vol. XII, p. 281 ff.
[192] Ibid., p. 289.
[193] Ibid., p. 316
[194] See also ZEMANEK, Karl, Causes and Forms of International Liability, *Studie z mezinárodního práva*, vol. 22, Praha, 1989, p. 139.

The Canadian claim in the *Kosmos 954* case deserves special attention. It was a Soviet artificial satellite with a nuclear power source (fuel cells with radioactive material) on board, which got out of control during its return and entered Canadian airspace on January 24, 1978. During its flight through the atmosphere, it disintegrated and radioactive waste partly reached the almost uninhabited territory of the Canadian provinces of the Northwest Territories, and partly also Alberta and Saskatchewan.[195] The Canadian claim is particularly notable in that it was based on the Convention on International Liability for Damage Caused by Space Objects (1972), which will be analysed in detail below, and on the general principles of international law (liability for violation of sovereignty). The said Convention was already in force at that time and both Canada and the USSR were parties to it.[196] The Soviet Union declared that it would deal with any claim for compensation in strict accordance with the Convention.[197]

In the present case, however, there was no harm to life or health or to property, so that the "damage" defined in Article I of the Convention was not fulfilled. The Canadian claim represented the costs incurred for extensive operations consisting of "locating, capturing, removing and examining the waste and cleaning up the affected areas. The aim of these operations was to determine the nature and extent of the damage caused by the waste, to limit the existing damage and to minimize the risk of further damage and to restore the affected areas to their original condition to the extent possible". Canada estimated these costs at 12 million Canadian dollars, of which it demanded that the USSR pay 6 million.[198] The Canadian claim was ultimately resolved without any mention of legal liability on the basis of a special Protocol signed in Moscow on

[195] See GRAEFRATH, Bernard, Responsibility and Damages Caused: Relationship Between Responsibility and Damages, *Recueil des Cours de l'A.D.I.*, t. 185, 1984, vol. II, p. 97.
[196] See the Canadian Note of January 23, 1979 to the Soviet Ambassador in Ottawa with Annex A (text in: BROWNLIE, Ian, *System of the Law of Nations: State Responsibility, Part I*, Oxford: Clarendon Press, 1983, pp. 97-98, 277-283).
[197] See *International Legal Materials*, vol. 18, 1979, s. 923.
[198] See GRAEFRATH, Bernard, op. cit., p. 97.

2 April 1981, Article I of which stipulated that the USSR would pay a lump sum of 3 million C$ "as a full and final settlement".[199] From the above facts, it can be concluded that it was more of an *ex gratia* payment.

Many other cases could be cited. Probably the most famous was the accident at the Soviet (now Ukrainian) Chernobyl nuclear power plant in the spring of 1986. The stirring of public opinion and the objectively conditioned need for legal regulation led to the rapid development and adoption of two important international treaties based on a Soviet initiative within the International Atomic Energy Agency (IAEA). These are the Convention on Early Notification of Nuclear Accidents (1986) and the Convention on Assistance in the Case of a Nuclear or Radiological Accident (1986), the first of which entered into force on 27 October 1986,[200] and the second on 26 February 1987.[201] On the other hand, there was no compensation for the damage (mostly indirect outside the USSR) caused by the fallout of dust with increased radiation on the territory of a number of European countries. The possibility of applying international state liability in this case proved to be completely unrealistic, as did the then Soviet proposal to start working on a draft of such a treaty.[202] However, negotiations were initiated within the IAEA aimed at developing a treaty regime of compensation for damage.[203] However, negotiations on this sensitive issue progressed much more slowly and ultimately led to an improvement in the regime of civil liability for nuclear damage with state participation (see below).

---

[199] See BROWNLIE, Ian, op. cit., p. 97.
[200] See www.iaea.org/topics/nuclear-safety-conventions/convention-early-notification-nuclear-accident
[201] See www.iaea.org/topics/nuclear-safety-conventions/convention-assistance-case-nuclear-accident-or-radiological-emergency
[202] Cf. DUPUY, Pierre-Marie, L□□tat et la réparation des dommages catastrophiques, in: L'État: F. FRANCIONI, T. SCOVAZZI (eds.), *International Responsibility for Environmental Harm*, London : Graham & Trotman, 1991, pp. 140-141; OKOWA, Phoebe, *State Responsibility for Transboundary Air Pollution in International Law*, Oxford: Oxford University Press, 2000, pp. 124-130.
[203] Cf. POLITI, Mauro, International and Civil Liability for Nuclear Damage: Some Recent Developments of State Practice, in: *La réparation des dommages catastrophiques,* Bruxelles, 1990, p. 332 ff.

3.3. Treaty regimes on liability for harmful consequences of non-prohibited activities

In the treaty practice of States, several paths can be found leading to compensation for damage beyond state borders caused by risky activities to persons, property or the environment. (1) One of them is international (strict) liability of States for damage caused by space objects. (2) Another solution is represented by conventions unifying the civil liability of operators of risky activities, in particular for nuclear damage, where, however, there is also a certain subsidiary liability of the State. (3) Another option is to concentrate civil liability exclusively on operators of activities hazardous to the environment without any participation of the State (Lugansk Convention, 1993). (4) The last category consists of conventions containing a mere *pactum de negociando* in relation to liability for damage.

(a) International liability of a State for damage caused by space objects

The only case of a multilateral treaty that provides for such a compensation obligation *de lege lata* is the Convention on the International Liability for Damage Caused by Space Objects (1972).[204] This convention is not a codification of the norms of general international law on liability. Therefore, the application of its rules is only possible between the contracting parties and only in the case of damage specified in the contract. For the purposes of this convention, the term "damage" means loss of life, bodily injury or other harm to health, or loss of or damage to property of natural or legal persons, as well as to the property of international governmental organizations (Article I(a)). It therefore concerns exclusively material damage. Environmental damage is not explicitly mentioned there, which does not mean, however, that such damage is not subject to compensation if it can be subsumed under one of the above-mentioned heads of damage.

[204] UNTS, Vol. 961, No. 13810 (1975), p. 188.

The 1972 Convention regulates the international liability of the launching State only, with compensation, the amount of which is not limited, being determined in accordance with international law and the principles of equity (Article XII). States may also bring claims for compensation on behalf of natural or legal persons, without the persons they represent having first exhausted domestic remedies (Article XI, paragraph 1). If the State of which the injured natural or legal persons are nationals has not brought a claim for compensation, the State in whose territory the damage was caused may bring a claim for compensation against the launching State. If neither of those States has brought a claim for compensation or has notified its intention to do so, another State may bring a claim against the launching State for compensation for damage caused to persons permanently resident in it (Article VIII). On the other hand, claims in favour of nationals of the launching State are excluded (Article VII (a)). If two or more States launch a space object jointly, they shall be jointly and severally liable. The State from whose territory or facility the space object is launched shall be considered a participant in the joint launch (Article V). As already mentioned, the 1972 Convention is based on the so-called strict international liability, or liability for the result borne by the State that caused the damage through its legal activity.

(b) Unification of civil liability for nuclear damage

Although a treaty regulation of strict liability along the lines of the 1972 Convention would be desirable for other cases of damage, other similar instruments have not yet been adopted. The second approach, which is based on the civil liability of the operator of the harmful activity, is somewhat more widely used, thus sidelining the issue of international liability of the State. These are special international treaties of a unifying nature, by which States unify their national civil liability laws.

Since 1960, several international treaties on civil liability for nuclear damage have been adopted, both regional[205] and open

[205] Paris Convention on Third Party Liability in the Field of Nuclear Energy (1960) and Brussels Supplementary Convention to the Paris Convention (1963); see KISS,

multilateral.[206] The most important of these instruments are undoubtedly the Paris Convention on Third Party Liability in the Field of Nuclear Energy (1960), concluded within the framework of the Organisation for Economic Co-operation and Development (OECD), and the Vienna Convention on Civil Liability for Nuclear Damage (1963), which was drawn up within the framework of the IAEA. However, even these were initially of limited importance - due to the small number of contracting parties. Therefore, a working group of experts, established on the basis of a recommendation by the IAEA Board of Governors, first attempted to harmonise the said conventions. It drew up a Joint Protocol on the Application of the Vienna Convention and the Paris Convention, which was adopted in Vienna on 21 September 1988. Its aim is to mutually extend the special liability regime under each convention to the contracting parties to the other convention and to prevent any potential conflicts resulting from the simultaneous application of both conventions.

An analysis of the above conventions shows that they are based, *mutatis mutandis*, on the same principles:

(1) In all cases, it is so-called strict liability or - in other words – "liability for a risk, independent of fault and linked to the mere proof of a causal relationship".[207] The usual grounds for exemption such as *force majeure* are not foreseen in these conventions. The operator of a nuclear installation can be exempted from liability only if this accident is caused by a "nuclear event directly resulting from armed conflict, hostilities, civil war or insurrection...",[208] a

Alexandre Charles (ed.), *Selected Multilateral Treaties in the Field of Environment*, Nairobi: UNEP, 1983, pp. 159-165, 171-176.

[206] Vienna Convention on Civil Liability for Nuclear Damage (1963), Convention on Civil Liability in Respect of the Carriage of Nuclear Material (1971) and Convention on the Liability of Operators of Nuclear Ships (1962); see KISS, Alexandre Charles (ed.), op. cit., pp. 179 and 253.

[207] See DUPUY, Pierre-Marie, *La responsabilité internationale des Etats pour les dommages d'origine technologique et industrielle*, Paris, 1976, pp. 106-109.

[208] Cf. Article 9 of the Paris Convention and Article IV, paragraph 3, letter a) of the Vienna Convention.

natural disaster of an extraordinary nature[209] and the conduct or gross negligence or intentional omission of the injured party.[210]

(2) It is always a "channelled" liability (*canalisée*), which means that under the relevant conventions only the operator and no one else is liable for nuclear damage.[211]

(3) This liability is limited in terms of the amount of compensation and the period of time within which the claim can be successfully asserted with regard to the limitation period. However, the maximum limits for damages and the limitation periods are regulated differently in each convention. It is also necessary to mention the insurance that is mandatory under these conventions.

According to Article II of the Joint Protocol (1988), the operator is liable for nuclear damage sustained in the territory of a Contracting Party to the Joint Protocol and either the Vienna or Paris Conventions under the Convention in whose territory the relevant nuclear installation is located. In this way, a number of cases of nuclear damage beyond the borders of States can be legally covered, to which neither the Paris Convention nor the Vienna Convention could previously be applied exclusively. It is therefore clear that the adoption of the Joint Protocol has been beneficial in this respect. To some extent, it has also led to an increase in the interest of States in acceding to the Vienna Convention on Civil Liability for Nuclear Damage.

The idea of developing a new convention on international state liability for nuclear damage, which would supplement the two conventions from 1986 (on early notification and assistance in the event of a nuclear accident), had been considered by the IAEA bodies since 1987.[212] However, due to the strong opposition of some States (especially the USA, Great Britain and France), this option

[209] Cf. Article 9 of the Paris Convention and Article IV, paragraph 3, letter b) of the Vienna Convention.
[210] Cf. Article IV, paragraph 7, letter a) of the Vienna Convention.
[211] See DUPUY, P.-M., op. cit., pp. 109-115.
[212] Cf. doc. IAEA GOV/2306 (8.6.1987), p. 2.

was abandoned.[213] It was not until a diplomatic conference in Vienna in September 1997 that the Convention on Supplementary Compensation for Nuclear Damage was adopted. This convention brought several significant changes compared to older treaties (especially the Vienna Convention), namely (1) an extension of the territorial scope compared to the Vienna and Paris Conventions; (2) a clarification and expansion of the definition of nuclear damage; (3) a significantly higher limit for compensation for damage; and, above all, (4) an obligation on the state with the nuclear facility where the accident occurred, as well as other contracting parties, to participate in compensation for damage.[214]

(c) Civil liability for damage resulting from activities dangerous to the environment

Unlike older conventions, which dealt only with liability for certain, narrowly defined damages resulting usually from specific risky activities (e.g. nuclear damage, marine pollution during the transport of oil), it was not until the 1990s that more generally conceived international instruments were concluded, and rather at the regional level. This happened with the adoption of the Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment by the Committee of Ministers of the Council of Europe (6 March 1993). The Convention was then opened for signature by states on 21 June 1993 in Lugano.[215] The significance of this convention lies in the fact that it is the first international legal document that established a strict liability regime for all damages caused as a result of an environmental accident, but with the exception of damages resulting from the transport of dangerous products and from nuclear accidents (Article 4), which are covered by other international treaties.

[213] See POLITI, Mauro, International and Civil Liability for Nuclear Damage, op. cit., p. 333.
[214] Convention on Supplementary Compensation for Nuclear Damage; see doc. IAEA INFCIRC/567 (22.7.1998).
[215] See Explanatory report on the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, Council of Europe, 1993.

However, this is a purely civil liability of operators without any participation or subsidiary liability of States.

(d) Conventions containing a mere *pactum de negociando* in relation to liability for damage

As an example from a relatively recent period (early 1990s), two conventions developed within the framework of the United Nations Economic Commission for Europe (UNECE) can be mentioned: the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992) and the Convention on the Consequences of Transboundary Industrial Accidents (1992). Both of these treaties, which are mainly focused on prevention, exchange of information and mutual assistance, however, contain only a very brief mention of liability (in Articles 7 and 13 of the first and second conventions, respectively):

"The Parties shall encourage appropriate international efforts to develop rules, criteria and procedures in the field of responsibility and liability."

Although such an obligation does not solve anything, similar clauses are gaining popularity because they allow States to bridge contentious areas (which usually include liability for damages) and reach an agreement.

A similar solution is contained in Article 16 of the Protocol to the Antarctic Treaty on Environmental Protection (Madrid, 1991). According to this provision, the Contracting Parties, in accordance with the objectives of this Protocol for the comprehensive protection of the Antarctic environment and its dependent and associated ecosystems, "undertake to develop rules and procedures relating to liability for damage arising from activities carried out in the Antarctic Treaty area and covered by this Protocol". The cited Article 16 does not indicate at all whether this should be liability for breach of vigilance (due diligence) or strict liability.[216]

[216] See FRANCIONI, Francesco, International Responsibility for Damage to the Antarctic Environment, in: F. Francioni (ed.), *International Environmental Law for Antarctica*, Milano: Giuffrè Editore, 1992, pp. 243-246.

4. The rather modest final outcomes of the International Law Commission

The 1996 draft articles on international liability was only adopted by the ILC on first reading. However, the Commission subsequently decided to continue working on the topic in a piecemeal manner, separating damage prevention and compensation (liability). The first result, Articles on the Prevention of Transboundary Harm from Hazardous Activities were adopted by the ILC in 2001.[217]

However, the draft articles concern exclusively prevention and cooperation with the exclusion of liability for damage. In accordance with its title, it applies only to activities not prohibited by international law that involve a risk of causing - through physical consequences - significant transboundary damage (Article 1). Logically, it does not apply to activities that have harmful consequences during their normal operation. It should be a collection of primary rules relating to risk management or prevention. The basic obligation of states is to take all appropriate measures to prevent or minimize the risk of significant transboundary damage (Article 3). In addition, the draft contains obligations regarding cooperation between states, including with the assistance of relevant international organizations (Article 4), and the adoption of legislative and other implementing measures, including monitoring mechanisms (Article 5).

However, it was not the end of the work because the General Assembly requested the ILC to resume work on liability.[218] In response to the express request from the General Assembly the ILC proceeded quickly and adopted in 2004 a set of draft principles. In 2006, after receiving comments from the Member States, the Commission adopted a final version of Draft Principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities.[219]

[217] Yearbook of the ILC, 2001, vol. II (Part Two), pp. 144-170.
[218] UN GA Resolution 56/82, 12 December 2001.
[219] Report of the ILC, 2006, A/61/10, pp. 101-182, paras. 51-67.

On the face of it, this objective is also expressed in the Draft Principles on allocation of loss (2006). Principle 3 sets out the purposes of the draft principles:

'*(a) ensure prompt and adequate compensation to victims of transboundary damage; and*

(b) to preserve and protect the environment in the event of transboundary damage, especially with respect to mitigation of damage to the environment and its restoration or reinstatement.'[220]

At closer examination, however, it is clear that the ILC, for pragmatic reasons, taking into account that making States directly liable for all transboundary damage was not acceptable to many governments, abandoned the original concept of international liability in favour of civil liability of operators. This follows the example of the Lugano Convention on Civil Liability for Damage Resulting from Activities Dangerous to Environment (1993)[221] and some other conventions (e.g., on liability for nuclear damage).

Moreover, the ILC adopted its usual cautious approach and drafted the Principles in very general manner. As was rightly said, the 2006 Principles on allocation of loss as a whole cannot be viewed as codification of customary international law.[222] Nor has this document made a significant contribution to the progressive development of international law, which was originally expected from the topic of "international liability". According to some commentators, 'the 2006 Draft is a regressive development of international law, recommending lower standards than those contained in the conventions dealing with civil liability for the damage caused by pollution.'[223]

---

[220] Report 2006, Yearbook of the ILC, 2006, vol. II (Part Two), p. 72.
[221] European Treaty Series, No. 150 (Lugano, 21.6.1993).
[222] BOYLE, Alan, Liability for Injurious Consequences of Acts Not Prohibited by International Law, op. cit., p. 104.
[223] SERŠIĆ, Maja, Liability of States sine delicto, in: K. Kowalik-Bańczyk, K. Wierczyńska, A. Jakubowski (eds.), *Euphony, Harmony and Dissonance in the International Legal Order*, Warsaw: ILS PAS Publishing House, 2014, p. 450.

Be that as it may, the examples of the Special Conventions and the 2006 Draft Principles adopted by the ILC show that the obligation to compensate for certain injuries arising from non-prohibited activities is distinct in nature from compensation as a form of State responsibility for internationally wrongful acts. Put it simply, liability *sine delicto* is not governed by general secondary rules of international law. On the contrary, its emergence, as well as the precise conditions and the content of the obligation to compensate depend on special regulation by the primary rules of international law.

5. Alternative to "strict liability": a turn to State responsibility based on due diligence

Since the ILC failed to adopt general rules on international liability for transboundary harm, but potential compensation depends on special rules governing (primarily) civil liability, the attention of both doctrine and practice returns to the State responsibility for the breach of preventive obligations.

In the field of international law, especially in contemporary law, there are also obligations of the State that do not constitute an absolute obligation to achieve a certain result (or to prevent a certain harm), but rather an obligation to use all appropriate means at its disposal. This may be an obligation to prevent pollution of an international river from sources on the territory of the State or to prevent the activities of private actors operating on its territory from causing harm to another State.[224]

This may not only concern vigilance obligations relating to the use of one's own territory (the general rule *sic utere tuo ut alienum non laedas*), but also preventive obligations in relation to

[224] See DUPUY, Pierre-Marie, Reviewing the Difficulties of Codification: On Ago's Classification of Obligations of Means and Obligations of Result in Relation to State Responsibility, *European Journal of International Law*, vol. 10 (1999), p. 375.

international spaces. An example is Article 194(1) of the UN Convention on the Law of the Sea (1982).[225]

Although not elaborated in the most well-known ILC codification documents, the Articles on State Responsibility (2001) and the Articles on the Responsibility of International Organizations (ARIO, 2011), the concept of due diligence finally appears in the draft articles on the prevention of transboundary harm resulting from hazardous activities. It is here, in the commentary to draft article 3 (Prevention),[226] that the nature of the obligation to prevent transboundary harm as due diligence is described in more detail.[227] This is quite understandable, since obligations of this type often appear in treaties concerning transboundary pollution or, more generally, environmental protection.

This is evidenced by the case law of international courts. The first significant example of the adoption and concretization of the concept of due diligence is the ICJ judgment in the *Pulp Mills* case (2010).[228] The Court stated here that "the principle of prevention as a customary rule finds its origin in the due diligence of a State in its territory." A State is thus obliged to use all means at its disposal to prevent activities taking place on its territory or in any area under

[225] "1. States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection." (UNTS, vol. 1833, p. 3 ff.)
[226] "The State of origin shall take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof."
[227] Yearbook of the ILC, 2001, vol. II, Part 2, p. 154, § 7: "The obligation of the State of origin to take preventive or minimization measures is one of due diligence. It is the conduct of the State of origin that will determine whether the State has complied with its obligation under the present articles. The duty of due diligence involved, however, is not intended to guarantee that significant harm be totally prevented, if it is not possible to do so. In that eventuality, the State of origin is required, as noted above, to exert its best possible efforts to minimize the risk. In this sense, it does not guarantee that the harm would not occur."
[228] *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, ICJ Reports 2010, p. 14 an.

its jurisdiction from causing significant damage to the environment of another State.[229]

The Court thus concluded, by deduction from the principle of prevention and with reference to the concept of due diligence, relatively far-reaching obligations of the State to protect the environment, including the obligation to carry out an environmental impact assessment before authorizing a planned industrial activity that may cause significant transboundary harm.[230] As is evident, the ICJ was able to use the concept of due diligence to interpret both the customary principle of prevention and the treaties governing the Uruguay River regime in order to derive some new specific rules.[231]

The ICJ continued this trend in the *Costa Rica-Nicaragua* case (2015).[232] Here, the Court, with reference to due diligence, extended the obligation to conduct an impact assessment for any activity that may have a significant transboundary impact on the environment, and further inferred the obligation to inform and consult in good faith with the State that may be affected, if necessary to determine appropriate measures to prevent or mitigate that risk.[233]

In addition to the International Court of Justice, some other international courts and tribunals also work with the concept of due diligence. The International Tribunal for the Law of the Sea has also made a significant contribution to its interpretation and application. Its Chamber for Seabed Disputes issued an opinion in 2011 on the question of the legal obligations of States Parties to the United Nations Convention on the Law of the Sea with respect to

[229] *Pulp Mills on the River Uruguay*, ibid., § 101.
[230] Ibid., § 204.
[231] Cf. KERBRAT, Yann, Le standard de due diligence, catalyseur d'obligations conventionnelles et coutumières pour les Etats. In : CASSELA, Sarah (ed.), *Le standard de due diligence et la responsabilité internationale*. Journée d´études du Mans, SFDI, Paris: Pedone, 2018, pp. 34-36.
[232] *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, ICJ Reports, p. 665.
[233] Ibid., § 141.

the activities of persons in the Seabed Area they sponsor.[234] This is a truly thorough analysis of both the nature of the concept itself and its consequences for the obligations of a State sponsoring private activities in the Area, including its liability for damage caused thereby. The Tribunal first noted that *due diligence* is a *variable concept*, the content of which may change in the light of new scientific knowledge and in view of the risks associated with the activity.[235]

In the opinion of the Tribunal, the obligation of due diligence "requires sponsoring States to take all appropriate measures to prevent damage that might arise from the activities of contractors they sponsor." Furthermore, the opinion infers from this obligation the obligation of the State to adopt a precautionary approach, i.e. to apply those measures even in situations where there is insufficient scientific evidence of the extent and possible negative effect of the activities in question, but there are credible indications of possible risks. Therefore, "a sponsoring State would not have fulfilled its obligation of due diligence if it had not taken those risks into account."[236]

In the operative part, the opinion again states that the State's obligation to ensure that contractors comply with the terms of the contract and the obligations under the Convention is an obligation of "due diligence". The sponsoring State is obliged to make the best possible efforts to ensure that contractors comply. The legislative and administrative measures that the State must adopt in its legal order should be "reasonably appropriate".[237]

---

[234] *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (Advisory Opinion, 1 February 2011), ITLOS Reports 2015.
[235] Ibid., p. 34, § 117: "The content of "due diligence" obligations may not easily be described in precise terms. Among the factors that make such a description difficult is the fact that "due diligence" is a variable concept. It may change over time as measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific or technological knowledge. It may also change in relation to the risks involved in the activity."
[236] Ibid., p. 46, § 131.
[237] Ibid., p. 74, § 242 (3).

A State is also not liable for damage caused by a private entity (contractor) whose application for exploration or exploitation it sponsored under Article 153, paragraph 2(b), which contractor fails to comply with its obligations "if that State Party has adopted laws and administrative measures that are reasonably appropriate within its legal system to ensure compliance by persons under its jurisdiction" (Article 4, paragraph 4, of Annex III).

As for the question of the responsibility of the sponsoring State, according to the opinion, it is conditioned by the breach of due diligence and the occurrence of damage. The fact that the sponsored contractor has breached its obligations does not in itself lead to the occurrence of responsibility on the part of the State. The responsibility of the sponsoring State will arise only if its neglect of the duty of due diligence is in a *causal link* with the damage that has occurred.[238]

Although this is an answer to a very specific question concerning responsibility for activities in the Seabed Area, this construction can also be applied in many other areas of international law, where certain environmental harm was caused not by the conduct of the State itself, but in connection with the breach of a preventive obligation based on the standard of due diligence.

Conclusions

Developments in international law over the past decades are beginning to put the question of the perspective of international liability for harmful consequences of activities not prohibited by international law in a somewhat different light. On the one hand, treaty-based international liability for harmful consequences resulting from non-prohibited but risky activities has not been established outside the area of damage caused by space objects. On the other hand, the unification of civil liability has played a significant role in addressing not only issues of nuclear damage but also other aspects of transboundary environmental harm. However, the conventions do not cover all cases of environmental

[238] Ibid., p. 76, § 242 (4).

harm. The International Law Commission tried to contribute to the progressive development and codification of international law in the area, but its originally broad and ambitious topic of "international liability" gave rise to two relatively modest outcomes, i.e., Draft articles on the prevention of transboundary harm from hazardous activities (2001) and Draft Principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities (2006). Therefore, alternatives to international liability are coming to the fore. These include, in particular, a shift towards State responsibility for internationally wrongful acts based on a breach of due diligence in relation to obligations requiring the prevention of environmental damage.

List of bibliography

1. AKEHURST, Michael, International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law, *Netherlands Yearbook of International Law*, vol. 16, 1985.

2. BARBOZA, Julio, La responsabilité „causale" à la Commission du Droit International, *Annuaire français de droit international* (AFDI), vol. 34, 1988.

3. BOYLE, Alan, Liability for Injurious Consequences of Acts Not Prohibited by International Law, in: CRAWFORD, James, and others (eds.), *The Law of International Responsibility*. Oxford: Oxford University Press, 2021.

4. BOYLE, Alan, State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction? in: *The International and Comparative Law Quarterly*, vol. 39, no. 1, 1990

5. BROWNLIE, Ian, *System of the Law of Nations: State Responsibility*, Part I. Oxford: Clarendon Press, 1983.

6. Canadian Note to the Soviet Ambassador, 23 January 1979, in: BROWNLIE, Ian, *System of the Law of Nations: State Responsibility*, Part I, Oxford, 1983.

7. Council of Europe, Explanatory Report on the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment. 1993.

8. DUPUY, Pierre-Marie, L'État et la réparation des dommages catastrophiques, in: FRANCIONI, Francesco; SCOVAZZI, Tullio. (eds.), *International Responsibility for Environmental Harm*. London: Graham & Trotman, 1991.

9. DUPUY, Pierre-Marie, *La responsabilité internationale des Etats pour les dommages d'origine technologique et industrielle*. Paris, 1976.

10. DUPUY, Pierre-Marie, Reviewing the Difficulties of Codification: On Ago's Classification of Obligations of Means and Obligations of Result in Relation to State Responsibility. *European Journal of International Law*, vol. 10, 1999.

11. European Treaty Series, No. 150 (Lugano, 21.6.1993).

12. Explanatory report on the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, Council of Europe, 1993.

13. FRANCIONI, Francesco, International Responsibility for Damage to the Antarctic Environment, in: FRANCIONI, Francesco (ed.). *International Environmental Law for Antarctica*. Milano: Giuffrè Editore, 1992.

14. GOLDIE, L. Frederick E., Concepts of strict and absolute liability and the ranking of liability in terms of relative exposure to risk. *Netherlands Yearbook of International Law*, vol. 16, 1985.

15. GOLDIE, L. Frederick E., A general view of international environmental law. A survey of capabilities, trends and limits, in: KISS, Alexandre-Charles (ed.), *The Protection of the Environment and International Law*, Leiden, 1975.

16. GRAEFRATH, Bernard, *Responsibility and Damages Caused: Relationship Between Responsibility and Damages*. Recueil des Cours de l'A.D.I., t. 185, vol. II, 1984.

17. HANDL, Günter, Liability as an Obligation Established by a Primary Rule of International Law, *Netherlands Yearbook of International Law*, vol. 16, 1985.

18. International Court of Justice Reports, 1949.

19. International Atomic Energy Agency GOV/2306 (8.6.1987).

20. International Legal Materials, vol. 18, Cambridge University Press, 1979.

21. ITLOS: Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area (Advisory Opinion, 1 February 2011), ITLOS Reports, 2015.

22. KERBRAT, Yann, Le standard de due diligence, catalyseur d'obligations conventionnelles et coutumières pour les États, in: CASSELA, Sarah (ed.), *Le standard de due diligence et la responsabilité internationale*. Journée d´études du Mans, SFDI, Paris: Pedone, 2018.

23. KISS, Alexandre-Charles (ed.), *Selected Multilateral Treaties in the Field of Environment*. Nairobi: UNEP, 1983.

24. MAGRAW, Daniel, Transboundary Harm: the ILC's Study of International Liability, *American Journal of International Law*, vol. 80, 1986.

25. OKOWA, Phoebe, *State Responsibility for Transboundary Air Pollution in International Law*. Oxford: Oxford University Press, 2000.

26. PINTO - DOBERNING, Inge R., Liability for the Harmful Consequences of Instances of Transfrontier Pollution Not Prohibited by International Law, *Österr. Zeitschrift f. öffent. Recht u. Völkerrecht*, vol. 38, No. 1-3, 1987.

27. POLITI, Mauro, International and Civil Liability for Nuclear Damage: Some Recent Developments of State Practice, in: *La réparation des dommages catastrophiques*, Bruxelles, 1990.

28. Reports of International Arbitral Awards (1941), vol. III.

29. Reports of International Arbitral Awards (1957), vol. XII.

30. Report 2006, Yearbook of the International Law Commission, vol. II (Part Two), doc. A/56/10, 2006.

31. Report of the United Nations Conference on Human Environment, A/CONF.48/14/Rev.1, 1972.

32. SERŠIĆ, Maja, Liability of States sine delicto, in: KOWALIK-BAŃCZYK, K.; WIERZYŃSKA, K.; JAKUBOWSKI, A. (eds.). *Euphony, Harmony and Dissonance in the International Legal Order*, Warsaw: ILS PAS Publishing House, 2014.

33. Yearbook of the International Law Commission, 1980, 1983, 1986, 1996, 2001

34. ZEMANEK, Karl, Causes and Forms of International Liability, *Studie z mezinárodního práva*, vol. 22, Praha, 1989.

2.2. The Liability of European Companies for Environmental Damage in Supply Chains Involving Third Countries

Mgr. Regina Šťastová, PhD.

Institute of State and Law, Slovak Academy of Sciences, v. v. i.

regina.stastova@savba.sk

JUDr. Lea Mezeiová, PhD.

Comenius University Bratislava, Faculty of Law, Department of International Law and International Relations

lea.mezeiova@flaw.uniba.sk

Introduction

At first glance, international commercial law, as a specific branch of law, may not seem like a field that deals with environmental law issues. However, in business practice, many companies are among the main violators of these rights, as evidenced by numerous statistics.[239] Not only do they contribute to increased emissions, plastic pollution, and the degradation of plant and animal habitats, but their products often harm the health of their end users, i.e., consumers. For several years, the European Union has been trying to prevent such practices, especially by companies operating on the European market, but until last year, their efforts often remained within the borders of the European Union. A turning point came with the adoption of Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on corporate sustainability due diligence and amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859 *(hereinafter referred to as the "Directive")*, which allows environmental protection responsibilities to be extended beyond the borders of the European Union. Since the adoption of the Directive, corporate responsibility for companies, specifically

[239] See chapter: *1. IN GENERAL: RESPONSIBILITY OF EUROPEAN COMPANIES FOR THE ENVIRONMENT*, p. 2.

environmental due diligence, has applied to the entire supply chain of a given company, even if parts of its supply chain are located outside of the European Union. This extends corporate responsibility into an area that has so far remained unregulated by legislation.

The aim of this paper is to analyse the obligations of European companies, including environmental due diligence obligations, in relation to their business activities and supply chain.[240] Paper focuses on the involvement of an entity located outside of the European Union, but is part of the supply chain mechanism of a European company, thereby affecting European consumers also.

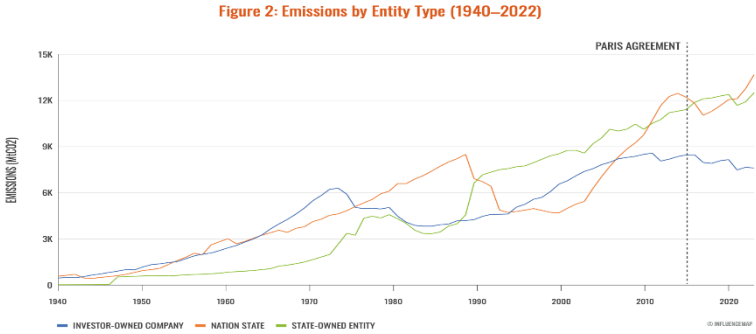
The authors mainly use traditional methods, including analysis of newly introduced institutions, synthesis of acquired knowledge, and inductive and deductive reasoning regarding the impact of legislation on the business environment.

1. IN GENERAL: *RESPONSIBILITY OF EUROPEAN COMPANIES FOR THE ENVIRONMENT*

Today, in an era of globalised production and transnational commerce, companies, including European companies increasingly operate through complex supply chains mechanism, that in some cases extend far beyond the borders of the European Union. Environmental issues and protection may appear in general unimportant to companies and their operations within the European Union. However, environmental protection is an issue that affects all companies, as evidenced by numerous statistics. European companies, like global trading companies, contribute significantly to environmental degradation in many areas. One of many areas, most effected in which European companies damage the environment is air pollution. It is not only private companies that contribute to pollution, but in many cases also state-owned entities as well. According to an analysis, only 57 companies,

[240] Authors' note: *The paper does not focus on human rights due diligence of companies, which is also introduced by the Directive. Due to the extensiveness of the adopted legislation, the authors focus on this article only on part of the obligations it brings, namely environmental due diligence.*

including European companies unleashed 80% of global carbon emissions between 2016 and 2022.[241] The statistics included companies based in France, Germany, the Netherlands, and other European countries. Statistics also demonstrates that companies acting as the principal importers of essential goods into the European market are themselves significant contributors to emissions, specifically non European state - owned companies.[242]



Graph 1: THE CARBON MAJORS DATABASE. Launch report. [online]. 2024. [Cited 2025-08-15]. Available at:

https://www.developmentaid.org/api/frontend/cms/file/2024/05/Carbon_Majors_Launch_Report.pdf, p. 4.

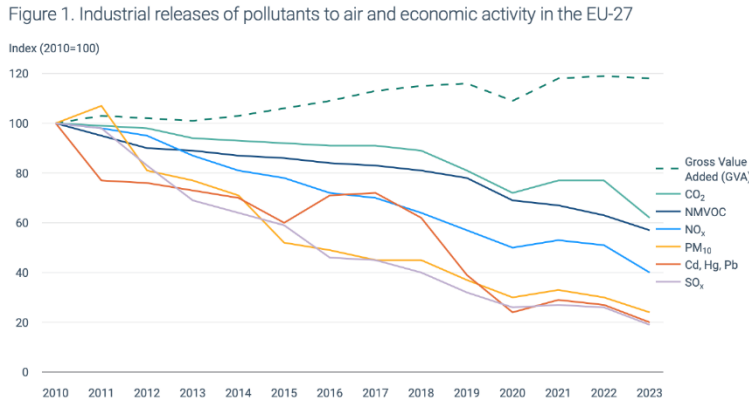
The figure illustrates the trajectory of greenhouse gas emissions, in other words carbon dioxide, disaggregated by three distinct categories of traders *(investor-owned companies, nation states, and state-owned entities)*. The data show an empirical basis for research into the impact of these entities on the environment and climate change. From one perspective, this shows that investor-owned companies contributed to a sharp increase in pollution in the last century, peaking in 1970 before moderating and declining

[241] THE CARBON MAJORS DATABASE. Launch report. [online]. 2024. [Cited 2025-08-15]. Available at: https://www.developmentaid.org/api/frontend/cms/file/2024/05/Carbon_Majors_Launch_Report.pdf, p. 4.
[242] Ibid.

until 2010, when a sharp increase in pollution was again observed. By contrast, state-owned entities experienced a more moderate increase in the 20th century compared to private companies, with a gradual increase also seen after the conclusion of the Paris Agreement. State-owned entities remain comparatively minor contributors until the late 1960s, after which their emissions expand rapidly, ultimately converging with, and in certain periods surpassing, the emissions of both investor-owned companies and nation states. Which is also evidence that state-owned companies are also contributors to the issue. Legally significant is the reference of the Paris Agreement.[243] Despite the international intention to commit under that treaty to pursue efforts to limit global temperature increase, the figure illustrates that aggregate emissions from all three categories have continued to rise, with a little to significant of decreasing emissions from investor-owned companies. This empirical evidence raises questions about the adequacy of international legal instruments, the enforceability under climate treaties, and the potential of targeting both private and state-owned entities within their obligations regarding protection of environment.

It can be observed that while emissions of other greenhouse gases and air pollutants have declined in recent years, carbon dioxide emissions continue to persist as a significant problem, as the following graph shows.

[243] The Paris Agreement adopted under the United Nations Framework Convention on Climate Change in 2016 was not the only effort to protect the environment and mitigate negative impacts on it. The United Nations Framework Convention on Climate Change was adopted in 1992, followed by the Convention on Biological Diversity in 1992, the Kyoto Protocol to the United Nations Framework Convention on Climate Change in 1997, and others.



Graph 2: EUROPEAN ENVIRONMENT AGENCY. Industrial pollutant releases to air in Europe. [online]. 2024. [Cited 2025-08-15]. Available at: https://www.eea.europa.eu/en/analysis/indicators/industrial-pollutant-releases-to-air?activeAccordion=546a7c35-9188-4d23-94ee-005d97c26f2b.

Other statistics also show that protection of the air environment is not the only issue among European companies. European companies each year also import commodities associated with the destruction of the environment. It was proven that there was a link connection between deforestation and production and import of goods that were designated for the European market and for its consumers.[244] Companies are also impacted via the supply chain mechanism in another area and that is plastic pollution. European companies are among the global businesses that are together responsible for 55% of the world's plastic packaging waste and are both state-owned and multinational corporations. [245]

[244] For more details, see: WILD, Sarah. To confront climate change, we need to understand the environmental footprint of global supply chains. *Horizon The EU research & Innovation magazine*. [online]. 2021. [cited 2025-10-10]. Available at: https://projects.research-and-innovation.ec.europa.eu/en/horizon-magazine/confront-climate-change-we-need-understand-environmental-footprint-global-supply-chains.

[245] For more details, see: LAVILLE, Sandra. Twenty firms produce 55% of world's plastic waste, report reveals. *The Guardian*. [online]. 2021. [cited 2025-10-10].

Companies do not only have a direct impact on the environment as polluters. Indirect impact can also manifest itself as a result of their business activities, which indirectly disrupt the environment, such as the disruption of plant habitats and natural environments for animals, ultimately causing permanent damage to the environment. Such indirect impacts also affect consumers themselves, whether in terms of product quality or the products themselves. At the same time, the export of such products can harm consumers, i.e., consumers in the country of origin.[246]

So, it is proven that European companies and their supply chain, as it is including companies that are not based in the European Union creates an issue that needs to be solved dramatically along the borders of European Union, not just for the protection of the environment but for the protection of consumers as well. However, a study conducted by the Commission prior to the adoption of the directive confirmed that less than half of the respondents from among companies perform environmental and human rights due diligence across their businesses, and only a minimum of them cover their entire supply chain within the scope of their responsibility. [247] This leads to the conclusion that companies today are not focusing enough on this issue, probably because of the lack of mechanisms for liability and enforcement.

2. LIABILITY OF EUROPEAN *COMPANIES – ENVIROMENTAL DUE DILIGENCE*

Companies, including European ones, are among the biggest contributors to environmental impact. With regard to the

Available at: https://www.theguardian.com/environment/2021/may/18/twenty-firms-produce-55-of-worlds-plastic-waste-report-reveals.

[246] For more details, see: HEALY, Hazel, et. al. The hidden cost of your supermarket sea bass. *The Guardian*. [online]. 2025. [cited 2025-10-10]. Available at: https://www.theguardian.com/environment/2025/may/22/the-hidden-cost-of-your-supermarket-sea-bass.

[247] 1.European Parliament. Corporate sustainability due diligence . BRIEFING. EU Legislation in Progress.
https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729424/EPRS_BRI(2022)729424_EN.pdf, s. 2.

framework of the business environment, two basic types of economic entities can be identified on the European market:

1. Direct players on the European market; i.e. business entities whose business activities, such as production, processing, and distribution to end users, take place within the European Union and are established within the European Union, as follows:

a. Companies are direct players in the entire European supply chain and do not use any non-European companies in their supply chain;

b. European companies based within the European Union use non-European companies in certain parts of their supply chain;

c. European companies established within the European Union are part of the group or holding structure of a non-European company.

2. Indirect actors in the European supply chain, i.e., business entities whose business activities, such as manufacturing, processing, and distribution to end users, take place outside the European Union, are not established within the European Union, but supply end users in the European Union.

Based on the above, companies have a diverse presence on the European market. Their activities can have an impact on the environment on several levels, depending on the type of supply chain, their presence on the European market, or even the subject of their business.

Corporate liability for environmental harm caused within global supply chains ranks among the pressing challenges of contemporary European and global regulation. The issue of corporate due diligence was addressed primarily through voluntary initiatives, in recent years, however, there has been a notable shift toward a binding legal framework in this area. Particularly important is the development within the European Union, which, through the adoption of Directive, seeks to enshrine minimum

standards for companies with a view to ensuring the protection of human rights and the environment.

Within the European Green Deal, the European Union has committed to transforming its economy into a climate-neutral and competitive one[248]. In this context, the Directive represents a landmark step, because for the first time in the European Union, cross-sectoral supply chain compliance with human rights and environmental standards would become mandatory. The Directive aims to foster corporate social responsibility and to embed sustainability considerations into corporate governance and risk-management systems. A core requirement is for companies to implement due-diligence measures throughout their supply chains, including with respect to operators outside the European Union, in order to identify, assess, prevent, mitigate, or remedy adverse impacts on human rights and the environment.

The complexity of today's global supply chains characterized by multi-layered structures, and a lack of transparency, poses a significant practical challenge for effectively monitoring supplier conduct. Many companies operating on the European Union market have relocated production or sourcing to third countries, raising the question of how to ensure compliance with standards in jurisdictions where such standards are not a priority. In this context, a legal framework laying down clear and uniform rules becomes essential, not only as a response to the shortcomings of voluntary approaches, but as a precondition for the effective protection of fundamental rights and sustainable development.

In this context, it is necessary to assess the current state of due diligence in business practice within the European Union and to analyze the reasons that led to the need for specific legal regulation in this area.

---

[248] VELA ALMEIDA, D.; KOLINJIVADI, V.; FERRANDO, T.; ROY, B.; HERRERA, H.; VECCHIONE GONÇALVES, M.; VAN HECKEN, G. *The "Greening" of Empire: The European Green Deal as the EU first agenda*. Political Geography, 2023, 105, 102925, p. 1

2.1. Development of environmental due diligence within the European Union

As highlighted in the preceding section, corporate liability for environmental harm arising within global supply chains remains a salient topic at both the European and global levels. To date, this field has been addressed predominantly through voluntary corporate due-diligence schemes, rather than through a uniform binding framework. International efforts to hold companies legally accountable for their impacts on climate change arguably remain primarily in the realm of soft law or non-law.[249]

Within the European Union, however, there is a clear shift toward binding regulation, exemplified by Directive. In what follows, we turn to corporate practice: the concrete due-diligence initiatives companies have put in place across their supply chains, and the practical constraints and limitations that these efforts continue to face.

A particularly comprehensive analysis in this field, is the European Commission's 2020 study (hereinafter referred to as the "Study")[250]. The concept of due diligence relevant to this Study, to "identify, prevent, mitigate and account for" adverse corporate impacts on human rights and the environment, was introduced by the UN Guiding Principles on Business and Human Rights (hereinafter referred to as "UNGPs"),[251] and incorporated into the OECD Guidelines for Multinational Enterprises (hereinafter referred to as "OECD Guidelines")[252] to extend to other areas of responsible business conduct such as the environment and climate change, conflict, labour rights, bribery and corruption, disclosure

[249] BUSER, A.: *Protecting the climate through EU supply chain legislation? Two critiques and a compromise*. European Law Open. 2024;3(3):617-632., p. 619
[250] EUROPEAN COMMISSION. *Study on due diligence requirements through the supply chain : final report*. Publications Office; 2020.
[251] UN Office of the High Commissioner for Human Rights: *Guiding Principles on Business and Human Rights: Implementing the 'Protect, Respect and Remedy' Framework*. ("UNGPs"), HR/PUB/11/04, 2011.
[252] OECD. OECD Guidelines on Multinational Enterprises, 2011

and consumer interests,[253] as well as in the ILO Tripartite declaration of principles concerning multinational enterprises and social policy (hereinafter referred to as "MNE Declaration").[254]

The Study also offers a consolidated picture of business practice. According to the Study, just over one-third of surveyed companies reported having formalised due-diligence processes covering all human-rights and environmental impacts. The Study reports 37.14%, with roughly another third applying due diligence only in certain areas (for example health and safety, labour, non-discrimination and equality, environmental, land rights and indigenous communities)[255]. The most selected actions by general stakeholders about due diligence practices in companies' own operations were contractual clauses and codes of conduct (61.76%), followed by audits (60.29%).[256]

However, research shows that when companies take voluntary action, they often focus on the first link in the supply chain (tier 1) while human rights and environmental harm typically occurs further away in the value chain. Furthermore, very few companies cover all human rights and environmental matters in their due diligence processes. The Study indicates that 51.82% of companies cover only the first tier, 16.06% report coverage of the entire upstream, and 16.06% the entire value chain.[257] Many of the most severe environmental impacts concentrate in the initial segments of the chain (e.g., extraction and primary processing outside the EU). As for motivations, firms primarily cite reputational and investor pressures, consumer expectations, and sectoral initiatives. The full integration into core governance and remuneration systems is less common. The Study also records sectoral and size

[253] OECD. OECD Guidelines on Multinational Enterprises, 2011, Commentary on General Policies at para 14
[254] ILO, *Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy*, Adopted by the Governing Body of the International Labour Office at its 204th Session (Geneva, November 1977) and amended at is 279th (November 2000), 295th (March 2006) and 329th (March 2017) Sessions
[255] See EUROPEAN COMMISSION. Study on due diligence requirements through the supply chain : final report. Publications Office; 2020, p.15-24, p. 151-152
[256] Ibid. pp. 63, 152
[257] Ibid. pp. 65,151

differences, for example the sample was heavily represented by manufacturing, automotive, IT/technology, financial services, consumer goods, and agribusiness, and larger firms are generally further advanced than SMEs.[258]

Despite the spread of voluntary standards, several structural weaknesses continue to limit their effectiveness. The Study points to a tendency toward box-ticking and audit fatigue, i.e., reliance on paper-based audits that often fail to uncover latent or concealed practices.[259]At the lower tiers of the chain, the information and traceability gaps persist, compounded by suppliers' reluctance to cooperate or share data. Buyer leverage is often insufficient, especially in a case with dominant or quasi-monopoly suppliers in third countries and the problem is particularly acute for SMEs.[260] Finally, fragmented frameworks and non-comparable requirements across countries and sectors create uneven market conditions and blunt the impact of voluntary measures.[261]

Overall, voluntary due diligence in the European Union shows variability in uptake and depth and tends to be more reactive than preventative. The evidence points to gaps in scope, depth, and consistency, especially beyond tier-1 as well as to a limited ability of individual firms to influence supplier behaviour. These realities help explain why European Union policy, consistent with the European Green Deal, has shifted from soft instruments toward a more binding framework designed to harmonise expectations across the internal market and strengthen the protection of people and the environment throughout global supply chains.

2.2. Case study: Vattenfall and limiting environmental damage

To ground our general findings from above mentioned section, the following case study of Vattenfall illustrates how a large energy company has sought to translate voluntary due-diligence

[258] Ibid. pp. 45–46, 49
[259] Ibid. p. 66
[260] Ibid. pp. 318, 319
[261] Ibid. pp. 35–40, 225–227, 443

commitments into supplier engagement, leverage, and climate targets across its supply chain.[262]

Vattenfall is a Swedish state-owned energy company that generates electricity and heat and sells into both markets. Its core footprint spans Denmark, Finland, the Netherlands, Germany, the United Kingdom, and Sweden. In recent years, it has also become a telling case of how a large utility tries to weave due-diligence thinking, climate included, into day-to-day decision-making.

The immediate spur was public scrutiny. In 2016 the German NGO Urgewald published *Energy You Want? Vattenfall's Dark Side*[263], a report linking Vattenfall's Colombian coal suppliers to the use of private militias and to paramilitary financing tied to thousands of killings between 1996 and 2006. The report also faulted the company for continuing to own lignite assets in Germany and for selling those assets rather than committing to a transparent phase-out.

In two response letters, Vattenfall cast itself as a "responsible seller[264]," claiming that divestment aligned with its wider transition toward lower CO_2 exposure and renewables. It also set out a policy line on Colombia with no direct sourcing from companies that refuse to publicly condemn past abuses in the regions where they operate, support the peace process, and back reconciliation with victims. More broadly, the company pledged to build leverage in its supply chain, engage suppliers more consistently, and lift their sustainability performance. Those promises are echoed in its Supplier Code of Conduct, which allows for regular, systematic due-diligence checks on human and labour-rights, environmental, and

[262] EUROPEAN COMMISSION. Study on due diligence requirements through the supply chain : final report. Publications Office; 2020, pp. 61-65
[263] Endcoal, "Energy You Want? Vattenfall's Dark Side" (April 2016), available at: https://endcoal.org/resources/energy-you want-vattenfalls-dark-side/.
[264] RAMSKOLD, A.: Vattenfall's Response to Urgewald Report, (13 May 2016), available at: https://www.business humanrights.org/sites/default/files/documents/20160513_Vattenfall%27s%20response_Business%20and%20Human%20Rights%20Centre_Urgewald%20report.pdf.

ethics risks. Vattenfall has since put out stand-alone policies on human rights, sustainability, and the environment.

The climate side of the house is anchored in a CO_2 Roadmap, which aims to phase out coal in district heating in Germany and the Netherlands by 2030 and reach climate neutrality in the Nordic region by the same year. That direction marks a notable turn when set against the company's earlier legal strategy. In 2009 and 2012 Vattenfall brought two Energy Charter Treaty claims against Germany. One tied to restrictions affecting coal, another to the closure of two nuclear plants. The first case settled in 2011 after a softening of environmental conditions and the second continued for some time.

After the Colombia concerns surfaced, Vattenfall published in November 2017 a human-rights risk assessment for its Colombian coal supply chain[265]. The document acknowledges that mining took place in a setting marked by violence, with likely impacts on local communities, and urges companies to engage directly with victims. An update in January 2019 reported that Vattenfall dropped Drummond from its supplier list when the firm ended its dialogue on the human-rights action plan. In practical terms, this is how "leverage" operates: progressively raise expectations, require sustained engagement, and, failing progress, terminate the relationship.

Taken together, the case reads as a shift from reactive messaging to a more active, supply-chain-wide risk posture. Vattenfall is trying to knit internal policies, contractual expectations for suppliers, targeted human-rights assessments, and concrete climate milestones into a single frame. The effort is imperfect and, at points, conflicted, but it shows how a large energy company can pair a longer-term climate pivot (coal phase-out, regional

[265] VATTENFALL: *A Human Rights Risk Assessment in Colombia: Vattenfall's Efforts on Coal Supply Chain Responsibility*, 2017, available at: https://www.business-humanrights.org/sites/default/files/documents/vattenfall_coal_sorcing_report_2017_0.pdf.

neutrality) with deeper human-rights due diligence aimed at high-risk suppliers outside the EU.

2.3. Legal framework at EU level until the adoption of the Directive

The European Union in many cases seeks to be a leader in the field of sustainability ambitions, including environmental protection, the reality for companies trying to implement thorough environmental due diligence is often challenging due to fragmented legislation. For companies this does not only represent an administrative burden, but in practice it can create significant risks. It allows for loopholes, including legal loopholes, which often cannot be addressed even by national regulations. This may be the problematic aspect of attributing liability to the responsible entity for environmental damage, calculating the amount of environmental damage, or the non-liability of the company. From a supply chain located outside the European Union. Secondary legal acts of the European Union have focused only on partial application aspects of due diligence, while rather specifying administrative obligations of companies, such as reporting or completing documentation (only compliance with environmental regulations), without a proper liability mechanism. The legal regulation of the environmental responsibility of companies before the adoption of the Directive thus enshrined only selected aspects of responsibility, fragmented into several legal regulations. The scope of the environmental responsibility of companies at the European level is regulated primarily by the following legal regulations:[266]

- *Regulation (EU) 2017/821 of the European Parliament and of the Council of 17 May 2017 laying down supply chain due diligence obligations for Union importers of tin, tantalum and*

[266] Authors' note: *Despite the fact that the Directive has been adopted and the law has been transposed, certain legal aspects of the protection enshrined in the Directive will remain subject to the aforementioned legal regulations. The adopted Directive does not affect them.*

tungsten, their ores, and gold originating from conflict-affected and high-risk areas;

- *Regulation (EU) 2017/852 of the European Parliament and of the Council of 17 May 2017 on mercury;*

- *Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088;*

- *Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism;*

- *Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May 2023 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation.*

Besides directly applicable regulations, the European Union has also adopted several Directives necessary to achieve environmental protection and due diligence of companies:

- *Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups;*

- *Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting;*

- *Directive (EU) 2024/1203 of the European Parliament and of the Council of 11 April 2024 on the protection of the environment through criminal law and replacing Directives 2008/99/EC and 2009/123/EC.*

In recent years, the European Union has sought to cover the widest possible range of aspects aimed at ensuring environmental protection, either by directly imposing obligations on environmental protection entities or on Member States, whose measures indirectly affect the activities of such entities. The above only regulate selected aspects of the business activities of companies, while environmental responsibility is imposed primarily within the European union. Namely, the fragmentation of national rules regarding the obligations of due diligence in the field of sustainability in companies further slows down the implementation of good practices.[267] Not only does it slow down the implementation of certain practices, but it also significantly undermines the legal certainty of entities, not only businesses, but also individuals, such as consumers, on the European market. Individual measures by some Member States are not enough to help companies use their full potential and act sustainably. [268] The adopted rules thus have as their primary objective to unify the legal framework and ensure uniform conditions for the application of responsibility throughout the single market. These rules will also be beneficial for companies themselves, as they will support international competitiveness, increase innovation, and provide legal certainty for companies dealing with sustainability impacts. This will significantly contribute to responsible behaviour in the field of the environment.

3. ADOPTION OF DIRECTIVE (EU) 2024/1760 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 13 JUNE 2024 ON CORPORATE SUSTAINABILITY DUE DILIGENCE

The adoption of the directive establishing a direct due diligence obligation for a selected group of companies, particularly large enterprises identified in the initial statistics as the most likely

[267] EUROPEAN COMMISSION. Corporate sustainability due diligence. [online]. 2024. [cited 2025-10-10]. Available at: https://commission.europa.eu/business-economy-euro/doing-business-eu/sustainability-due-diligence-responsible-business/corporate-sustainability-due-diligence_en.
[268] Ibid.

polluters, represents a significant step forward in environmental protection. The adoption of the Directive reflects, in practice, the fundamental obligation laid down in Article 191 (2) of the Treaty on the Functioning of the European Union, specifically the *"polluter pays principle"*. The aim of the policy in the European Union, based on the above provision, is to ensure a high level of environmental protection, while in addition to the aforementioned precautionary principle, protection is also based on the principle of remediation of damage at source.

The Directive (Article 1) thus translates the above principles into rules and sets out specific rules on obligations with regard to actual and potential adverse environmental impacts, including the inference of liability from the above obligation. It also sets out the obligation to adopt and implement a climate change mitigation transformation plan so that companies can transition to a sustainable economy and prevent global warming.

The Directive applies to two groups of companies, the decisive criterion for the groups being their place of incorporation. First, the Directive applies to companies that are incorporated in accordance with European Union law or are incorporated in accordance with the law of a third country. The group of companies established in accordance with European Union law for which the directive imposes new obligations are the following companies:

a. the company had more than 1 000 employees on average and had a net worldwide turnover of more than EUR 450 000 000 in the last financial year for which annual financial statements have been or should have been adopted;

b. the company did not reach the thresholds as referred to in point (a) but is the ultimate parent company of a group that reached those thresholds in the last financial year for which consolidated annual financial statements have been or should have been adopted;

c. the company entered into or is the ultimate parent company of a group that entered into franchising or licensing

agreements in the Union in return for royalties with independent third-party companies, where those agreements ensure a common identity, a common business concept and the application of uniform business methods, and where those royalties amounted to more than EUR 22 500 000 in the last financial year for which annual financial statements have been or should have been adopted, and provided that the company had or is the ultimate parent company of a group that had a net worldwide turnover of more than EUR 80 000 000 in the last financial year for which annual financial statements have been or should have been adopted.[269]

The decisive criterion is, on the one hand, the financial condition of the company in question, and on the other hand, the form of the contracts it has concluded within the framework of its business activities, specifically the license agreement or franchise agreement.

Within the framework of companies established under the law of a third country, obligations will be imposed on companies if they meet the following condition:

a. the company generated a net turnover of more than EUR 450 000 000 in the Union in the financial year preceding the last financial year;

b. the company did not reach the threshold as referred to in point (a) but is the ultimate parent company of a group that on a consolidated basis reached that threshold in the financial year preceding the last financial year;

c. the company entered into or is the ultimate parent company of a group that entered into franchising or licensing agreements in the Union in return for royalties with independent third-party companies, where those agreements ensure a common identity, a common business concept and the application of uniform business methods, and where those royalties amounted to more than EUR 22 500 000 in the Union in the financial year

[269] Article 1 (1) Directive.

preceding the last financial year; and provided that the company generated, or is the ultimate parent company of a group that generated, a net turnover of more than EUR 80 000 000 in the Union in the financial year preceding the last financial year.[270]

This is a wide range of companies[271] that participate in trading on the European market, while at the same time they can have an impact on consumers. It applies not only to companies. Established in accordance with European Union law, but also to those that are established in accordance with other law. Both groups of companies., must meet at least one of the above conditions set out in the directive, in order to define a clear scope. This condition may lie not only in the financial situation, the number of employees but also in the form of its business activity, which it participates in.

The obligations set out by the Directive apply not only to the activities of the legal entities themselves, through which the business activity is carried out, for example subsidiaries, but also to third parties who are business partners directly or indirectly, through other companies with which the business partners have commercial agreements.[272]

3.1. Regulatory Obligations and Corporate Duties under the Directive

The directive establishes a set of responsibilities, with the primary obligation set by the directive for companies is environmental due diligence. The main elements of this responsibility will be the identification, elimination, prevention, and mitigation of any environmental impacts within the framework

[270] Article 1 (2) Directive.
[271] Authors' note: *The personal scope of the Directive does not apply to SMEs, although they may be indirectly affected by the obligations. Companies that are subject to the obligations and are partners of such SMEs should ensure that they provide them with appropriate due diligence support and apply fair, reasonable, non-discriminatory, and proportionate conditions to such enterprises*. For more, see: Recitals 46 and 69 of the Directive.
[272] SEQUEIRA, Ana Carolina dos Santos. *A step towards corporate sustainability - The new directive on due diligence*. In: AZEVEDO, Graça; VIEIRA, Elisabete; MARQUES, Rui; ALMEIDA, Luís (eds.). *The Challenges of Era 5.0 in Accounting and Finance Innovation*. Cham: Springer Nature Switzerland AG, 2025, p. 21.

of their activities, including the activities of subsidiaries and/or supply chains.[273] For companies, due diligence consists of the following steps, which are integral to their daily business operations:

1. integrating due diligence into policies and management systems;

2. identifying and assessing adverse environmental impacts;

3. preventing and mitigating potential impacts, including eliminating adverse ones and minimizing their extent;

4. providing remediation for actual adverse impacts;

5. engaging stakeholders in the due diligence process;

6. establishing and maintaining a notification mechanism and a complaints procedure;

7. monitoring the effectiveness of their due diligence policies and measures;

8. publicly communicating on due diligence efforts and outcomes.[274]

The company itself must create an internal system to ensure its operation in accordance with the individual steps of environmental due diligence. In order to meet the objectives of due diligence, the company should undertake appropriate measures that will effectively address adverse impacts in a manner commensurate with their severity and likelihood.[275] Similarly, the aspect of severity

[273] POLL, Jens. Auditing, supervising and enforcing corporate sustainability due diligence, disclosure and reporting. ERA Forum, Journal of the Academy of European Law, 2023, vol. 24 (4), p. 609.
[274] For more information on the practical aspects of each step, see: OECD. OECD Due Diligence Guidance for Responsible Business Conduct. [online]. 2018 [cit. 2025-10-05]. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2018/02/oecd-due-diligence-guidance-for-responsible-business-conduct_c669bd57/15f5f4b3-en.pdf, p. 22 – 34.
[275] SEQUEIRA, Ana Carolina dos Santos. *A step towards corporate sustainability - The new directive on due diligence*. In: AZEVEDO, Graça; VIEIRA, Elisabete;

and likelihood of adverse impact is also crucial if the company is dealing with multiple identifiable impacts. The Directive distinguishes between the terms *"adverse impact"* and *"severe adverse impact"*. Adverse environmental impacts can include soil degradation, depletion of scarce resources, destruction of pristine forests, loss of biodiversity, water pollution, but also dangerously high levels of biological, chemical or physical values in products or services.[276] - The term *"severe adverse impact"* can be defined *"adverse impact that is especially significant on account of its nature, such as an impact that entails harm to human life, health or liberty, or on account of its scale, scope or irremediable character, taking into account its gravity, including the number of individuals that are or may be affected, the extent to which the environment is or may be damaged or otherwise affected, its irreversibility and the limits on the ability to restore affected individuals or the environment to a situation equivalent to their situation prior to the impact within a reasonable period of time"*.[277] This is therefore an impact with a more serious impact on the environment or the people affected by the aforementioned provision. The severity of impact and influence is not an absolute concept and is specific to a given context.[278] The severity of the impact on the environment will be assessed according to the degree, extent and aspect of remendability of the adverse impact, taking into account:

- the gravity of the impact;

MARQUES, Rui; ALMEIDA, Luís (eds.). *The Challenges of Era 5.0 in Accounting and Finance Innovation*. Cham: Springer Nature Switzerland AG, 2025, p. 22.

[276] OECD. OECD Due Diligence Guidance for Responsible Business Conduct. [online]. 2018 [cit. 2025-10-05]. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2018/02/oecd-due-diligence-guidance-for-responsible-business-conduct_c669bd57/15f5f4b3-en.pdf, p. 39.

[277] Article 3 l) Directive.

[278] OECD. OECD Due Diligence Guidance for Responsible Business Conduct. [online]. 2018 [cit. 2025-10-05]. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2018/02/oecd-due-diligence-guidance-for-responsible-business-conduct_c669bd57/15f5f4b3-en.pdf, p. 42.

- the number of persons who are or may be affected by the impact;

- the extent to which the environment is or may be damaged or otherwise affected;

- the reversibility of the impact;

- the limitation of returning the affected persons or the environment to their original state and within a reasonable period of time. [279]

In practice, a company may find itself in a situation where it is affected by several impacts at the same time, and the extent of the severity will need to be assessed individually. The company's due diligence may include the aspect of prioritization within the issue of due diligence, if it is not possible to address all identifiable impacts at once, the company should determine the order in which it acts based on the above aspects (severity and likelihood).[280]

Article 7 of the Directive directly sets out these two obligations in relation to ensuring due diligence within a company. On the one hand, the company has the obligation to integrate due diligence into its risk management policies and systems, with a detailed description of the company's approach, a code of conduct and a description of the processes by which the above obligations will be implemented. The Directive sets out the conditions for discussing and consulting on the above procedures with employees and their representatives, while according to the wording of the obligation, consultation only with the employees' representatives is not sufficient.

Additionally, it should also include an *"obligation of means"*, meaning that the company should take measures that can reasonably be expected to prevent or minimize the adverse

[279] Article 3 v) Directive.
[280] OECD. OECD Due Diligence Guidance for Responsible Business Conduct. [online]. 2018 [cit. 2025-10-05]. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2018/02/oecd-due-diligence-guidance-for-responsible-business-conduct_c669bd57/15f5f4b3-en.pdf, p. 42.

impact.[281] In the event that it is not possible to prevent or mitigate these adverse impacts, the enterprise should refrain from entering into any new relationships or in any way expanding existing relationships related to these impacts.[282] The Company will thus be liable for damages in the event of a breach of its obligation to prevent, mitigate, minimize or terminate (potential) indirect impacts. The Company will not be liable for damages caused by (potential) adverse impacts resulting from the activities of its indirect partners with whom it has established a business relationship but will be liable if it would be unreasonable to expect that the measures taken by its indirect partners would be sufficient to prevent, mitigate or terminate the extent of the adverse impact.[283]

On the other hand, the provision also sets out an obligation for Member States, which must ensure that companies to which this obligation applies also integrate the above due diligence. Member States are also obliged to ensure supervision by means of designated supervisory authorities under Article 24 of the Directive. This may be one or more supervisory authorities. The powers of the supervisory authorities will not only consist of supervision, but also of the power to request information directly from the company, within the framework of transparency and demonstration of compliance with the provisions.[284] If necessary, the supervisory authority may initiate an investigation into the fulfilment of obligations, including ex officio or based on a notification from authorised entities.[285] According to Article 26 of the Directive, an authorised subject is any natural or legal person

[281] LAFARRE, Anne. The proposed corporate sustainability due diligence directive : Corporate liability design for social harms. *European Business Law Review*, 2023, vol. 34, no. 2, p. 223 – 224.
[282] Ibid.
[283] SPINACI, Stefano. Corporate Sustainability Due Diligence: How to Integrate Human Rights and Environmental Concerns in Value Chains. Briefing: EU Legislation in Progress. *European Parliamentary Research Service*, 2023, 12 pp. [online]. 2023. [cited 2025-08-20]. Available at: https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729424/EPRS_BRI(2022)729424_EN.pdf, p. 6.
[284] Article 25 (1) Directive.
[285] Article 25 (2) Directive.

who, based on objective circumstances, suspects that a company is not complying with the obligations set out. National supervisory authorities should therefore have at least the following powers, such as the power to order the (permanent) cessation of infringements, the power to order the adoption of corrective measures, the power to impose sanctions, the power to adopt interim measures to prevent (potential) damage.[286] Including matters of information and transparency, Member States shall, in accordance with Article 20 of the Directive, establish information channels—such as websites and platforms—that provide support not only to the companies directly subject to these obligations, but also to their business partners, stakeholders, and SMEs within their supply chains.

3.2. Considerations on the Challenges of Implementing the Directive Through National Regulatory Frameworks

The most important aspect, according to the authors, is the challenges that national laws must address in implementing the Directive. Its current wording provides only a basic legal framework for the outline of a company's environmental due diligence but leaves room for legislators on many issues. A company will be liable for the application of environmental due diligence and its violations. The same applies to the issue of preventing adverse impacts and imposing liability for their violations. The Directive does not provide how this civil liability will be formed and the issue is left to implementation. It also requires that rules be established governing this liability of companies and the damage caused to a natural or legal person in the event that a company intentionally or negligently fails to prevent potential adverse impacts and mitigate them or to eliminate the actual impacts and minimize their extent, as a result of which a natural or legal person suffers damage.[287]

---

[286] LAFARRE, Anne. The proposed corporate sustainability due diligence directive : Corporate liability design for social harms. *European Business Law Review*, 2023, vol. 34, no. 2, p. 223 – 224.

[287] Damage caused to the protected legal interests of a person, such as death, physical or mental harm, deprivation of personal liberty, loss of human dignity or

Directive entered into force on 25 July 2024 regarding corporate sustainability due diligence. Member States are to transpose the Directive into national law by 26 July 2027. The Directive will subsequently apply to entities in the following manner:

- directly from 26 July 2027, it will apply to companies with more than 5,000 employees and an annual net turnover of more than 1.5 billion euros (worldwide turnover);

- companies with more than 3,000 employees and an annual net turnover of more than 900 million euros (worldwide turnover) from 26 July 2028;

- in the final stage, from 26 July 2029, it will apply to the last two groups of companies, namely companies with more than 1,000 employees and an annual net (worldwide) turnover of more than 450 million euros and companies from third countries with a turnover of more than 450 million euros but only within the EU.

Conclusion

The direct or indirect impact of companies on the environment can be assessed from various perspectives, including on the basis of the statistics mentioned in the introduction, the key being their supply chain and transparency within it. In recent years, the legislative framework of the European Union has sought to ensure that companies are transparent in their supply chain. Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on corporate sustainability due diligence and amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859 represents a key step by which the European Union will oblige companies to legal obligations in the field of environmental protection and human rights. This significant shift in recent years signals that the ESG policy of companies should not be just a marketing move, but also an inherent part of every business, for which companies will be penalized in case of non-compliance.

damage to a person‘s property, should be understood in accordance with national law. Recital 79 of the Directive.

Environmental due diligence of commercial companies applies not only to the company itself, which supplies to the end user, namely the consumer, but also to its entire chain of activities, which also includes business partners outside the EU. The main aim of this paper is to analyse the obligations of European companies, including environmental due diligence obligations, in relation to their business activities and supply chain. Based on the analysis performed, we confirm the hypothesis that the environmental due diligence of European companies in relation to their business activities and in particular the supply chain is currently undergoing significant change.

The findings show that the existing EU regulatory framework, such as Directive 2024/1760 on corporate due diligence, uniformly establishes the aforementioned obligation for selected groups of companies, while clearly and comprehensibly defining not only the obligations of companies, but also adverse environmental impacts. The task is thus to ensure that the obligation of companies includes the obligation to identify, prevent, mitigate, and eliminate the adverse impacts of their activities and the activities of their suppliers, not only in the environmental field and corporate governance. Specifically, environmental due diligence is no longer just a matter of voluntary efforts by companies but is becoming a legally enforceable obligation and responsibility.

This confirms the assumption that European companies are forced to take responsibility for the environment, which requires traceability, transparency, and sustainability standards throughout its entire supply chain. The authors will continue to monitor developments in this area and topic, specifically in the Slovak Republic, also due to the upcoming transposition into national legal systems. The implementation of the Directive will bring many challenges that may open new questions in the field of environmental due diligence.

Bibliography

AZEVEDO, Graça; VIEIRA, Elisabete; MARQUES, Rui; ALMEIDA, Luís (eds.). The Challenges of Era 5.0 in Accounting and

Finance Innovation. Cham: Springer Nature Switzerland AG, 2025, 584 pp. ISBN 978-3-031-77531-4. https://doi.org/10.1007/978-3-031-77531-4.

BUSER, A.: Protecting the climate through EU supply chain legislation? Two critiques and a compromise. European Law Open. 2024;3(3):617-632. DOI: https://doi.org/10.1017/elo.2024.35

Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on corporate sustainability due diligence and amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859.

EUROPEAN COMMISSION. Corporate sustainability due diligence. [online]. 2024. [cited 2025-10-10]. Available at: https://commission.europa.eu/business-economy-euro/doing-business-eu/sustainability-due-diligence-responsible-business/corporate-sustainability-due-diligence_en.

EUROPEAN COMMISSION. Study on due diligence requirements through the supply chain: final report. Publications Office; 2020. Available from: doi/10.2838/39830

SPINACI, Stefano. Corporate Sustainability Due Diligence: How to Integrate Human Rights and Environmental Concerns in Value Chains. Briefing: EU Legislation in Progress. *European Parliamentary Research Service*, 2023, 12 pp. [online]. 2023. [cited 2025-08-20]. Available at: https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729424/EPRS_BRI(2022)729424_EN.pdf.

EUROPEAN ENVIROMENT AGENCY. Industrial pollutant releases to air in Europe. [online]. 2024. [cited 2025-08-15]. Available at:

https://www.eea.europa.eu/en/analysis/indicators/industrial-pollutant-releases-to-air?activeAccordion=546a7c35-9188-4d23-94ee-005d97c26f2b.

HEALY, Hazel, et. al. The hidden cost of your supermarket sea bass. *The Guardian*. [online]. 2025. [cited 2025-10-10]. Available

at: https://www.theguardian.com/environment/2025/may/22/the-hidden-cost-of-your-supermarket-sea-bass.

ILO, *Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy*, Adopted by the Governing Body of the International Labour Office at its 204th Session (Geneva, November 1977) and amended at is 279th (November 2000), 295th (March 2006) and 329th (March 2017) Sessions

LAFARRE, Anne. The proposed corporate sustainability due diligence directive : Corporate liability design for social harms. *European Business Law Review*, 2023, vol. 34, no. 2, pp. 213-237. ISSN 0959-6941. https://doi.org/10.54648/eulr2023017.

LAVILLE, Sandra. Twenty firms produce 55% of world's plastic waste, report reveals. *The Guardian*. [online]. 2021. [cited 2025-10-10]. Available at: https://www.theguardian.com/environment/2021/may/18/twenty-firms-produce-55-of-worlds-plastic-waste-report-reveals.

OECD. OECD Due Diligence Guidance for Responsible Business Conduct. [online]. 2018 [cit. 2025-10-05]. 98 pp. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2018/02/oecd-due-diligence-guidance-for-responsible-business-conduct_c669bd57/15f5f4b3-en.pdf.

OECD. OECD Guidelines on Multinational Enterprises, 2011, DOI: https://doi.org/10.1787/9789264115415-en

POLL, Jens. Auditing, supervising and enforcing corporate sustainability due diligence, disclosure and reporting. ERA Forum, Journal of the Academy of European Law, 2023, vol. 24 (4), pp. 599 – 611. ISSN 1863-9038. https://doi.org/10.1007/s12027-023-00776-3.

THE CARBON MAJORS DATABASE. Launch report. [online]. 2024. [cited 2025-08-15]. Available at:

https://www.developmentaid.org/api/frontend/cms/file/2024/05/Carbon_Majors_Launch_Report.pdf, 34 p.

UN Office of the High Commissioner for Human Rights: *Guiding Principles on Business and Human Rights: Implementing the 'Protect, Respect and Remedy' Framework*. ("UNGPs"), HR/PUB/11/04, 2011.

VELA ALMEIDA, D.; KOLINJIVADI, V.; FERRANDO, T.; ROY, B.; HERRERA, H.; VECCHIONE GONÇALVES, M.; VAN HECKEN, G. The "Greening" of Empire: The European Green Deal as the EU first agenda. Political Geography, 2023, 105, 102925, p. 1-10, ISSN 0962-6298. DOI: https://doi.org/10.1016/j.polgeo.2023.102925

WILD, Sarah. To confront climate change, we need to understand the environmental footprint of global supply chains. *Horizon The EU research & Innovation magazine*. [online]. 2021. [cited 2025-10-10]. Available at: https://projects.research-and-innovation.ec.europa.eu/en/horizon-magazine/confront-climate-change-we-need-understand-environmental-footprint-global-supply-chains.

2.3. Striking the Right Balance between Property Rights and the Public Interest in the Preservation of Natural Resources in International Law

Doc. JUDr. Katarína Chovancová, PhD., LL.M., Univ. Prof., MCIArb

Institute of State and Law, The Slovak Academy of Sciences/Senior Research Fellow

katarina.chovancova@savba.sk

Introduction

'*We acted out, we wear the colours, defined by the things we own; we're not without, we're like each other, pretending we're here alone. And far away they burn their buildings, but in the face of the damage done…*'[288] Aye, with a little bit of exaggeration, of whom else this *'burning'* statement might be a salient feature, than of one unidentified, but certainly ruthless foreign investor, seeing the duty of care of his host state toward its citizens more as a measure of tedium, or even some utter nullity in the worst case,[289] rather than an inevitable link in the chain of responsibility, clinking ostentatiously today (more than ever) on the wrists of every responsible state?[290]

Simply put, there is nothing out of reach, nothing new, nothing changed, but no time for insouciance either; after striving to a summit with reaching *that* investors' anti-climax and disappointment - be it *Eco Oro v Colombia*,[291] or *Union Fenosa v*

[288] Linking Park, Rebellion, 2014.
[289] *Angel Samuel Seda et al. v The Republic of Colombia,* Award, ICSID Case No. ARB/19/6, 27 June 2024.
[290] SUBEDI, Surya: *International Investment Law. Reconciling Policy and Principle.* The Hague: Kluwer Law International, 2024, p.223.
[291] *Eco Oro Minerals Corp (Claimant) v The Republic of Colombia (Respondent),* Decision on Jurisdiction, Liability and Directions on Quantum, ICSID Case No. ARB/16/41, 9 September 2021.CHOVANCOVÁ, Katarína. The Legitimate Expectations and Their Current Status in International Investment Law. In:

Egypt[292] dispute (to name but a few), it is all of a sudden downhill. As a matter of fact, these cases and their likes share one common feature - in various extent to which they can be moulded (identifying the investors' gullibility and environmentalists' own sentimental folly),[293] they concern environmental issues and in a broader sense also the preservation of natural resources for the public of the state, in which they are located, striving for the proper equilibrium between all glorified property rights, together with the heavily elbowed foreign investors' rights on the one hand,[294] and the overarching public interest to preserve the natural resources for the common good of mankind at the same time.[295]

Without simulated politeness, this article is a non-liverish attempt to come out on top of the abovementioned perpetual strive, with its author, never being in doubt about its utmost importance. Except for reviewing the property rights and property regimes in international law of natural resources at first,[296] this article also depicts consequentially the contrasts between the public and private ownership of natural resources. First, it challenges the mantra of the private ownership as the only security for the wellbeing of the individual within the frame of international law of natural resources, putting forward the semi-public ownership instead as a wiser option.

GEISTLINGER, Michael - ROTH, Marianne (eds.). *VIII Yearbook on International Arbitration and ADR* Vienna: Verlag Österreich, 2024, pp.359 - 379.

[292] *Unión Fenosa Gas, SA v Arab Republic of Egypt*, Award, ICSID Case No ARB/14/4, 31 August 2018.

[293] COTULA, Lorenzo - PERONE, Nicolas. Seeing Santurban through ISDS: A Sociolegal Case Study of *Eco Oro v Colombia*. *Leiden Journal of International Law,* 2024, Vol.37, pp.440-461.

[294] SUBEDI, Surya: *International Investment Law. Reconciling Policy and Principle*. The Hague: Kluwer Law International, 2024, p.194.

[295] See e.g. HARRISON, James. Significant International Environmental Law Developments: 2021-2022. *Journal of Environmental Law,* 2022, Vol.34, pp. 499-515.

[296] RONNE, Anita. Public and Private Rights to Natural Resources and Differences in Their Protection? In: McHARG, Aileen - BARRY, Barton (eds.). *Property and The Law in Energy and Natural Resources*. Oxford: Oxford University Press, 2010, pp.60-79.

Second, it indicates the reasons of the state ownership of oil and gas,[297] being even more crucial, before pointing in turn to the absolute ownership, illustrated by the American famous rule of capture[298] and the common collective ownership too.[299] Simultaneously, by the way of example, a short analysis of the related recent ICSID arbitral award follows, questioning the dubious potential concurrent jurisdiction of ICSID investment tribunals and IACHR over environmental issues. At the very end, this article suggests the preservation of the natural resources of the world for the whole mankind[300] and its sustainable development as the main beacon, propped up by the principle of permanent sovereignty over natural resources,[301] before ending with the sceptical note of Sornarajah[302] on the long waiting time for the proper balance to be achieved, stressing getting on, but with watching the states' backs either - there is no afterwards irrelevant now.

II. Prioritizing between Ownerships of Natural Resources - Removing the Flotsam and Jetsam as a Solemn Duty

Eco Oro v Colombia,[303] *Union Fenosa v Egypt*,[304] *EuroGas and Belmont Resources v Slovakia*,[305] *Perenco v Ecuador*,[306] *Gabriel*

[297] MAKUCH, Karen - PEREIRA, Ricardo: *Environmental and Energy Law*. Oxford: Blackwell Publishing, 2012, p.207.
[298] Ibid, p.206.
[299] Ibid, p.207.
[300] Ibid, p.38.
[301] SUBEDI, Surya: *International Investment Law. Reconciling Policy and Principle*. The Hague: Kluwer Law International, 2024, pp.51-53.
[302] SORNARAJAH, M.: *The International Law on Foreign Investment*. Cambridge: Cambridge University Press, 2021.661p.
[303] For instance GARDEN, Robert. Eco Oro v Colombia: The Brave New World of Environmental Exceptions' ICSID Review, 2023, Vol.38, pp.17-24.
[304] CASELLA, Sarah. Union Fenosa Gas v Egypt: The Necessity Defense: Much Ado about Nothing? 37 *ICSID Review,* 2022, Vol.37, pp.552 -557.
[305] *EuroGas Inc. and Belmont Resources Inc. v. Slovak Republic*, Award, ICSID Case No. ARB/14/14, 18 August 2017.
[306] *Perenco Ecuador v The Republic of Ecuador*, Award, ICSID Case No ARB/08/6, 27 September 2019.

Resources v Romania,[307] *Odyssey v Mexico*[308] and practically all cases, in which indigenous people's natural habitat[309] must have been defended. Really, it is not always necessary to sprint back to the conclusions,[310] achieved only in *Methanex*,[311] or to the constructive criticism, typical for the era after the *Metalclad*[312] award was rendered a long time ago. As a matter of fact, all the indicated cases above possess one common feature. First, in various extent, they concern environmental issues. Second, in a broader sense, they also pertain inevitably to the preservation of natural resources for the public of the state, in which they are located.

For instance, *Eurogas and Belmont Resources v Slovakia*[313] has arisen due to the dispute over the mining rights in one of the biggest talc deposits in the world. Similarly, in the *Perenco*[314] case, luckily, the last award, rendered in 2019, did not embrace only the foreign investor with a hefty sum, amounting almost to 340 million USD, but at least gave 55 million USD to Ecuador as well, all in return for causing the environmental catastrophe there.[315] That being so, nonetheless, is should be added, that the compensation for Ecuador

[307] *Gabriel Resources v Romania,* Award, ICSID Case No. ARB/15/31, 8 March 2024.
[308] *Odyssey Marine Exploration, Inc. v United Mexican States,* Awards, ICSID Case No. UNCT/20/1, 27 September 2024.
[309] See e.g. PEREIRA, Ricardo - GOUG, Orla. Permanent Sovereignty Over Natural Resources in the 21st Century: Natural Resource Governance and the Right to Self-Determination of Indigenous Peoples Under International Law. *Melbourne Journal of International Law*, 2013, Vol.14, pp.1-20.
[310] CHOVANCOVÁ, Katarína**.** *International Arbitration of Investment Disputes: Introduction and The Basic Characteristics.* Bratislava: Eurokódex, 2009, pp.160-176.
[311] *Methanex Corporation v United States,* Final Award on Jurisdiction and Merits, ICSID, 3 August 2005.
[312] *Metalclad Corporation v United Mexican States,* Award, ICSID Case No.ARB(AF)97/1, 30 August 2000.
[313] See in detail CHOVANCOVÁ, Katarína. The Fair and Equitable Treatment and Its Current Status in International Investment Law. In: GEISTLINGER, Michael - ROTH, Marianne (eds.). *VIII Yearbook on International Arbitration and ADR* Vienna: NWV, 2019, pp.171- 186.
[314] *Perenco Ecuador v The Republic of Ecuador*, Award, ICSID Case No ARB/08/6, 27 September 2019.
[315] See in detail CHOVANCOVÁ, Katarína. Medzinárodné investičné arbitráže v sektore energetiky. In: ŠTURMA, Pavel - TRÁVNIČKOVÁ, Zuzana (eds.) *Pokojné řešení sporů v mezinárodním právu*. Praha: Česká společnost pro mezinárodní právo, 2020, pp. 117-132.

was significantly reduced on account of an earlier payment to Ecuador for an older environmental damage, paid by the *Burlington* corporation in related arbitral decision.[316] Finally, at the very least, in *Gabriel Resources v Romania* the Canadian corporation *Gabriel Resources* did not succeed in Romania, as it had planned to use cyanide for mining there, and nowhere else, but right at the places, where later the archeologic site of the former Roman mining activities was demarcated.

Naturally, the inevitable question springs to our mind: does international law as it currently stands strike the proper balance between the property rights, heavily enforced and reinforced rights of foreign investors (especially in developing countries) and the overarching public interest[317] to preserve the natural resources for the common good of mankind, and to enjoy and use them sustainably? To answer this question, it is necessary to characterize the property rights at first, as the most efficient mechanism for attributing value to resources - practically of any kind, which is an undeniable fact.

The right to property is the right to own, to use, to dispose of, to defend, to alienate, to charge etc.[318] There are different property regimes of natural resources and they may be classified as public, private and semipublic. Equally, there are special rules for offshore and onshore resources[319] and a separate licensing regime - not mentioning still a unique system of ownership of oil and gas natural resources, which can be also private and public, and all this is just for a starter. The public ownership is typical for stressing the public interest and satisfying the physical needs of community and society

[316] *Burlington Resources Inc. v Republic of Ecuador,* Decision on Liability, ICSID Case No. ARB/08/5, 14 December 2012.
[317] McINTYRE, Owen. Solidarity and Community Interests in International Environmental and Natural Resources Law. *Journal of Energy & Natural Resources Law*, 2025, Vol 43, pp.1-19.
[318] RONNE, Anita. Public and Private Rights to Natural Resources and Differences in Their Protection? In: McHARG, Aileen - BARRY, Barton (eds.). *Property and The Law in Energy and Natural Resources*. Oxford: Oxford University Press, 2010, p.62.
[319] Ibid, p.65.

in the broader sense.[320] It considers social and moral values and the common good for all people in the state, not just for the businessmen and elites, with the management of natural resources, informed by the principle of solidarity between states.

In contrast, the private ownership - going back to Locke - claiming it the natural law, which means we are all private owners of our bodies and minds (literally), stresses its own efficiency, considering the common or collective ownership to be flawed and inefficient. According to this theory, as well as the claims of all advocates of the private ownership, only the private ownership is the security for the wellbeing of the individual. However, if this was one hundred percent true, the semi-public ownership, which is quite successful today, and dwells equally on sustainable development, as the private companies can really help the public sector (not at least because of their better technological equipment), would have no sense.

In any case, as long as all onshore natural resources belong primarily to states and they are also leased through licenses, which may be revoked,[321] if it is inevitable in public interest (e.g. when the investor is constantly violating the national environmental law of the host state or recklessly causes a serious environmental damage), it is safe to anticipate, that expropriations and regulatory takings[322]- non compensable, as they are made for the public purpose, legally, without discrimination and arbitrariness - help to preserve the natural resources too. After all, the states are obliged to cope up with their obligations from environmental international agreements in order to protect the environment and secure the sustainable development[323] - and not just the preservation of natural resources within their borders.

[320] Ibid, p.66.
[321] Ibid, 68.
[322] SORNARAJAH, M.: *The International Law on Foreign Investment*. Cambridge: Cambridge University Press, 2021, pp.492-509.
[323]SANDS, Philippe - PEEL, Jacqueline: *Principles of International Environmental Law*. Cambridge: Cambridge University Press, 2018, pp.49-50.

Property regimes of oil and gas are even more crucial, and there is no need to characterize in length the American way of private ownership here, be it the absolute ownership with its famous rule of capture,[324] or the common collective ownership. In this respect, the state ownership of oil and gas, whether in Spain, France, Denmark, or Germany, well known for its different ownership of *Bergrfrei*[325] and *Grundfrei* (*Grundeigen*)[326] of natural resources is an exceptionally good safeguard, shouldered by '*the direct link between those resources and economic development, which it has incorporated.*'[327] In addition, it is always important to bear in mind, what the main aim of all environmental conventions, declarations and resolutions, let alone the conferences in Stockholm,[328] Rio,[329] Johannesburg[330] or also of the UN Sustainable Development Summit[331] was - preserving the natural resources of the world for the whole mankind and develop it sustainably,[332] and, above all, responsibly, which has proved very difficult to write about with the current state of the world. The real issue is, that it has become

[324] The owner of the land owns all the oil and gas, found beneath their land - even if it 'travelled' there from the subsurface of any other person's land (not just the nearest neighbour). The rule of capture was applied for the first time in *Kelly v Ohio Oil Co*., 57 Ohio St.317, 49 NE 399 (1897).
[325] Free from land property.
[326] Land owned, enjoying the protection as a private property. RONNE, Anita. Public and Private Rights to Natural Resources and Differences in Their Protection? In: McHARG, Aileen - BARRY, Barton (eds.). *Property and The Law in Energy and Natural Resources*. Oxford: Oxford University Press, 2010, p.64.
[327] MAKUCH, Karen - PEREIRA, Ricardo: *Environmental and Energy Law*. Oxford: Blackwell Publishing, 2012, p.207.
[328] The 1972 United Nations Conference on the Human Environment). SANDS, Philippe - PEEL, Jacqueline: *Principles of International Environmental Law*. Cambridge: Cambridge University Press, 2018, pp.29-32.
[329] The 1992 United Nations Conference on Environment and Development (UNCED). Ibid, pp.40-41.
[330] The 2002 World Summit on Sustainable Development (WSSD). Ibid, p.48.
[331] The 2015 UN Sustainable Development Summit. Ibid, p.50.
[332] MAKUCH, Karen - PEREIRA, Ricardo: *Environmental and Energy Law*. Oxford: Blackwell Publishing, 2012, p.39.

questionable, how much sustainability[333] and solidarity[334] is currently really being left, especially when considering the basic tenets of intra-generational and inter-generational equity.[335]

Nonetheless, the principle of permanent sovereignty of states over their natural resources is a powerful tool too - the courtesy of forming the part of customary international law, enabling states '*to regain effective control over their natural resources*.'[336] Short of the complete conclusion, one does not need to be an expert in international environmental law to deduce and work out easily, that as long as the idea of absolute ownership and its bulletproof protection is blooming in such dynamic areas of international law as international investment law undoubtedly is, the proper balance still must wait a bit to be achieved, as Sornarajah would probably sceptically note. That said, hardly could a better example of the abovementioned underlying assumption be chosen, than a highly protracted controversial arbitral award, recently rendered in *Eco Oro* dispute, to which the reader's attention will be drawn in the following part of this article.

III. The Jurisdiction of ICSID Tribunals over Environmental Claims – Propping or Dueling with the IACHR? (The Practical Example)

On the 9th of September 2021, the ICSID arbitral award in *Eco Oro v Colombia* was made, being one of the most impugnable arbitral awards, ever rendered in international investment arbitration. The *Eco Oro* tribunal has become famous not so much for reliance of the Canadian claimant on the force majeure treaty exception under the Canada-Colombia Free Trade Agreement ('FTA'), but because of its controversial inferences, leading the

[333]PATHIRANA, Dilini. Multilateral Rules on Sustainable Development. In: CHAISSE, Julien – HERRMANN, Christoph (eds.). *The International Law of Economic Integration*. Oxford: Oxford University Press, 2025, p.500.
[334] McINTYRE, Owen. Solidarity and Community Interests in International Environmental and Natural Resources Law. *Journal of Energy & Natural Resources Law*, 2025, Vol 43, p.4.
[335] Ibid, pp.5-7.
[336] MAKUCH, Karen - PEREIRA, Ricardo: *Environmental and Energy Law*. Oxford: Blackwell Publishing, 2012, p.201.

critics to the strict dismissal[337] of the arbitral award, blinking among them the arbitrators' ignorance of the host state's right to protect its environment, namely, the delicate Colombian Santurbán páramo (moorland, or a high altitude wetland ecosystem), enriched with a long history of the local mining on the one hand, while being the national carbon sink on the other at the same time.

The subject of the dispute pertained to old mining rights of *Eco Oro* with the claimant, commencing the ICSID arbitration after waiting for many years with his concession, granted in 2007, before the Colombian Constitutional Court finally buried the possibility of obtaining exceptions for the realization of his foreign investment.[338] The dispute was centered around the host state measures, affecting the páramo. The claimant argued an indirect expropriation of his concessional rights and also the violation of the fair and equitable treatment ('FET') and MST,[339] succeeding partially before the tribunal, but not with an expropriation claim due to the lack of severity of the host state measures.

Dispensing swiftly with expropriation, the tribunal tried to fill the void and awarded compensation, twisting the autonomous FET and the customary international law principle of MST,[340] while supporting its erroneous conclusions with a pretty insensitive shortcutting of the environmental exception in the Canada -

[337]YEPES, Juliana Carvajal. A Risky Treaty Interpretation Loophole? The Case of Investment-State Arbitration Cases with Environmental Issues. *ITA in Review: The Journal of the Institute for Transnational Arbitration,* 2022, Vol.4, No.2, pp.6 - 15. Equally LORFING, Pascale. ICSID Award: Eco Oro Minerals Corp v The Republic of Colombia. *International Business Law Journal,* 2021, Vol.6, pp. 819-826.

[338]CHOVANCOVÁ, Katarína. The Legitimate Expectations and Their Current Status in International Investment Law. In: GEISTLINGER, Michael - ROTH, Marianne (eds.). *VIII Yearbook on International Arbitration and ADR* Vienna: Verlag Österreich, 2024, p.361.

[339] The most favored nation treatment.

[340] DUMBERRY, Patrick. The Eco Oro and Red Eagle Awards: Recent Divergence on How to Interpret Fair and Equitable Treatment Clauses Linked to the Minimum Standard of Treatment (Arbitration Blog, 23 July 2024) <https://arbitrationblog.kluwerarbitration.com/2024/07/23/the-eco-oro-and-red-eagle-awards-recent-divergence-on-how-to-interpret-fair-and-equitable-treatment-clauses-linked-to-the-minimum-standard-of-treatment/> accessed on 25 July 2024.

Colombia FTA and its effect, cutting it down to size[341] with its interpretation of the environmental exception, which was not recognized as a defense on the merits in the tribunal's opinion, with no automatic relief from the obligation of compensation, or as a compensable exception, or no exception at all, to be exact.

In parallel, at the end of 2023, the IACHR issued an intriguing judgment in the *Case of La Oroya v Peru*,[342] holding Peru responsible for the human right violations against inhabitants of La Oroya, being the result of air, water and also soil pollution due to - and this comes as no surprise - an extensive mining and also metallurgical activities in La Oroya, both ineffectively regulated and poorly supervised.[343] Therefore, it didn't take long before encroaching on the right to health, life, and healthy environment took place, in fact, the host state even reduced the important air quality standards. With the damage done, the court ordered not only reparation measures, when feasible, due to multiple violation of the American Convention of Human Rights,[344] but also investigation to determine the proper sanctions, when applicable for the harassment of environmentalists, the duty to provide a remediation plan for the environmental damage caused etc.[345]

---

[341] KUO, Hou-chih – LO, Jeffrey. Runaway Tribunal? An Assessment of the Eco Oro Tribunal's Opinion on the General Exceptions. *Contemporary Asia Arbitration Journal (CAA Journal)*, 2022, Vol.15, pp.143 - 170.

[342] *Case of Inhabitants of La Oroya v Peru*. Preliminary Objections, Merits, Reparations and Costs. Judgment, IACHR, Series C No.511, 27 November 2023..

[343] SOLANO, Lucia. IACHR Orders Peru to Adopt Comprehensive Reparations Measures. *International Courts & Tribunals Interest Group Newsletter,* 2024, Vol.5, No.2, p.6.

[344] Peru was responsible for violating Articles 26, 5, 4.1., 8.1., 13, 19, 23 and 25 of the American Convention of Human Rights.

[345] See also *Case of Indigenas Tagaeri and Taromenane Indigenous Peoples vs. Ecuador*. Preliminary Objections, Merits, Reparations and Costs. Judgment, IACHR, Serie C No.537, 4 September 2024. The IACHR held Ecuador responsible for multiple violations of human rights, caused by the third parties' incursions and extracting activities in the Intangible Zone. On the right of indigenous people to informed consent in all cases, where their property rights may be afflicted by extraction of natural resources see e.g. PEREIRA, Ricardo - GOUG, Orla. Permanent Sovereignty Over Natural Resources in the 21st Century: Natural Resource Governance and the Right to Self-Determination of Indigenous Peoples

Naturally, it is downright impossible to slip into a deep analysis of the *La Oroya* case, or that of the *Eco Oro* award to come up with some off the cuff made sweeping conclusions on the competence of the ICSID tribunals over environmental aspects of international investment disputes, one would need at least a dozen cases to review to do that responsibly. In spite of it, what can be done instead, is taking the stock of the *Eco Oro* award to paint with some rough strokes at least a reckless way of dealing with environmental exception in the Canada-Colombia FTA by the tribunal, which was incorrect.[346] In turn, a few commonalities and more differences, than similarities between the extent of jurisdiction of the investment tribunals and of already mentioned IACHR should be visible in a heartbeat, and without need for multiplying the theoretical approach in its current, space efficient proportions too.

Moving back to the *Eco Oro* award: at the heart of the dispute was the prohibition of mining in the páramo, where the claimant had got the first mining permission in 1994 without prohibition of mining, applicable to any category of investors.[347] He was finally granted the concession in 2007, shortly before his mining area was sequestered as a part of the páramo, and suddenly overlapped with it by fifty-four percent. When facing the ban on mining activities in páramos in 2010 and a refusal of his application for an environmental license, the investor tried to modify the type of mine to satisfy the authorities and to secure another environmental impact assessment. In between, his concession was declared a Project of National Interest. The prospects looked good, but only until the Colombian Constitutional Court excluded any possible exception for mining in the páramo in 2016. The time has eventually run out and *Eco Oro* initiated the ICSID arbitration.

Under International Law. *Melbourne Journal of International Law*, 2013, Vol.14, pp.28–29.

[346] ÜNUVAR, Günes. A Tale of Policy Carve-outs and General Exceptions: Eco Oro v Colombia as a Case Study. *Journal of International Dispute Settlement,* 2023, Vol.14, pp.517-533.

[347] COTULA, Lorenzo – PERONE, Nicolas. Seeing Santurban through ISDS: A Sociolegal Case Study of *Eco Oro v Colombia*. *Leiden Journal of International Law,* 2024, Vol.37, pp.440-461.

The expropriation claim failed, as the tribunal sided with the defendant, who argued that there was no expropriation, but a legitimate exercise of the host state police powers for environmental protection.[348] Accordingly, the tribunal opined, that indeed, the challenged measures were a good faith legitimate exercise of Colombia's police powers and no expropriation was committed. Except for this, the tribunal underrated the relevant Annex 811 of the treaty only as a little '*explanation of the factors that are relevant to the expropriation inquiry*',[349] but this little explanation perhaps was not as puny as presumed by the tribunal, as one of the two dissenting arbitrators deduced his finding of indirect expropriation exactly from the wording of Annex 811, namely its '*rare circumstances*' existence, considering - among other legal factors - the general good faith rule of customary international law.

However, at the first sight, the logical conclusion of the tribunal, based on the wording of Annex 811 is not blurred, except for overlooking *the rare circumstances* condition, which Prof. Naón (one of the two dissenting arbitrators) held to be fulfilled, because of several unusual elements of the claimant-defendant relationship, the most prominent being the retroactive application of the national law to the detriment of the claimant. One could probably produce a little book, explaining a long, never-ending story of delimitation of the páramo, which caused uncertainty, and harmed the claimant substantially as well, due to colliding decisions of the various host state authorities, or the lack of due diligence, for which both the investor and the host state could be equally blamed. Suffice to say, as Naón opined, the value of the claimant's right was reduced to zero, and Colombia violated the FTA with its measures,

[348] See e.g. BULUT, Ömer Erkut. Drawing Boundaries of Police Powers Doctrine: A Balanced Framework for Investors and States. (2022) 13 *Journal of International Dispute Settlement*, 2022, Vol.13, pp.583-607.
[349] *Eco Oro Minerals Corp (Claimant) v The Republic of Colombia (Respondent),* Decision on Jurisdiction, Liability and Directions on Quantum, ICSID Case No. ARB/16/41, 9 September 2021, p.262.

being unreasonable, disproportionate, adopted without good faith and constituting indirect expropriation.[350]

The last allegation, made by the claimant pertained to the compensation obligation of the defendant under Article 2201 of the Canada - Colombia FTA in spite of the environmental exception (or carve-out), forming its part. Although recognizing the host state measures as non-precluded, the tribunal interpreted the environmental exception as permissive only, that means not non-compensable in order to secure the predictable and stable legal environment for all investors under the FTA, as one of the limbs of the FET. Apparently, this part of the tribunal's interpretation explanation was out of scale, as the predictability and stability of the legal order of the host state does have its limits and will be maintained, even if the measures, fulfilling the criteria under Article 2201 are considered non-compensable, by making them non-compensable explicitly in the exception, which was not the case with the Canada-Colombia FTA.

There is no doubt that the non-precluded measures in the treaty environmental exception should be basically non-compensable, unless being taken without good faith, which may be certainly taken care of by the application and proper interpretation of the treaty standards of investments protection, not that magnificent confusion, the *Eco Oro* tribunal produced for the global environmental terror.[351] However, as long as investment tribunals are capable of coming with inventive solutions of low quality as the one *Eco Oro* tribunal produced for the want of awarding compensation at any costs, an explicit formulation in the treaty, or the Model FTA simply qualifying non-precluded measures of the host state as non-compensable, might be a wise safeguard.

Unfortunately, the tribunal's conclusions annoyed environmentalists unnecessarily, while making two equals out of

[350] *Eco Oro* Decision, The Partial Dissenting Opinion of Horacio A. Grigera Naón 11.
[351] GARDEN, Robert. Eco Oro v Colombia: The Brave New World of Environmental Exceptions' ICSID Review, 2023, Vol.38, pp.17-24.

protection of foreign investments and environmental protection proved to be finally fatal to the *Eco Oro* award. In the same vein, classifying the treaty exception as permissive only was out of line, as the environmental exception carries a heavyset of the public interest, thus making the rare circumstances exception, typical for expropriation provisions unsuitable, riding the roughshod over public interest par excellence.

When recalling the title of this article, the present author is bound to elaborate on subsuming this part properly within its coverage. In truth, when considering both cases, the non-compensability of the measures in environmental exception seems to be far more prominent, than the concurrent jurisdiction, or a complete exclusion of their compensability, unless being taken without good faith. In all honesty, how could the ICSID, or any other investment tribunal blackmail the host state with an obligatory compensation for adopting protective, or other necessary measures for protection of environment in good faith, when the IACHR in the meantime may rightly convict the same host state for ignoring it?[352]

Obviously, an ample space between the competence of investment tribunals, set up in the treaty or investment contract to decide international investment disputes, involving environmental issues in comparison with the IACHR is clear. At least, the fallings of the *Eco Oro* tribunal, losing, instead of succeeding even by a very narrow margin, were later narrowed down in even the narrower ICSID *Red Eagle* award,[353] rendered in 2024, the environmental exception unharmed.[354] The reason and had its way.

---

[352]See e.g. SOLANO, Lucia. Inter-American Court of Human Rights Rules on Indigenous Rights. *International Courts & Tribunals Interest Group Newsletter,* 2024, Vol.5, p.6. 2025, Vol.6, No.2, p.4.

[353] *Red Eagle Exploration Limited v. Republic of Colombia,* Award, ICSID Case No. ARB/18/13, 2 February 2024.

[354] CODY, Anthony - RESTREPO LONDONO, Ana et al. Red Eagle Exploration Limited v. Republic of Colombia (Award), ICSID Case No. ARB/18/13, 28 February 2024, A contribution by the ITA Board of Reporters; Kluwer Law International. See also CONTRERAS, Estefania – VILLEGAS, Jesus. Red Eagle v. Colombia: Colombia's Decisions to Protect Páramos Do Not Constitute a Violation of the

Conclusion

The international investment law is rapidly changing, being not looked down on as 'exotic'[355] anymore.[356] Actually, it is probably emerging (not impetuously), as if not state centered outright, then at least state oriented again, which comes as no obliteration, or anomaly, but more an inexorable transformation. Even its biggest names brandish vociferous claims, urging it should become *'more attuned to the needs of sustainable development,'*[357] while ordering investors - something unheard of thirty years ago, they simply *'must, in carrying out their business activities, respect and protect the environment.'*[358] International investment treaties contribute to that transformation too, as they may stipulate new environmental obligations for its parties, while incorporating also the sustainable development[359] at the same time, thus helping to preserve the natural resources in a broader sense, and not within their borders only - this was the proposal, argued in this article. Consequently, as there is no doubt the state parties are masters of their own investment treaties, the missing accent on environmental and social concerns both in older treaties, as well as in the Washington Convention[360] therefore turns out as a bit extraneous these days, and hardly Catch-22 either.

Minimum Standard of Treatment vis-à-vis an Investor with No Vested Right (Arbitration Blog May 25th, 2024) <https://arbitrationblog.kluwerarbitration.com/2024/05/25/red-eagle-v-colombia-colombias decisions-to-protect-paramos-do-not-constitute-a-violation-of-the-minimum-standard-of-treatment-vis-a-vis-an-investor-with-no-vested-right/> accessed on 25 July 2024.

[355] See in detail in TAMS Christian - SCHILL Stephan W.- HOFFMAN, Reiner: *International Investment Law and General International Law*. London: Edward Elgar 2023, p10.

[356] See also The ILC Fragmentation Report 2006.

[357] SUBEDI, Surya: *International Investment Law. Reconciling Policy and Principle.* The Hague: Kluwer Law International, 2024, p.226.

[358] Ibid, p.226.

[359]PATHIRANA, Dilini. Multilateral Rules on Sustainable Development. In: CHAISSE, Julien – HERRMANN, Christoph (eds.). *The International Law of Economic Integration*. Oxford: Oxford University Press, 2025, p.511.

[360]Convention on the Settlement of Investment Disputes between States and Nationals of Other States 1965. (ICSID Convention). Ibid, p. 509.

In contrast, the number of environmental disputes is rising, and it has been foretold the rise will continue partially because of the permanent increase in investments in the energy sector,[361] as well as due to abundant environmental regulation, through which environmentally accountable states, acting with due diligence[362] target various burning environmental issues, less promoted corollaries of investments including.[363] The *Eco Oro* case was one of such disputes, subsumed into the category of disputes, arising out of mining of other minerals, than fossil fuel, which is one of four basic categories of investments in natural resources. These disputes are usually solved in litigation,[364] but more often in investment arbitration, still perceived by many investors, relying on the ISDS clauses in investment treaties, as nonpareil, when it comes to the most appropriate dispute resolution mechanism, even in environmental cases. As Preston explains, the rational for this phenomenon '*is an inevitable response to the global transition in environmental law and governance, including response to the energy transition.*'[365]

Against this backdrop, while investment arbitration under the new investment treaties is now expected to be environmentally and

[361] MAZZEI, Isabella. Arbitrators of Environmental Disputes: The Guardians of Natural Resources. *Pace Environmental Law Review*, 2025, Vol. 42, p.278.
[362] VOIGT, Christina. International Environmental Responsibility and Liability. In: PEEL, Jacqueline-RAMAJANI, Lavanya (eds.): *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press, 2021, p.1040.
[363] PRESTON, Brian - BUTLER, Kate. Investor–State Dispute Settlement in Natural Resources, Energy and Environmental Cases. *Journal of Energy & Natural Resources Law*, 2024, Vol 42, p.453.
[364] VOIGT, Christina. International Environmental Responsibility and Liability. In: PEEL, Jacqueline-RAMAJANI, Lavanya (eds.): *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press, 2021, p.1020.
[365] PRESTON, Brian - BUTLER, Kate. Investor–State Dispute Settlement in Natural Resources, Energy and Environmental Cases. *Journal of Energy & Natural Resources Law*, 2024, Vol 42, p.454. Similarly, one should not be flummoxed too much, as international natural resources law is not just a sub-discipline of international environmental law, but also international investment law and the whole international economic law – even the genesis of the principle of permanent sovereignty over natural resources is intertwined at first with the parallel development of the protection of foreign direct investment, and the sustainable development later too.

socially oriented,[366] even the traditional role of arbitrators is upgrading from forever being protectors of investors' rights, to acting more as the guardians of natural resources and sustainable development,[367] that goes hand in hand with recommendation of the special management of environmental cases.[368] Conversely, even the new, environmentally street smart treaties cannot mollify an occasional distaste, when it is far from certain, whether arbitrators '*have given full effect to the state endeavors to safeguard their regulatory autonomy in modern investment treaties, notably including general exception clauses*,'[369] or it was nothing more than hypocrisy, while keeping the clauses in abeyance. This was the challenge - tough, but not insurmountable in the long run, illustrated by the *Eco Oro* award, assessed in this article.

On the other hands, even the new treaties may not seem to be an ideal solution, as according to Henckels, their provisions '*that aim to signal that the treaty does not wholly subordinate public welfare regulation to the protection of foreign investment appear to have exacerbated the problem rather than ameliorating it*.'[370] Be that as it may, the general and security exceptions as a matter of fact do instruct the parties to the investment treaty clearly *'in which circumstances they may permissibly do something that is ordinarily impermissible,'* thus removing the obligation of compensation *ab initio*. Otherwise, they lose any sense, attempts to

[366] MAZZEI, Isabella. Arbitrators of Environmental Disputes: The Guardians of Natural Resources, p.291.
[367] Ibid, p.280.
[368] PRESTON, Brian. Appropriate Dispute Resolution of Investor-State Disputes in Natural Resources, Energy and Environmental Cases. *Journal of Energy & Natural Resources Law*, 2025, Vol 43, p.68.
[369] PATHIRANA, Dilini. Multilateral Rules on Sustainable Development. In: CHAISSE, Julien – HERRMANN, Christoph (eds.). *The International Law of Economic Integration*. Oxford: Oxford University Press, 2025, p.512.
[370]HENCKELS, Caroline. General and Security Exceptions and The Question of Compensation in International Investment Law. *Journal of International Economic Law*, 2025, Vol.28, p.3.

posit them in the same row with the ARSIWA[371] Article 25 necessity notwithstanding.

The motto of this article, stressing '*burning the buildings*' with '*the damage done*' was not chosen carelessly, or without purpose, although the main point of departure pointed more to the much-desired equilibrium between property rights and the public interest to preserve natural resources in international law. Ultimately, as for (at least) international law of natural resources and international environmental law, inferences may remain sanguine and end on a note of optimism, while leaving the vagaries and imbalances in protection of the absolute ownership in international investment law simply aside, without eying them askance.

Instead, when considering all the facts mentioned above, it is not the renegade investor, mentioned in the motto of this article, but - what may appear a bit uncanny at the first sight - the Stockholm[372] Principle 21 as a cornerstone of international environmental and natural resources law, that ought to be finally accentuated, because according to Principle 21 the states are responsible for keeping all activities within their jurisdiction or control - exploitation of their own resources including - exactly *without causing damage* in another state or beyond purview of their national jurisdiction, thus making any later '*burning of buildings*' superfluous. Thereupon, in the next five years, just let the states fully abide by the Stockholm Principle 21 and Principle 2 of the Rio Declaration[373] as its reinstatement, accentuating not only environmental, but also applicable developmental state policies, while working tirelessly, holding to their promises, on the complete implementation of the SDGs and the whole 2030 Agenda for Sustainable Development at its behest. This should be, after all, the highest goal.

---

[371] International Law Commission, *Draft Articles on the Responsibility of States for Internationally Wrongful Acts,* U.N. Doc. A/56/10 (2001).
[372]The Declaration of Principles for the Preservation and Enhancement of the Human Environment (The Stockholm Declaration 1972).
[373] The Rio Declaration on Environment and Development 1992.

List of Bibliography

1. CASELLA, Sarah. Union Fenosa Gas v Egypt: The Necessity Defense: Much Ado about Nothing? 37 *ICSID Review,* 2022, Vol.37, pp.552 -557. ISSN : 2049-1999

2. CHOVANCOVÁ, Katarína. The Legitimate Expectations and Their Current Status in International Investment Law. In: GEISTLINGER, Michael - ROTH, Marianne (eds.). *VIII Yearbook on International Arbitration and ADR*. Vienna: Verlag Österreich, 2024, pp.359 - 379.

3. CHOVANCOVÁ, Katarína. The Fair and Equitable Treatment and Its Current Status in International Investment Law. In: GEISTLINGER, Michael – ROTH, Marianne (eds.). *VIII Yearbook on International Arbitration and ADR*. Vienna: NWV, 2019, pp.171- 186.

4. CHOVANCOVÁ, Katarína**.** *International Arbitration of Investment Disputes**:** Introduction and The Basic Characteristics*. Bratislava: Eurokódex, 2009. 392 p.

5. CHOVANCOVÁ, Katarína. Medzinárodné investičné arbitráže v sektore energetiky. In: ŠTURMA, Pavel - TRÁVNIČKOVÁ, Zuzana (eds.) *Pokojné řešení sporů v mezinárodním právu*. Praha: Česká společnost pro mezinárodní právo, 2020, pp. 117-132.

6. CODY, Anthony - RESTREPO LONDONO, Ana et al. Red Eagle Exploration Limited v. Republic of Colombia (Award), ICSID Case No. ARB/18/13, 28 February 2024, A contribution by the ITA Board of Reporters; Kluwer Law International

7. CONTRERAS, Estefania – VILLEGAS, Jesus. Red Eagle v. Colombia: Colombia's Decisions to Protect Páramos Do Not Constitute a Violation of the Minimum Standard of Treatment vis-à-vis an Investor with No Vested Right (Arbitration Blog May 25th, 2024) https://arbitrationblog.kluwerarbitration.com/2024/05/25/red-eagle-v-colombia-colombias decisions-to-protect-paramos-do-

not-constitute-a-violation-of-the-minimum-standard-of-treatment-vis-a-vis-an-investor-with-no-vested-right/ accessed on 25 July 2024

8. COTULA, Lorenzo – PERONE, Nicolas. Seeing Santurban through ISDS: A Sociolegal Case Study of *Eco Oro v Colombia*. *Leiden Journal of International Law,* 2024, Vol.37, pp.440-461. ISSN 0922-1565

9. DUMBERRY, Patrick. The Eco Oro and Red Eagle Awards: Recent Divergence on How to Interpret Fair and Equitable Treatment Clauses Linked to the Minimum Standard of Treatment (Arbitration Blog, 23 July 2024) <https://arbitrationblog.kluwerarbitration.com/2024/07/23/the-eco-oro-and-red-eagle-awards-recent-divergence-on-how-to-interpret-fair-and-equitable-treatment-clauses-linked-to-the-minimum-standard-of-treatment/> accessed on 25 July 2024

10. GARDEN, Robert. Eco Oro v Colombia: The Brave New World of Environmental Exceptions' *ICSID Review*, 2023, Vol.38, pp.17-24. ISSN : 2049-1999

11. GUPTA, Aarushi. Eco Oro v Colombia: Is GATT Article XX to be Blamed? *Arbitration: The International Journal of Arbitration, Mediation and Dispute Management*, 2023, Vol.89, pp.21-34. ISSN 0003-7877.

12. HARRISON, James. Significant International Environmental Law Developments: 2021-2022. *Journal of Environmental Law,* 2022, Vol.34, pp. 499-515. ISSN 0952-8873

13. HENCKELS, Caroline. General and Security Exceptions and The Question of Compensation in International Investment Law. *Journal of International Economic Law*, 2025, Vol.28, pp.63-77. ISSN 1086-7872

14. HEATH, Benton. Eco Oro and the Twilight of Policy Exceptionalism (Investment Treaty News, 20 December 2021) https://www.iisd.org/itn/en/2021/12/20/eco-oro-and-the-twilight-of-policy-exceptionalism/ accessed on 25 July 2024

15. KUO, Hou-chih – LO, Jeffrey. Runaway Tribunal? An Assessment of the Eco Oro Tribunal's Opinion on the General Exceptions. *Contemporary Asia Arbitration Journal (CAA Journal)*, 2022, Vol.15, pp.143 – 170. ISSN 1999747.

16. LORFING, Pascale. ICSID Award: Eco Oro Minerals Corp v The Republic of Colombia. *International Business Law Journal,* 2021, Vol.6, pp. 819- 826. ISSN 2151 - 7649.

17. MAKUCH, Karen - PEREIRA, Ricardo: *Environmental and Energy Law*. Oxford: Blackwell Publishing, 2012. 651p.

18. MATHEWS, Roopa – DEVITRE, Dilber. New Generation Investment Treaties and Environmental Exceptions: A Case Study of Treaty Interpretation in Eco Oro Minerals Corp v. Colombia (Arbitration Blog, 11 April 2021) <https://arbitrationblog.kluwerarbitration.com/2022/04/11/new-generation-investmenttreaties-and-environmental-exceptions-a-case-study-of-treaty-interpretation-in-eco-oro-minerals-corp-v-colombia/> accessed 30 January 2023.

19. MAZZEI, Isabella. Arbitrators of Environmental Disputes: The Guardians of Natural Resources. *Pace Environmental Law Review*, 2025, Vol. 42, pp. 278-294. ISSN 2331-1207

20. McINTYRE, Owen. Solidarity and Community Interests in International Environmental and Natural Resources Law. *Journal of Energy & Natural Resources Law*, 2025, Vol 43, pp.1-19. ISSN 0264-6811

21. PATHIRANA, Dilini. Multilateral Rules on Sustainable Development. In: CHAISSE, Julien – HERRMANN, Christoph (eds.). *The International Law of Economic Integration*. Oxford: Oxford University Press, 2025, pp.499-516.

22. PEREIRA, Ricardo - GOUG, Orla. Permanent Sovereignty Over Natural Resources in the 21st Century: Natural Resource Governance and the Right to Self-Determination of Indigenous Peoples Under International Law. *Melbourne Journal of International Law*, 2013, Vol.14, pp.1–20. ISSN 1444-8602

23. PRESTON, Brian. Appropriate Dispute Resolution of Investor-State Disputes in Natural Resources, Energy and Environmental Cases. *Journal of Energy & Natural Resources Law*, 2025, Vol 43, pp. 67–101. ISSN 0264-6811

24. PRESTON, Brian - BUTLER, Kate. Investor-State Dispute Settlement in Natural Resources, Energy and Environmental Cases. *Journal of Energy & Natural Resources Law*, 2024, Vol 42, pp. 453-484. ISSN 0264-6811

25. RONNE, Anita. Public and Private Rights to Natural Resources and Differences in Their Protection? In: McHARG, Aileen – BARRY, Barton (eds.). *Property and The Law in Energy and Natural Resources*. Oxford: Oxford University Press, 2010, pp.60-79.

26. SANDOVAL, Andres A. – EGAN, Patrick J.W.- WEINBERG, Joe. Input-Factor Mobility and the Impact of Host Country Institutions on Foreign Direct Investment in Natural Resources. *Studies in Comparative International Development*. <https://www.researchgate.net/publication/388356703_InputFactor_Mobility_and_the_Impact_of_Host_Country_Institutions_on_Foreign_Direct_Investment_in_Natural_Resources > accessed 20 July 2025.

27. SANDS, Philippe - PEEL, Jacqueline: *Principles of International Environmental Law*. Cambridge: Cambridge University Press, 2018.968p.

28. SOLANO, Lucia. Inter-American Court of Human Rights Rules on Indigenous Rights. *International Courts & Tribunals Interest Group Newsletter,* ASIL, 2024, Vol.5, p.6. 2025, Vol.6, No.2, p.4.

29. SOLANO, Lucia. IACHR Orders Peru to Adopt Comprehensive Reparations Measures. *International Courts & Tribunals Interest Group Newsletter,* ASIL, 2024, Vol.5, No.2, p.6.

30. SORNARAJAH, M.: *The International Law on Foreign Investment*. Cambridge: Cambridge University Press, 2021.661p.

31. SUBEDI, Surya: *International Investment Law. Reconciling Policy and Principle*. The Hague: Kluwer Law International, 2024. 349p.

32. TAMS Christian - SCHILL Stephan W.- HOFFMAN, Reiner: *International Investment Law and General International Law*. London: Edward Elgar 2023. 416 p.

33. ÜNUVAR, Günes. A Tale of Policy Carve-outs and General Exceptions: Eco Oro v Colombia as a Case Study. *Journal of International Dispute Settlement,* 2023, Vol.14, pp.517-533. ISSN 2040-3593

34. VOIGT, Christina. International Environmental Responsibility and Liability. In: PEEL, Jacqueline-RAMAJANI, Lavanya (eds.): *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press, 2021, pp.1003-1021.

35. YEPES, Juliana Carvajal. A Risky Treaty Interpretation Loophole? The Case of Investment-State Arbitration Cases with Environmental Issues. *ITA in Review: The Journal of the Institute for Transnational Arbitration,* 2022, Vol.4, No.2, pp.6 - 15.

Legal Documents and Cases

The American Convention of Human Rights. 1969

International Law Commission, Draft Articles on the Responsibility of States for Internationally Wrongful Acts, U.N. Doc. A/56/10 (2001)

International Law Commission, Fragmentation of International Law: Difficulties Arising from Diversification and Expansion of International Law, 2006, U.N. Doc. A/CN.4/L.682 (ILC Fragmentation Report 2006)

The Rio Declaration on Environment and Development 1992

The Declaration of Principles for the Preservation and Enhancement of the Human Environment (The Stockholm Declaration 1972)

Convention on the Settlement of Investment Disputes between States and Nationals of Other States 1965 (The ICSID Convention 1965)

Angel Samuel Seda et al. v The Republic of Colombia, Award, ICSID Case No. ARB/19/6, 27 June 2024

Burlington Resources Inc. v Republic of Ecuador, Decision on Liability, ICSID Case No. ARB/08/5, 14 December 2012

Eco Oro Minerals Corp (Claimant) v The Republic of Colombia (Respondent), Decision on Jurisdiction, Liability and Directions on Quantum, ICSID Case No. ARB/16/41, 9 September 2021

EuroGas Inc. and Belmont Resources Inc. v. Slovak Republic, Award, ICSID Case No. ARB/14/14, 18 August 2017

Gabriel Resources v Romania, Award, ICSID Case No. ARB/15/31, 8 March 2024

Case of Inhabitants of La Oroya v Peru. Preliminary Objections, Merits, Reparations and Costs. Judgment, IACHR, Series C No.511, 27 November 2023

Kelly v Ohio Oil Co., 57 Ohio St.317, 49 NE 399 (1897)

Metalclad Corporation v United Mexican States, Award, ICSID Case No.ARB(AF)97/1, 30 August 2000

Methanex Corporation v United States, Final Award on Jurisdiction and Merits, ICSID, 3 August 2005

Odyssey Marine Exploration, Inc. v United Mexican States, Awards, ICSID Case No.UNCT/20/1, 27 September 2024

Perenco Ecuador v The Republic of Ecuador, Award, ICSID Case No ARB/08/6, 27 September 2019

Red Eagle Exploration Limited v. Republic of Colombia, Award, ICSID Case No. ARB/18/13, 2 February 2024

Case of Indigenas Tagaeri and Taromenane Indigenous Peoples vs. Ecuador. Preliminary Objections, Merits, Reparations and Costs. Judgment, IACHR, Serie C No.537, 4 September 2024

III. The Role of International Organisations and Financial Institutions in Shaping International Environmental Law

3.1. Ukraine's Cooperation with International Organisations in the Development of Environmental Law

Mgr. Ivan Gabani, PhD

Senior Lecturer of the Department of International Law, Faculty of Law, Uzhhorod National University, Ukraine

ivan.habani@uzhnu.edu.ua

Problem Statement

Transboundary environmental pollution represents one of the most critical threats to international environmental security, directly impacting countries that share common borders — particularly Ukraine and its neighboring states. The emergence and cross-border spread of harmful environmental factors pose numerous challenges to the development of international environmental law, as this issue demands a comprehensive, integrated approach and the implementation of effective international cooperation mechanisms.

As an active participant in global environmental initiatives, Ukraine faces specific legal, institutional, and political obligations that must be fulfilled within both national and international environmental policy frameworks. In particular, there is an urgent need to address the misalignment of national environmental legislation with European standards, especially in the areas of environmental control, industrial pollution, and biodiversity conservation.

These challenges necessitate a well-reasoned approach to the harmonization of national regulations with international legal standards, along with the implementation of effective mechanisms capable of addressing environmental issues in the context of global ecological challenges.

Status of the Issue

Ukraine's cooperation with international organisations in the development of environmental law is a key area of interest for both domestic and international scholars. Ukrainian legal scholarship actively examines the adaptation of national environmental legislation to international standards—particularly those of the European Union—as well as the legal mechanisms that ensure effective implementation of international environmental obligations.

In his work *"International Legal Mechanisms in the Field of Ecology: Ukraine's Experience and Challenges"* (2021)[374], M. Lyapin explores the influence of international agreements and conventions—particularly in the context of transboundary pollution—on Ukraine's legislative initiatives and its legal responsibility for violating international environmental standards. Similarly, I. Sakhno's *"Environmental Law of Ukraine in the Context of European Integration"* (2020)[375] focuses on the legal harmonisation of Ukrainian environmental law with the acquis communautaire. In turn, O. Borovyk's study *"International Cooperation in Environmental Protection: Ukraine's Role in Global Initiatives"* (2022)[376] analyses the international legal dimensions of Ukraine's participation in global environmental initiatives, especially within the UN and EU frameworks.

A significant contribution to the development of legal doctrine has been made by N. Petretska in her article *"Ecosystem Approaches in the Practice of National Law Enforcement"*

[374] Liapin, M. (2021). Міжнародні правові механізми у сфері екології: досвід України та виклики [International legal mechanisms in the field of ecology: Ukraine's experience and challenges]. Екологічне право України, (3), 15–22.
[375] Sakhno, I. (2020). Екологічне право України в контексті європейської інтеграції [Environmental law of Ukraine in the context of European integration]. Право України, (7), 58–66.
[376] Borovyk, O. (2022). Міжнародна співпраця в охороні довкілля: роль України у глобальних ініціативах [International cooperation in environmental protection: The role of Ukraine in global initiatives]. Екологічний вісник, (4), 41–48.

(2023)[377], which highlights the potential for integrating ecosystem-based principles into the practice of national law enforcement. The author substantiates the need for broader application of the Aarhus Convention and other sources of international environmental law to ensure the effective resolution of environmental disputes. Her approach promotes a modern vision of environmental legal relations focused on the holistic preservation of the environment, and supports the incorporation of sustainable development principles into legal enforcement practice in Ukraine.

The works of V. Kovalchuk also merit particular attention—especially his study *"Transboundary Pollution: International Legal Responsibility"* (2021)[378], which analyses the international legal framework for holding states accountable for environmental damage resulting from transboundary impacts. In the context of integration into the European legal space, the research of international scholars such as P. James (*Global Environmental Governance: The Role of Emerging Economies*, 2020)[379] is also relevant; James emphasises Ukraine's role as a transitional economy in global environmental governance and the need to implement the principle of differentiated responsibility.

Thus, despite the existing academic contributions, challenges remain in the effective implementation of international environmental norms into Ukraine's national legislation, the strengthening of institutional capacity, and ensuring accountability for transboundary environmental violations—necessitating further legal analysis and scholarly reflection.

---

[377] Petretska, N. I. (2023). Екосистемні підходи у практиці національного правозастосування [Ecosystem approaches in national law enforcement practice]. Юридична наука, (2), 23–30.
[378] Kovalchuk, V. (2021). Транскордонне забруднення: міжнародно-правова відповідальність [Transboundary pollution: International legal responsibility]. Міжнародне право і глобальні виклики, (1), 71–79.
[379] James, P. (2020). Global environmental governance: The role of emerging economies. Oxford University Press.

Purpose of the Study

The purpose of this article is to conduct a comprehensive analysis of the issue of transboundary environmental pollution, with a particular focus on the international environmental initiatives in which Ukraine is involved. The main emphasis is placed on evaluating the legal mechanisms for fulfilling international environmental obligations, especially within the framework of European integration.

Additionally, the study aims to identify pathways for harmonising Ukraine's national environmental legislation with European standards and to develop practical recommendations for enhancing the effectiveness of national environmental policy in the face of transboundary environmental threats.

To achieve this goal, the following objectives have been set:

1. To analyse the factors contributing to transboundary environmental pollution, particularly through the example of Ukraine and its cooperation with neighbouring countries.

2. To assess the effectiveness of international legal mechanisms regulating transboundary pollution and to determine Ukraine's role in their implementation within the frameworks of the UN and the EU.

3. To examine the compliance of Ukraine's national environmental legislation with European standards in the areas of industrial pollution, biodiversity conservation, and environmental oversight.

4. To develop recommendations for strengthening Ukraine's institutional capacity to respond to environmental threats, particularly by enhancing monitoring and preventive mechanisms.

5. To propose strategies for integrating Ukraine into global environmental initiatives aimed at minimising transboundary environmental risks.

6.

Analysis and Discussion

Transboundary environmental pollution remains one of the most pressing challenges in contemporary international environmental law. It refers to situations in which the negative impacts of economic or natural activities within one state cause environmental harm beyond its national borders.

Given its extensive shared borders with European Union countries, Ukraine plays a pivotal role in shaping the environmental security of the Central and Eastern European region. The issue of transboundary pollution in Ukraine is exacerbated by a combination of internal and external factors, including high levels of industrial pressure, unauthorized exploitation of natural resources, weak environmental monitoring systems, and the environmental consequences of military operations within the country.

One of the most acute examples of transboundary pollution is the case of the Tisa River, which flows through the Zakarpattia region of Ukraine and continues through Hungary, Slovakia, and Serbia. The Ukrainian section of the river basin is subject to ongoing pollution from household waste, plastic debris, wood residues, and chemical substances. In 2021 alone, during just a few days of flooding, Hungarian authorities collected over 60 tonnes of waste near the Ukrainian border. In the first months of that year, the river transported more than 1,500 cubic metres of waste downstream. Joint studies indicate that up to 20% of this waste originates in Ukraine.[380]

Particularly hazardous is the infiltration of leachate—highly toxic liquids formed by the decomposition of waste in solid waste landfills and unauthorized dump sites—into water bodies. During heavy rainfall or flooding, these substances are washed from the surfaces of landfills into nearby streams and small rivers, ultimately reaching the main channel of the Tisa. This poses a critical threat

[380] Ministry of Environmental Protection and Natural Resources of Ukraine. (2023). Звіт про незаконну вирубку лісів в Україні за 2022–2023 роки [Report on illegal logging in Ukraine for 2022–2023]. Отримано з https://mepr.gov.ua

to water quality and the ecological health of the river's entire transboundary flow.

Contributing factors include inadequate waste management oversight in mountain communities, a lack of infrastructure for sorting and recycling waste, and limited environmental awareness among the local population. The absence of centralized wastewater treatment facilities in several settlements further aggravates the situation.

Another significant source of transboundary pollution is illegal logging in the Carpathian region. Unregulated logging operations have led to the degradation of mountain ecosystems, accelerated soil erosion, and disrupted hydrological balance—all of which increase the likelihood of devastating floods and landslides. These natural hazards can affect not only Ukraine, but also neighboring regions of Romania and Slovakia, spreading environmental harm across national boundaries.

This problem is largely driven by weak institutional control, entrenched corruption in the forestry sector, and a lack of transparency regarding the scale and location of logging activities.

In 2022, Ukrainian authorities recorded at least 24,300 cubic metres of illegally harvested timber, accounting for 0.2% of the official logging volume. In 2023, this figure rose to 30,300 cubic metres—an increase of 24.7% compared to the previous year. The highest levels of illegal logging in 2023 were reported in Kharkiv (6,900 m³), Zhytomyr (4,100 m³), Lviv (3,000 m³), Dnipropetrovsk (2,900 m³), and Zakarpattia (2,500 m³) regions. The total estimated damages caused by documented illegal logging in 2023 amounted to UAH 703.9 million.[381]

Military actions on Ukrainian territory, ongoing since 2022, have become an additional critical factor exacerbating environmental threats. A particularly concerning case is the

[381] Hungarian Water Directorate. (2021). Спільний екологічний звіт про забруднення річки Тиса [Joint environmental report on the pollution of the Tisza River]. Отримано з https://vizugy.hu

situation within the Chernobyl Nuclear Power Plant exclusion zone. During the temporary occupation of the plant, the radiation monitoring infrastructure was damaged, and heavy military equipment operated in areas with elevated radiation levels, resulting in the resuspension of radioactive dust. This created a potential risk of radionuclide dispersion to the border regions of Belarus and, under certain meteorological conditions, beyond Ukraine's borders.[382]

Reports also indicate damage to industrial facilities in eastern Ukraine—including metallurgical plants, chemical factories, and oil depots—particularly in the Zaporizhzhia, Donetsk, and Kharkiv regions. Shelling and fires have led to the release of toxic substances into the air, soil, and water bodies. These pollutants may be transported to neighbouring countries via atmospheric currents or through transboundary rivers such as the Siverskyi Donets and Dniester.

Among less conspicuous, yet significant factors contributing to transboundary pollution is the use of agrochemicals in border areas. Intensive agricultural practices, combined with insufficient enforcement of pesticide application standards, result in the infiltration of these chemicals into groundwater and transboundary water bodies, particularly within the Dniester and Prut river basins.[383]

Thus, the factors contributing to transboundary pollution in Ukraine are multifaceted, encompassing natural geographical characteristics as well as anthropogenic, socio-economic, and political dimensions. Effective mitigation of these threats requires not only Ukraine's active participation in international legal initiatives but also comprehensive domestic reforms — notably the enhancement of monitoring systems, strengthening of

[382] United Nations Environment Programme. (2022). Екологічний вплив війни в Україні: попередня оцінка [Environmental impact of the war in Ukraine: Preliminary assessment]. Отримано з https://www.unep.org
[383] State Agency of Water Resources of Ukraine. (2023). Моніторинг транскордонних басейнів річок Тиса і Дністер [Monitoring of transboundary river basins: Tisza and Dniester]. Отримано з https://www.davr.gov.ua

environmental oversight, combating illegal activities in natural resource management, and addressing the environmental consequences of military operations.

International legal mechanisms regulating transboundary environmental pollution comprise various agreements, conventions, and protocols that obligate states to cooperate in minimizing adverse environmental impacts. A key instrument is the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (1997), which provides a legal framework for the joint management of water resources, particularly aimed at pollution prevention.[384]

The Aarhus Convention (1998) merits special mention, as it guarantees public access to environmental information, public participation in decision-making, and access to environmental justice.[385]

Additionally, the Protocol to the Convention on Long-Range Transboundary Air Pollution (1979) imposes obligations to reduce pollutant emissions and monitor their cross-border effects.[386] The European Union further reinforces these mechanisms through the incorporation of environmental standards into its domestic and external legal frameworks.[387]

---

[384] United Nations Economic Commission for Europe (UNECE). (1992). Конвенція про охорону та використання транскордонних водотоків і міжнародних озер [Convention on the Protection and Use of Transboundary Watercourses and International Lakes].

[385] UNECE. (1998). Конвенція з доступу до інформації, участі громадськості у прийнятті рішень та доступу до правосуддя у питаннях довкілля [Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters]. Отримано з https://unece.org/environment-policy/environmental-policy-areas/aarhus-convention

[386] UNECE. (1979). Конвенція про довгострокове транскордонне забруднення повітря [Convention on Long-Range Transboundary Air Pollution (CLRTAP)]. Отримано з https://unece.org/environment-policy/convention-long-range-transboundary-air-pollution

[387] European Commission. (n.d.). Екологічна політика та законодавство [Environmental Policy and Legislation]. Отримано з https://ec.europa.eu/environment/strategy/index_en.htm

Thanks to its geographical location and numerous neighboring countries, Ukraine actively participates in international environmental initiatives addressing transboundary pollution. This engagement enables Ukraine not only to align its national legislation with European standards but also to contribute to regional environmental security.

Examples of Ukraine's participation in international environmental cooperation

1. *International Commission for the Protection of the Danube River (ICPDR):* Ukraine participates in the Integrated Management Plan for the Tisza River Basin, which encompasses five countries. Joint coordination of water monitoring, flood prevention, and pollution control measures enables effective responses to environmental challenges. An updated plan for 2021–2027 was adopted in 2023.[388].

2. *Eastern Carpathian Biosphere Reserve under the auspices of UNESCO:* This transboundary nature conservation complex unites Ukraine, Slovakia, and Poland with the aim of preserving old-growth forests, promoting sustainable tourism, and preventing poaching and illegal logging.[389].

3. *EU Interreg NEXT Programme (2021–2027):* Within this initiative, Ukraine implements projects for monitoring water and air quality, establishing protected areas, and managing waste in border regions adjacent to Hungary, Slovakia, and Romania.[390].

4. *Accession to the Convention on the Transboundary Effects of Industrial Accidents (2023):* Ukraine became a party to this

[388] International Commission for the Protection of the Danube River (ICPDR). (2021–2027). Інтегрований план управління басейном річки Тиса [Integrated Management Plan for the Tisza River Basin]. Отримано з https://www.icpdr.org/main/management-plans/tisza-river-basin
[389] UNESCO. (n.d.). Східно-Карпатський біосферний заповідник [East Carpathian Biosphere Reserve]. Отримано з https://en.unesco.org/biosphere/eastcarpathian
[390] European Union. (2021–2027). Програма Interreg NEXT [Interreg NEXT Programme]. Отримано з https://interreg.eu/next/

convention, which governs the prevention and mitigation of accidents with potential transboundary impacts.[391].

5. *Participation in the Working Group on Air Pollution (2024):* The international forum addressed the environmental impact of Russian aggression in Ukraine and its transboundary consequences for neighbouring countries.[392].

6. *Management of the Dniester River basin in cooperation with Moldova:* Under the Helsinki Convention framework, a bilateral agreement was signed to jointly protect water resources and prevent pollution.[393].

7. *Adaptation to EU Directive 2008/50/EC on air quality:* Ukraine is progressively implementing European standards for atmospheric air quality monitoring, including integration into the European Pollutant Release and Transfer Register.[394].

8. *Adoption of the Law on Prevention, Reduction and Control of Industrial Pollution (2023):* The law introduces the European model of integrated environmental permits, facilitating the reduction of harmful emissions risks in border areas.[395].

9. *Participation in the Climate Partnership programme:* In border regions, particularly Lviv and Zakarpattia Oblasts, initiatives are underway to improve air quality and enhance climate

[391] UNECE. (1992). Конвенція про транскордонні наслідки промислових аварій [Convention on the Transboundary Effects of Industrial Accidents]. Отримано з https://unece.org/env/teia/
[392] UNECE. (n.d.). Робоча група з питань забруднення повітря. Звіти про впливи транскордонного забруднення [Working Group on Air Pollution. Reports on cross-border pollution impacts].
[393] Helsinki Commission (HELCOM). (n.d.). Угода про співпрацю у сфері управління басейном річки Дністер [Agreement on Cooperation for Dniester River Basin Management].
[394] European Parliament. (2008). Директива 2008/50/ЕС про якість атмосферного повітря [Directive 2008/50/EC on ambient air quality]. Отримано з https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0050
[395] Verkhovna Rada of Ukraine. (2023). Закон про запобігання, зменшення та контроль промислового забруднення [Law on Prevention, Reduction and Control of Industrial Pollution].

change adaptation, positively affecting the environmental situation in neighbouring states.[396].

Thus, although Ukraine has made significant progress toward integration with European environmental initiatives, numerous challenges remain. Further efforts are required to enhance implementation, strengthen regulatory oversight, increase funding, and build institutional capacity to ensure the effective fulfilment of international commitments and guarantee environmental security for present and future generations.

Ukraine has committed to aligning its national legislation with the requirements of Directive 2010/75/EU on Industrial Emissions (IED), which regulates the integrated permitting system for enterprises with significant environmental impact. The Law of Ukraine "On Prevention, Reduction and Control of Industrial Pollution" was adopted in the first reading in 2019 and finalized in 2023. This law establishes the foundation for introducing integrated environmental permits similar to those in the EU and mandates the use of Best Available Techniques (BAT) in compliance with EU standards. [397]

However, the implementation of this legislation remains incomplete:

1. a significant number of industrial facilities continue to operate under outdated standards without proper emission assessments;

2. enterprises often receive permits without comprehensive environmental monitoring, failing to meet EU requirements.

Ukraine is also a party to the Convention on Biological Diversity and has adapted its legislation to Directive 92/43/EEC (on habitats) and Directive 2009/147/EC (on the conservation of wild

[396] Partnership for Climate. (n.d.). Транскордонні екологічні проєкти в Україні [Cross-border environmental projects in Ukraine].
[397] Verkhovna Rada of Ukraine. (2019). Закон України «Про запобігання, зменшення та контроль промислового забруднення» [Law of Ukraine "On prevention, reduction and control of industrial pollution"]. Отримано з https://zakon.rada.gov.ua/laws/show/2207-19

birds). Amendments to the Law "On the Natural Reserve Fund" and the National Biodiversity Conservation Strategy until 2030 provide for the implementation of EU approaches, particularly the creation of an ecological network similar to Natura 2000.[398]

At the same time, Ukraine lacks an effective system for environmental impact assessment of high-value protected areas and faces the following challenges:

1. insufficient funding for protected areas;

2. weak integration of nature conservation policies into agricultural and forestry sectors;

3. illegal logging, especially in the Carpathian region, causing significant harm to biodiversity and aquatic ecosystems;

4. partial non-compliance with EU Regulation No. 995/2010 (on timber), particularly due to timber exports without proper control.[399]

According to environmental monitoring data, the condition of rivers such as the Dniester and Siverskyi Donets is deteriorating due to industrial wastewater discharges and outdated water treatment systems, indicating ineffective implementation of the EU Water Framework Directive 2000/60/EC.[400]

It is also important to emphasize that effective control and supervision are necessary for the successful enforcement of environmental standards. Ukraine has taken steps to implement Regulation (EC) No 166/2006 (European Pollutant Release and Transfer Register) and has enshrined the principles of

[398] Verkhovna Rada of Ukraine. (2023). Закон України «Про запобігання, зменшення та контроль промислового забруднення» (остання редакція) [Law of Ukraine "On prevention, reduction and control of industrial pollution" (final version)]. Отримано з https://zakon.rada.gov.ua/laws/show/2207-19#Text
[399] European Parliament and Council. (2010). Директива 2010/75/ЄС про промислові викиди (IED) [Directive 2010/75/EU on industrial emissions (IED)]. Отримано з https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32010L0075
[400] Verkhovna Rada of Ukraine. (2020). Закон України «Про природно-заповідний фонд» [Law of Ukraine "On nature reserve fund"]. Отримано з https://zakon.rada.gov.ua/laws/show/2456-19

environmental monitoring in the Law "On the Basic Principles of State Supervision (Control) in the Sphere of Economic Activity."[401]

In 2017, the Law "On Environmental Impact Assessment" was adopted, partially adapting the requirements of Directive 2011/92/EU. However, the actual enforcement of these requirements remains uneven:

1. environmental monitoring is often formal and procedural;

2. state authorities do not always have sufficient autonomy or resources to conduct environmental audits according to European standards.[402]

Effective response to environmental challenges requires Ukraine not only to react to existing threats but also to build a system of preventive environmental management. In this regard, it is critically important to strengthen the state's institutional capacity through modernizing monitoring systems, improving legislation, developing education, and enhancing international cooperation. Key recommendations include:

1. ***Modernisation of environmental monitoring systems****:*

1.1. Introduction of an integrated automated monitoring system enabling real-time tracking of air, water, and soil quality indicators, especially in hard-to-reach areas (the Carpathians, eastern Ukraine).

1.2. Integration of national environmental monitoring systems with satellite observation data and implementation of open information platforms, particularly the Copernicus programme.

---

[401] Ministry of Environmental Protection and Natural Resources of Ukraine. (2021). Національна стратегія збереження біорізноманіття до 2030 року [National biodiversity conservation strategy until 2030]. Отримано з https://mepr.gov.ua/strategiya-bioriznomanittya

[402] European Parliament and Council. (1992). Директива 92/43/ЄЕС про охорону природних середовищ існування та дикої флори і фауни [Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora]. Отримано з https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31992L0043

1.3. Creation of a register of environmentally hazardous enterprises linked to geospatial systems for rapid response to potential accidents.[403]

2. *Development of forecasting and early warning systems:*

2.1. Establishment of local early warning systems for forest fires, floods, and water pollution.

2.2. Adaptation of foreign experience, notably the 'green signal' system in Canada, which can be used to assess natural disaster risks in Ukraine.

2.3. Introduction of digital platforms for disseminating warnings to the public and local authorities.[404].

3. Strengthening the legislative framework and control:

3.1. Harmonisation of Ukraine's environmental legislation with EU Directives, particularly in monitoring, waste management, and water resources.

3.2. Improvement of the environmental control system through electronic environmental audits, online reporting, and enhanced transparency of inspections.

3.3. Establishment of effective sanctions for violations of environmental regulations, taking the example of Norway, where regulatory bodies enjoy high autonomy.

4. Education, professional development, and training:

[403] Ukraintseva, O., & Melnyk, S. (2024). Екологічна політика України у світлі європейської інтеграції [Environmental policy of Ukraine in light of European integration]. Науковий вісник екології та права, 10(1), 45–58.
[404] Petrenko, I. (2023). Вплив промислових викидів на транскордонне забруднення повітря [Impact of industrial emissions on transboundary air pollution]. Журнал екологічної безпеки, 15(2), 120–130.

4.1. Institutionalisation of training programmes in risk management, water resource management, and environmental assessment.

4.2. Regular training sessions for employees of government agencies, businesses, and civil society organisations.

4.3. Integration of environmental education into curricula at all levels, emphasizing practical aspects of sustainable development.

5. *Considering the transboundary dimension of environmental threats*

Special attention should be given to regions bordering other countries, where economic activities may pose significant risks of transboundary pollution. Ukraine should therefore adhere to and actively implement the following principles:

5.1. Prevention of transboundary harm, which is more effective than compensation.

5.2. The principle of due diligence — the state's obligation to take preventive measures, considering available resources.

5.3. Interstate cooperation — in both prevention and mitigation of environmental consequences.

5.4. Good faith — lawful conduct by states aimed at long-term environmental protection.

In this context, the following instruments are also crucial:

1. Ukraine's participation in international environmental initiatives and integration associations.

2. Cooperation with international financial institutions to implement sustainable development projects.

3. Voluntary acceptance of environmental commitments and utilisation of mutual control mechanisms.

4. Development of Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) as foundations for environmentally sound planning.

6. ***Recommendations for sustainable management of transboundary waters***

Given the extreme environmental vulnerability of basin areas, Ukraine should implement modern approaches to water management:

6.1. Transition to basin-based water resource management at both local and international levels.

6.2. Implementation of EU water directives, particularly concerning water quality and public participation.

6.3. Integration of natural and social sciences to study the sources and impacts of pollution.

6.4. Participatory modelling involving scientists, policymakers, communities, and businesses.

6.5. Modernisation of water treatment and sewage systems, including the adoption of secondary treatment technologies.

6.6. Raising public environmental awareness and fostering active international communication.

Ensuring sustainable water management within the framework of transboundary cooperation is a critical component of the state's institutional capacity, especially considering climate challenges, water scarcity, and man-made risks.

7. Combating illegal logging and protecting forest ecosystems

Ukraine's forest resources play a crucial role in maintaining ecological balance, safeguarding water sources, regulating climate, and preventing soil degradation. This is especially relevant for the Carpathian region, where logging causes extensive landslides, floods, and biodiversity loss. To enhance institutional capacity in this field, it is necessary to:

7.1. Strengthen electronic timber accounting systems and expand their coverage to all forest types, including municipal forests.

7.2. Introduce independent public monitoring of logging activities, utilising drones and satellite imagery.

7.3. Increase accountability for illegal logging through fines, criminal liability, and revocation of licences.

7.4. Transition to selective and nature-friendly logging practices, following the example of Scandinavian countries.

7.5. Develop forest restoration programmes engaging local communities and schoolchildren (e.g., annual tree-planting campaigns).

7.6. Enhance international cooperation to control illegal timber exports.

8. Promotion of Environmental Culture and Civic Awareness. No monitoring or control system can be effective without fundamental changes in public attitudes toward the natural environment.

Conclusions

Ukraine faces increasing environmental challenges that have both domestic and transboundary dimensions — ranging from water and air pollution to climate change and deforestation. Under these conditions, the priority is not only the need for internal reform of environmental policy but also active international cooperation. Analysis of Ukraine's interaction with international organizations demonstrates that the country has the potential for effective integration into global environmental processes, yet requires strengthening of institutional capacity, particularly in the areas of monitoring, prevention, legislation, and education.

Environmental law is not only a regulatory framework but also an instrument for transforming societal and governmental practices. Strengthening integration into international agreements,

attracting environmental financing, participation in European environmental programs, and the development of transboundary cooperation provide a foundation for systemic change.

Key priorities remain:

1. Harmonization of Ukrainian legislation with international standards;

2. Development of independent and digitalized monitoring systems;

3. Enhancement of the role of communities and local authorities;

4. International partnerships to address shared challenges;

5. Cultivation of environmental culture as a basis for sustainable development.

Successful implementation of these directions will enable Ukraine not only to more effectively counter environmental threats but also to become an active participant in shaping a new global environmental policy.

List of Bibliography

1. Liapin, M. (2021). Міжнародні правові механізми у сфері екології: досвід України та виклики [International legal mechanisms in the field of ecology: Ukraine's experience and challenges]. *Екологічне право України*, (3), 15–22.

2. Sakhno, I. (2020). Екологічне право України в контексті європейської інтеграції [Environmental law of Ukraine in the context of European integration]. *Право України*, (7), 58–66.

3. Borovyk, O. (2022). Міжнародна співпраця в охороні довкілля: роль України у глобальних ініціативах [International cooperation in environmental protection: The role of Ukraine in global initiatives]. *Екологічний вісник*, (4), 41–48.

4. Petretska, N. I. (2023). Екосистемні підходи у практиці національного правозастосування [Ecosystem approaches in national law enforcement practice]. *Юридична наука*, (2), 23–30.

5. Kovalchuk, V. (2021). Транскордонне забруднення: міжнародно-правова відповідальність [Transboundary pollution: International legal responsibility]. *Міжнародне право і глобальні виклики*, (1), 71–79.

6. James, P. (2020). *Global environmental governance: The role of emerging economies*. Oxford University Press.

7. Ministry of Environmental Protection and Natural Resources of Ukraine. (2023). Звіт про незаконну вирубку лісів в Україні за 2022–2023 роки [Report on illegal logging in Ukraine for 2022–2023]. Отримано з https://mepr.gov.ua

8. Hungarian Water Directorate. (2021). Спільний екологічний звіт про забруднення річки Тиса [Joint environmental report on the pollution of the Tisza River]. Отримано з https://vizugy.hu

9. United Nations Environment Programme. (2022). Екологічний вплив війни в Україні: попередня оцінка [Environmental impact of the war in Ukraine: Preliminary assessment]. Отримано з https://www.unep.org

10. State Agency of Water Resources of Ukraine. (2023). Моніторинг транскордонних басейнів річок Тиса і Дністер [Monitoring of transboundary river basins: Tisza and Dniester]. Отримано з https://www.davr.gov.ua

11. United Nations Economic Commission for Europe (UNECE). (1992). Конвенція про охорону та використання транскордонних водотоків і міжнародних озер [Convention on the Protection and Use of Transboundary Watercourses and International Lakes]. Отримано з https://unece.org/environment-policy/water/areas-work/water-convention

12. UNECE. (1998). Конвенція з доступу до інформації, участі громадськості у прийнятті рішень та доступу до правосуддя у питаннях довкілля [Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters]. Отримано з https://unece.org/environment-policy/environmental-policy-areas/aarhus-convention

13. UNECE. (1979). Конвенція про довгострокове транскордонне забруднення повітря [Convention on Long-Range Transboundary Air Pollution (CLRTAP)]. Отримано з https://unece.org/environment-policy/convention-long-range-transboundary-air-pollution

14. European Commission. (n.d.). Екологічна політика та законодавство [Environmental Policy and Legislation]. Отримано з https://ec.europa.eu/environment/strategy/index_en.htm

15. International Commission for the Protection of the Danube River (ICPDR). (2021–2027). Інтегрований план управління басейном річки Тиса [Integrated Management Plan for the Tisza River Basin]. Отримано з https://www.icpdr.org/main/management-plans/tisza-river-basin

16. UNESCO. (n.d.). Східно-Карпатський біосферний заповідник [East Carpathian Biosphere Reserve]. Отримано з https://en.unesco.org/biosphere/eastcarpathian

17. European Union. (2021–2027). Програма Interreg NEXT [Interreg NEXT Programme]. Отримано з https://interreg.eu/next/

18. UNECE. (1992). Конвенція про транскордонні наслідки промислових аварій [Convention on the Transboundary Effects of Industrial Accidents]. Отримано з https://unece.org/env/teia/

19. UNECE. (n.d.). Робоча група з питань забруднення повітря. Звіти про впливи транскордонного забруднення

[Working Group on Air Pollution. Reports on cross-border pollution impacts].

20. Helsinki Commission (HELCOM). (n.d.). Угода про співпрацю у сфері управління басейном річки Дністер [Agreement on Cooperation for Dniester River Basin Management].

21. European Parliament. (2008). Директива 2008/50/ЕС про якість атмосферного повітря [Directive 2008/50/EC on ambient air quality]. Отримано з https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0050

22. Verkhovna Rada of Ukraine. (2023). Закон про запобігання, зменшення та контроль промислового забруднення [Law on Prevention, Reduction and Control of Industrial Pollution].

23. Partnership for Climate. (n.d.). Транскордонні екологічні проєкти в Україні [Cross-border environmental projects in Ukraine].

24. Verkhovna Rada of Ukraine. (2019). Закон України «Про запобігання, зменшення та контроль промислового забруднення» [Law of Ukraine "On prevention, reduction and control of industrial pollution"]. Отримано з https://zakon.rada.gov.ua/laws/show/2207-19

25. Verkhovna Rada of Ukraine. (2023). Закон України «Про запобігання, зменшення та контроль промислового забруднення» (остання редакція) [Law of Ukraine "On prevention, reduction and control of industrial pollution" (final version)]. Отримано з https://zakon.rada.gov.ua/laws/show/2207-19#Text

26. European Parliament and Council. (2010). Директива 2010/75/ЄС про промислові викиди (IED) [Directive 2010/75/EU on industrial emissions (IED)]. Отримано з https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32010L0075

27. Verkhovna Rada of Ukraine. (2020). Закон України «Про природно-заповідний фонд» [Law of Ukraine “On nature reserve fund”]. Отримано з https://zakon.rada.gov.ua/laws/show/2456-19

28. Ministry of Environmental Protection and Natural Resources of Ukraine. (2021). Національна стратегія збереження біорізноманіття до 2030 року [National biodiversity conservation strategy until 2030]. Отримано з https://mepr.gov.ua/strategiya-bioriznomanittya

29. European Parliament and Council. (1992). Директива 92/43/ЄЕС про охорону природних середовищ існування та дикої флори і фауни [Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora]. Отримано з https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31992L0043

30. Ukraintseva, O., & Melnyk, S. (2024). Екологічна політика України у світлі європейської інтеграції [Environmental policy of Ukraine in light of European integration]. *Науковий вісник екології та права*, 10(1), 45–58.

31. Petrenko, I. (2023). Вплив промислових викидів на транскордонне забруднення повітря [Impact of industrial emissions on transboundary air pollution]. *Журнал екологічної безпеки*, 15(2), 120–130.

3.2. The Role of Financial Institutions in Advancing International Environmental Protection Standards

Huliaieva Liudmyla, PhD. in Economics, Associate Professor

Department of Finance, Academy of Labour, Social Relations and Tourism, Kyiv, Ukraine

glp2002@ukr.net

Oliinyk Andrii, PhD. in Economics, Associate Professor

Department of International Management, State University of Trade and Economics, Kyiv, Ukraine

oliynik12@gmail.com

Tkachenko Ianina, PhD. in Economics, Associate Professor

Head of the Department of Finance, Academy of Labour, Social Relations and Tourism, Kyiv, Ukraine

rts1@ukr.net

1. Key initiatives that have transformed approaches to environmental protection

Financial institutions exert a significant influence in advancing international environmental protection standards by shaping the allocation of capital and embedding sustainability considerations. Financial institutions are promoting international environmental standards. Their activities increasingly intersect with environmental obligations under international law, including treaty commitments, EU regulations, and global soft law mechanisms.

They apply environmental risk assessments, adopt sustainability frameworks, and integrate climate-related disclosures. As a result, finance functions not only as an economic

tool but also as a channel for implementing international environmental norms.

Priority areas for sustainable development investment include transportation, green energy, efficient water use, and information and communication technologies. At the global level, financial structures such as the World Bank Group and regional development banks play an important role in norm-setting, particularly in shaping national policy and legal frameworks. However, for financial institutions to effectively contribute to achieving the Sustainable Development Goals (SDGs), it is essential to maintain a balance between direct investment and the avoidance of adverse impacts on human rights, in accordance with existing international treaties and national legislation.

The measures proposed also encourage national and international development banks to contribute to the establishment of effective environmental protection systems, to introduce environmental and social insurance instruments based on international standards, and to uphold human rights and the principle of gender equality. By developing and promoting financial instruments such as green bonds, sustainability-linked loans, and climate funds, they mobilize capital towards projects that contribute directly to renewable energy deployment, climate change mitigation, biodiversity conservation, and the circular economy.

The United Nations Environment Programme Finance Initiative (UNEP FI), established in 1992 is considered the first global partnership between the United Nations Environment Programme (UNEP) and the financial sector[405]. This initiative mobilizes private sector finance for sustainable development and strengthens the role of financial institutions in addressing environmental, social, and governance (ESG) challenges.

UNEP FI advances global principles for the financial industry, catalyzing the mainstreaming of sustainability into financial

[405] UNEP Finance Initiative, 2025, https://www.unepfi.org/

market activities. The principal frameworks established or co-developed by UNEP FI include:

- the Principles for Responsible Investment (PRI), established in 2006 by UNEP FI and the UN Global Compact. The total volume of assets under management by the signatories is estimated at USD 128.4 trillion (compared to USD 121.3 trillion at the end of the previous PRI reporting period in March 2021)[406].

- the Principles for Sustainable Insurance (PSI), established 2012 by UNEP FI;

- the Principles for Responsible Banking (PRB), launched in 2019. More than 500 banks and insurers with assets exceeding US$170 trillion are individually implementing UNEP FI's Principles for Responsible Banking and Principles for Sustainable Insurance[407].

UNEP FI convenes financial institutions to foster expertise and best practice in domains including climate, pollution and circular economy, the Sustainable Development Goals and impact, alongside critical social issues.

Through three finance sector net-zero alliances, UNEP FI, in collaboration with key stakeholders, mobilizes financial institutions to commit to aligning their portfolios with net-zero greenhouse gas emissions by 2050[408]:

- Net-Zero Asset Owner Alliance (NZAOA), launched in 2019

- Net-Zero Banking Alliance (NZBA), launched in 2021 with over 130 banks and about half of global banking industry assets.

- Net-Zero Insurance Alliance (NZIA), launched in 2023.

[406] Principles for Responsible Investment – 2024. United Nations, 2024, https://www.unpri.org/download?ac=21536
[407] Principles for Responsible Banking. United Nations, 2024, https://www.unepfi.org/about/
[408] Principles for Responsible Banking. United Nations, 2024, https://www.unepfi.org/about/

For instance, NZBA unites banks worldwide that voluntarily commit to aligning their financing activities with pathways to net zero emissions by 2050, consistent with limiting global warming to 1.5°C. Signatory banks set intermediate targets for 2030 or earlier, following robust, science-based methodologies, combining near-term action with accountability. As the flagship climate initiative under the Principles for Responsible Banking, NZBA promotes science-based climate target setting and common practices. The Alliance provides a coherent international framework to guide decarbonisation strategies and underscores the critical role of banks in driving the transition of the real economy to net zero emissions. The Net-Zero Banking Alliance expanded from 43 to 144 member banks, representing over 40% of global banking assets. 97% of them adopted decarbonisation targets[409].

UNEP FI plays a critical role in setting global sustainability frameworks for financial institutions; providing guidance, tools, and training on sustainable finance.

While participation in UNEP FI is voluntary, its reach has progressively expanded, shaping client relations, influencing the design of financial products, and informing reporting and disclosure practices across the financial sector.

These initiatives have not only incorporated sustainable practices into business operations but also transformed attitudes toward conducting business. Sustainable initiatives have formed the basis for various standards. Participation in such initiatives demonstrates the consideration of ESG criteria – either to enhance reputation or in the process of developing a new growth strategy.

[409] UNEP FI Annual Overview 2024. United Nations, 2024, https://www.unepfi.org/industries/banking/unep-fi-annual-overview-2024/

2. Mechanisms through which Financial Institutions Advance Environmental Protection

The broad diffusion of environmental and social initiatives has directly influenced the operations of international financial institutions and has driven significant changes in the approaches of Multilateral Development Banks and central banks as regulators. Key Mechanisms through which Financial Institutions Advance Environmental Protection: Multilateral Development Banks and International Financial Institutions activity, Regulatory Instruments and Voluntary Initiatives.

It is important to acknowledge that all principles and standards have inherent limitations, which may concern the types of financial products covered, the scale of financing to which the rules apply, or other contextual factors. In general, existing standards can be classified into two categories:

• Conditionally mandatory – compliance is required when obtaining financing from certain financial institutions.

• Voluntary initiatives – participation is optional, but once undertaken, adherence to the established rules becomes obligatory.

Standards and Principles function as soft law: they apply to clients of financial institutions or extend to specific products, while also shaping behavior through reputational considerations, market expectations, and stakeholder pressure.

2.1. Multilateral Development Banks and International Financial Institutions activity,

Multilateral Development Banks (MDBs) have advanced a harmonised approach to alignment with the Paris Agreement. This joint framework is structured around some building blocks identified as essential for alignment: consistency with mitigation goals, adaptation and climate-resilient operations, scaling up contributions to the transition through climate finance, strategy and policy development, reporting. Across these areas, MDBs

worked closely to establish common principles and methodologies and to apply them within their operations.

The World Bank and the European Bank for Reconstruction and Development (EBRD), have integrated environmental and climate risk assessments into their project evaluation and financing decisions. For instance, the EBRD has embedded climate risk and resilience screening into its investment operations, guided by its Green Economy Transition (GET) approach and the alignment of its portfolio with the Paris Agreement. These practices ensure that environmental sustainability and climate resilience are treated as core criteria in MDB financing[410].

The EBRD launched its dedicated operational work on environmental and climate issues in 2006 with the introduction of the Sustainable Energy Initiative under its third Capital Resources Review (2006-2010). This agenda was subsequently broadened through the Green Economy Transition (GET) approach, endorsed in 2015 (BDS15-196 (Final)). The mainstreaming of GET activities across sectors, countries and regions has been reflected in the rising GET ratio across business lines. Between 2016 and 2019, cumulative GET financing amounted to €15.0 billion, representing a 42% increase from €10.5 billion in the preceding four-year period. Climate finance accounted for 94% of total GET financing, encompassing projects with additional environmental co-benefits. Consistent with the Bank's business model, private sector participation averaged 59% of GET financing. The EBRD is setting a target green finance ratio of more than 50% by 2025 to support the transition to a green low carbon economy in its countries of operations[411].

The EBRD issued its first green bonds in 2010 to fund its Environmental Sustainability Bond programme. Since then it has

[410] Green Economy Transition (GET) and Paris alignment. European Bank for Reconstruction and Development, 2021, https://www.ebrd.com/home/who-we-are/ebrd-values/ebrd-environmental-social-sustainability/EBRD-green/Green-Economy-Transition-Paris-alignment.html#get

[411] Green economy transition approach 2021-2025. European Bank for Reconstruction and Development, 86 p., 2020

issued 92 bonds in 13 currencies for a total of €5.2 billion by end 2019 with several innovative aspects including an inaugural five-year USD 700 million Climate Resilience Bond[412].

Similarly, the World Bank systematically applies its Environmental and Social Framework (ESF), which requires borrowers to assess and manage environmental and social risks as part of project design and implementation[413].

The Environmental and Social Framework (ESF) of the World Bank comprises ten Environmental and Social Standards (ESSs), which set out requirements for Borrowers, and the Environmental and Social Policy for Investment Project Financing (IPF), which defines the Bank's obligations, together with related directives. The ESF is the Bank's core system of rules and standards for managing environmental and social risks in its financed projects. Adopted in 2018 to replace the previous Safeguard Policies, it applies to all new investment project financing operations. The ESF strengthens the protection of people and the environment, aligns with evolving global standards on environmental and social safeguards, and supports responses to pressing challenges such as climate change, labor rights, and inclusive development. Projects financed through IPF are required to comply with the ten ESSs. The ESF applies to all IPF projects initiated on or after October 1, 2018. IPF is the World Bank's main lending instrument to support specific development projects; it typically spans 5–10 years, provides loans, credits, or grants, and finances both physical investments (e.g., infrastructure) and institutional strengthening (e.g., capacity building, reforms)[414]. According to the World Bank Annual Report 2023, 76% of the Bank's IPF portfolio (by value) in FY2023 was

[412] Green economy transition approach 2021-2025. European Bank for Reconstruction and Development, 86 p., 2020
[413] World Bank Environmental and Social Framework. World Bank, Washington, 2016
[414] World Bank Environmental and Social Framework. World Bank, Washington, 2016

allocated under the updated Environmental and Social Framework[415].

While the World Bank's Environmental and Social Standards (ESSs) have certain limitations, as they apply specifically to Investment Project Financing (IPF), the Performance Standards (PSs) developed and introduced by the International Finance Corporation (IFC) in April 2006 represent conditionally mandatory benchmarks with a significantly broader scope. Unlike the ESSs, which are tied to a specific lending instrument, the IFC Performance Standards extend to all IFC clients and products, including equity, debt, guarantees, and advisory services. Their influence has also gone beyond IFC's direct operations: they serve as the foundation for the Equator Principles thereby becoming the de facto global standard for managing environmental and social risks in private sector financing.

Since their introduction in 2006, the International Finance Corporation's Performance Standards (IFC PS) have served as the primary framework for identifying, assessing, and managing environmental and social risks and impacts in private sector financing across eligible member countries, with the overarching aim of enhancing sustainable development outcomes[416].

Following their revision in 2012, the IFC Performance Standards have been applied comprehensively to all clients within IFC's portfolio (Table 1).

General Characteristics of IFC PS

Key criteria	Characteristic
IFC Performance Standards	8 Standards: Assessment and Management of Environmental and Social Risks and

[415] A New Are in Development. World Bank, Washington, 2023, https://hn.usembassy.gov/wp-content/uploads/sites/164/2024/05/AR2023EN.pdf
[416] International Finance Corporation's Performance Standards on Social & Environmental Sustainability. International Financial Corporation, 2006, https://www.ifc.org/content/dam/ifc/doc/2000/2006-ifc-performance-standards-en.pdf

	Impacts. Labor and Working Conditions. Resource Efficiency and Pollution Prevention. Community Health, Safety, and Security. Land Acquisition and Involuntary Resettlement. Biodiversity Conservation and Sustainable Management of Living Natural Resources. Indigenous Peoples. Cultural Heritage
Scope of Application	Applicable to all IFC-financed projects, irrespective of the financing amount, with global coverage across all sectors

Table 1, Source[417]

The Standards are designed not only to ensure risk mitigation and environmental protection but also to strengthen clients' business performance, improve transparency and accountability, facilitate access to international capital, and promote meaningful engagement with project-affected communities.

In the last decade alone, IFC estimates that investments totaling $4.5 trillion across emerging markets have adhered to IFC's PS[418]. In 2024, Long-Term Investment Commitments for IFC's Own Account amounted to approximately US$21 billion (Table 2).

IFC Key Indicators FY20–FY24

Indicator	FY24	FY23	FY22	FY21	FY20
Long-Term Investment Commitments for IFC's Own Account (US$ mln)	21,458	16,677	12,569	12,474	11,135

[417] International Finance Corporation's Performance Standards on Social & Environmental Sustainability. International Financial Corporation, 2006, https://www.ifc.org/content/dam/ifc/doc/2000/2006-ifc-performance-standards-en.pdf

[418] ESG Policies and Standards. International Financial Corporation, 2024, https://www.ifc.org/en/what-we-do/sector-expertise/sustainability/policies-and-standards

Number of Projects	365	325	296	313	282
Number of Countries	67	78	68	71	67

Table 2, Source[419]

IFC PS have gained wide recognition among IFC clients and have become a benchmark beyond the scope of IFC-financed operations. Their application is not restricted to particular instruments, but extends broadly across financial products, contributing to a significant improvement in environmental and social practices among private sector companies, especially in developing economies. The IFC PS serve as mandatory requirements for financing from the IFC and other entities within the World Bank Group. Some elements of the IFC PS have been incorporated into other voluntary initiatives, most notably the Equator Principles (EPs).

2.2. Voluntary Initiatives.

Financial institutions that actively implement ESG strategies gain access to more favorable financing conditions, reduce their vulnerability to environmental and social risks, and strengthen trust among clients and partners. They develop new business models grounded in the principles of sustainable development. Capital providers adopt sustainable finance principles, which require assessing investment targets against ESG criteria as part of the investment decision-making process. ESG thus becomes a source of competitive advantage, enabling the attraction of responsible investors and adaptation to new regulatory requirements.

The Equator Principles were launched by 10 founding financial institutions in 2003. The EPs have evolved through four iterations

[419] Highlights from the 2024 IFC Annual Report, 2024, https://www.ifc.org/content/dam/ifc/doc/2024/ifc-annual-report-2024-highlights-en.pdf

– EP (2003), EP2 (2006), EP3 (2013) and EP4 (2020)[420]. As of 2025, the Principles cover more than 130 financial institutions across over 38 countries. Their application, however, is limited by the types of products and the size of financing. They serve as a common baseline across jurisdictions and apply globally to specified products—such as project finance advisory, project finance, project-related corporate loans, bridge loans, and project-related refinance or acquisition finance—above defined thresholds, thereby focusing enhanced due diligence on transactions with the greatest potential impact. The Equator Principles have thus become the de facto global standard in the financing of large-scale projects (Table 3)

General Characteristics of The Equator Principles

Key criteria	Characteristic
The Equator Principles	Review & Categorisation; E&S Assessment; Applicable E&S Standards; E&S Management System & EP Action Plan; Stakeholder Engagement; Grievance Mechanism; Independent Review; Covenants; Independent Monitoring & Reporting; Reporting & Transparency.
Scope of Application	the Equator Principles (EPs) apply globally and across all sectors of the economy, but only to projects that exceed certain thresholds (e.g., US$10 million for project finance) or meet other criteria defined in the Scope of the Equator Principles. This approach allows the focus to be placed on large and potentially high-risk projects. Their application is global and covers all sectors.

Table 3

[420] The Equator Principles, 2025, https://equator-principles.com/about-the-equator-principles/

The Equator Principles (EPs) have a global scope and apply across all industry sectors. Member financial institutions (EPFIs) must apply them to new projects that meet defined thresholds, including: (i) project finance and advisory services with capital costs of US$10 million or more; (ii) project-related corporate loans of at least US$50 million, with borrower operational control and a minimum two-year tenor; (iii) bridge loans intended for later refinancing through eligible project finance or corporate loans; and (iv) project-related refinancing or acquisition finance, provided the original financing complied with the EPs. Total number of reported in-scope transactions reaching financial close in 2023 1,473 up by 109 compared to 2022[421].

By tying access to capital to demonstrable compliance with IFC PS/EHS-aligned due diligence and management plans, the EPs translate global environmental and human-rights norms into concrete financing conditions. This capital-to-compliance transmission channel harmonizes lender expectations across borders, incentivizes borrowers to internalize E&S externalities through management systems and monitoring, and enhances transparency via annual reporting and independent review. EP4's clarification that even in "Designated Countries" lenders may require IFC PS as guidance where specific risks warrant it underscores a shift from formalistic host-law reliance toward risk-based equivalence to international best practice[422]. The growing body of official guidance and signatory reporting indicates diffusion across regions and sectors, reinforcing the EPs' role as a de facto transnational standard in project-related finance.

The Equator Principles exemplify how private-governance instruments can harden international environmental and social norms via financial conditionality. Their effectiveness rests on three pillars: normative anchoring in IFC PS/EHS GIIP;

[421] Activity Report 2023. The Equator Principles, https://equator-principles.com/app/uploads/Equator-Principles-Activity-Report-2023-FINAL.pdf
[422] The Equator Principles July 2020. The Equator Principles, 2020, https://equator-principles.com/app/uploads/The-Equator-Principles_EP4_July2020.pdf

institutionalization through evolving governance and standardized guidance; and market leverage—EPFIs' ability to steer capital toward compliant projects and away from non-aligned ones. As jurisdictions intensify climate and nature-related disclosure (ISSB/TCFD; TNFD outside the EP corpus), the EPs' risk-based approach positions lenders and sponsors to align project pipelines with emerging global environmental standards.

2.3. Regulatory instruments: Central banks role

Banks influence sustainability directly through their products and services. This influence generally manifests in two forms. First, by adopting environmental and social responsibility in day-to-day operations (e.g., efficient paper use, energy saving). Second, by embedding sustainability into financial products and strategic priorities (e.g., green lending).

The adoption of sustainable initiatives can be either voluntary or mandated by regulatory measures introduced by central banks. Voluntary adoption reflects a conscious decision by a bank's management, with impacts limited primarily to its clients and the institution itself. By contrast, when central banks establish regulations that encourage or require banks within a country or region to adopt sustainable strategies, the resulting initiatives achieve broader and more systemic dissemination.

For instance, the European Central Bank (ECB) has progressively integrated climate change considerations into its core activities. Following the review of its monetary policy strategy, the ECB introduced its first climate action plan in 2021, pledging to embed climate-related factors into monetary policy implementation, macroeconomic analysis, and statistical work. In 2022, the plan was expanded to cover financial stability and banking supervision. In January 2024, the ECB released an

updated strategy for 2024-2025, which, for the first time, also includes a commitment to assess nature-related risks[423].

The ECB's Climate and Nature Plan 2024-2025 is structured around three strategic focus areas[424]. First, the transition to a green economy entails profound structural challenges for the euro area, requiring policy interventions to transform production and consumption patterns, accelerate the substitution of fossil fuels with renewable energy, and mitigate impacts on employment, skills, trade, and capital allocation. Achieving the EU's climate objectives will necessitate substantial investment – estimated by the European Commission at an additional €620 billion annually until 2030 – together with framework conditions that foster innovation, research and development, and risk-taking in financial markets. For the ECB, a central task lies in evaluating whether the supply of green finance is commensurate with investment demand, how credit conditions influence the viability of green projects, and the extent to which public policies can mobilize private capital, all of which have direct implications for monetary policy and its transmission mechanism. Second, the intensification of the physical impacts of climate change. The ECB must integrate these physical risks into its macroeconomic projections and assess the role of adaptation finance in enhancing the resilience of the euro area economy. Third, nature-related risks represent an increasingly critical dimension of environmental and financial stability. The degradation of ecosystems through intensive land use, pollution, and resource overexploitation reduces the capacity for carbon sequestration, diminishes soil resilience, and undermines essential ecosystem services such as food and medicine supply. Survey evidence showing that nearly half of firms express significant concerns about environmental degradation – while 72% of non-financial corporations remain strongly dependent on ecosystem

[423] The ECB's climate and nature plan 2024-2025. Economic Bulletin Issue 2, 2024, European Central Bank, https://www.ecb.europa.eu/press/economic-bulletin/html/eb202402.en.html
[424] The ECB's climate and nature plan 2024-2025. Economic Bulletin Issue 2, 2024, European Central Bank, https://www.ecb.europa.eu/press/economic-bulletin/html/eb202402.en.html

services – nature-related risks carry systemic implications. Given that these firms account for approximately three-quarters of euro area banks' loan exposures, the ECB is advancing work to analyze how biodiversity loss interacts with climate change and how such risks may affect macroeconomic variables relevant to its mandate.

So, the ECB is incorporating climate factors into both monetary policy and prudential supervision. Commercial banks are required to account for climate change risks in portfolio management and access to liquidity. To this end, the ECB applies several instruments, including:

- inclusion of climate criteria in the Corporate Sector Purchase Programme (CSPP);
- application of "green tilting" in portfolios;
- integration of climate risks into annual bank stress tests,
- ESG disclosure requirements for collateral assets.

Central banks occupy a pivotal position in advancing environmental, social, and governance (ESG) standards within national financial systems, acting simultaneously as regulators and as catalysts for the adoption and harmonization of green and social initiatives. The emerging paradigm of green central banking reflects the increasing integration of climate and environmental considerations into central banks' mandates, policies, and operational frameworks, underscoring the growing recognition of their role in supporting sustainability objectives and safeguarding financial stability.

In this context, various platforms have been established to monitor, evaluate, and promote the progress of central banks in aligning their strategies and activities with global climate and environmental goals. One example is the Green Central Banking initiative[425], which provides research, rankings, and the annual Green Central Banking Scorecard covering G20 central banks. Another is analytical tool developed by the World Wide Fund for

[425] Green Central Banking. 2025, https://greencentralbanking.com/

Nature (WWF) Greening Financial Regulation Initiative, which, building on its extensive engagement with diverse financial stakeholders, has created the SUSREG Tracker – an online framework designed to assess how environmental and social considerations are integrated into regulatory and supervisory practices.

The Green Central Banking[426] evaluates G20 central banks on their progress in incorporating climate-related risks into monetary policy, financial supervision, disclosure frameworks, and portfolio management. By setting standards and highlighting best practices, green central banking aims to align monetary and financial systems with the objectives of the Paris Agreement and the transition to a net-zero, nature-positive economy.

According to the 2024 ranking, the EU and its G20 member states – France, Germany, and Italy – hold the top four positions. Their progress provides practical examples of effective green policy implementation for other central banks to follow, demonstrating consistent leadership in ESG activities and a strong commitment to embedding sustainability within the financial sector and banking supervision[427]. This leadership position underscores the ECB's role as a benchmark institution, providing practical examples of effective green policy implementation for other central banks to follow.

The WWF's SUSREG Tracker, developed under the Greening Financial Regulation Initiative, serves as a global benchmarking framework for assessing the integration of environmental, climate, and social considerations into financial regulation, supervision, and central banking activities. As of 2024, the Tracker encompasses 52 jurisdictions, collectively representing approximately 89% of global GDP and 75% of global greenhouse gas emissions, thereby providing a comprehensive overview of the alignment of financial systems with sustainability objectives[428].

[426] Green Central Banking. 2025, https://greencentralbanking.com/
[427] Green Central Banking. 2025, https://greencentralbanking.com/
[428] Susreg Tracker. 2025, https://susreg.panda.org/

Although central banks have initiated steps to phase out harmful assets and enhance portfolio disclosures, they have yet to achieve substantive integration of climate and environmental considerations into monetary policy instruments. Evidence from the 2024 SUSREG Annual Report indicates that between 2021 and 2024 the most significant progress occurred in banking supervision, which recorded an 18% increase in climate-related measures, followed by a 17% improvement in insurance supervision since 2022[429]. By contrast, monetary policy and central banking activities have largely stagnated, with only a 4% increase in climate integration. Despite these advancements, regulatory frameworks remain incomplete: nature-related risk drivers – including deforestation, land conversion, water management, and biodiversity protection – are insufficiently addressed, while essential policy tools such as target-setting and capital requirements remain underutilized. The report further highlights substantial disparities across jurisdictions. Among high-income countries, 20 out of 29 align with more than 50% of SUSREG's climate criteria in banking supervision, yet 14 fall below 50% alignment on nature-related supervision. Even among states with net-zero targets, 37% demonstrate weak climate financial supervision, meeting less than half of SUSREG's criteria. Nature-related risks pose an even greater challenge, with 31 out of 50 countries failing to achieve 50% alignment, while biodiversity hotspot nations perform particularly poorly in integrating such risks into both banking and insurance supervision.

The 2024 SUSREG report concludes with targeted recommendations for central banks, regulators, and financial institutions, emphasizing the need to strengthen climate, nature, and social risk integration while showcasing examples of good

[429] 2024 Susreg Annual Report. An Assessment of Sustainable Financial Regulations and Central Bank Activities Susreg Tracker. Susreg Tracker, 2024, https://www.wwf.sg/wp-content/uploads/2024/10/WWF_SUSREG-2024_Full-Report.pdf

practices that can be replicated across different national contexts[430].

Strategically, central banks must formulate pathways to ensure that their monetary policy portfolios – including asset purchases and foreign reserves—are aligned with net-zero and nature-positive objectives by 2050.

For central banks, adopting sustainable investment approaches in their balance sheets and "greening" monetary policy is essential to provide leadership for the broader financial sector. This requires embedding environmental criteria into central bank asset holdings and systematically applying them across monetary policy instruments. In practice, this includes integrating climate and environmental considerations into the assets used for monetary policy purposes, the conditionality and collateral frameworks of lending facilities, and other related mechanisms. Such initiatives enable For Private Financial Institutions to develop new products and services, strengthen the emotional connection between brand and customer, and ultimately enhance loyalty within society.

Sustainability innovations implemented under ESG strategies allow banks not only to demonstrate their commitment to environmental and social standards but also to leverage sustainability as a powerful market tool. The most advanced central banks have begun acknowledging the concept of double materiality, recognising both the financial causes and consequences of climate change in their policies and strategies. However, even among the top performers, there are substantial gaps in the adoption of high impact policies necessary to steer financial systems away from carbon-intensive activities and toward sustainable alternatives.

2.4. EU Regulatory instruments: Classification system and Sustainability reporting

[430] 2024 Susreg Annual Report. An Assessment of Sustainable Financial Regulations and Central Bank Activities Susreg Tracker. Susreg Tracker, 2024, https://www.wwf.sg/wp-content/uploads/2024/10/WWF_SUSREG-2024_Full-Report.pdf

The European Commission has introduced a comprehensive package of measures aimed at strengthening the flow of capital towards sustainable activities across the EU. By steering investments towards greener technologies and businesses, these measures are designed to accelerate the Union's transition to climate neutrality by 2050 and further consolidate the EU's role as a global leader in shaping standards for sustainable finance. Together, they form a cornerstone of the EU's sustainable finance agenda, ensuring greater transparency, consistency, and accountability across financial and corporate sectors.

The package consists of three key elements:

- EU Taxonomy Climate Delegated Act – establishes a common classification system to identify which economic activities make a substantial contribution to the EU's environmental and climate objectives. By offering clarity and predictability, it is expected to direct private investment towards activities that support the Green Deal and long-term decarbonisation pathways.

- Corporate Sustainability Reporting Directive (CSRD) – significantly enhances the quality, comparability, and accessibility of sustainability information disclosed by companies. By introducing standardized reporting requirements, the CSRD ensures that investors, financial institutions, and stakeholders have access to reliable and consistent data for decision-making, risk management, and accountability.

- Six Amending Delegated Acts – revise rules on fiduciary duties, investment, and insurance advice, making sustainability considerations an integral part of financial decision-making. This requires financial intermediaries such as asset managers, advisers, and insurers to systematically integrate environmental, social, and governance (ESG) factors into their investment processes and advice to clients.

EU Taxonomy for Sustainable Activities[431]. The classification system establishing criteria for environmentally sustainable economic activities, aiming to guide investment towards sustainability goals. (Regulation (EU) 2020/852)

The EU Taxonomy Climate Delegated Act establishes and classifies the types of activities that have the most positive impact on climate and the environment. The EU Taxonomy is a classification system that can be used to determine whether a financial product or investment is environmentally sustainable. Its purpose is to facilitate investors' choice of sustainable investments. Implemented under the EU Taxonomy Regulation (Regulation (EU) 2020/852), it applies to companies subject to non-financial reporting requirements (NFRD/CSRD) and has been in force since January 1, 2022. It represents the world's first "green list" – a classification system for environmentally sustainable economic activities that investors can use when directing capital towards projects and activities with a significant positive impact on climate and the environment[432].

The Delegated Act defines which investments "substantially contribute" to achieving:

- climate change mitigation;
- climate change adaptation.

It covers the economic activities of approximately 40% of listed companies in sectors responsible for nearly 80% of direct greenhouse gas emissions in Europe, including energy, forestry, manufacturing, transport, and construction[433].

---

[431] EU Taxonomy for Sustainable Activities. URL: https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en, 2025

[432] Implementing and delegated acts - Taxonomy Regulation. European Commission, 2025, https://finance.ec.europa.eu/regulation-and-supervision/financial-services-legislation/implementing-and-delegated-acts/taxonomy-regulation_en

[433] Sustainable Finance and EU Taxonomy: Commission takes further steps to channel money towards sustainable activities. European Commission, 2025, https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1804

Classification of taxonomy expenditures[434]:

- Taxonomy-eligible – investments that meet the criteria for inclusion under the EU Taxonomy but do not necessarily comply with all sustainability requirements.

- Taxonomy-aligned – investments that fully meet the EU criteria for environmental sustainability (i.e., comply with all technical requirements and do not cause significant harm to other sustainability objectives).

The Non-Financial Reporting Directive (NFRD), formally Directive 2014/95/EU, was the first EU-level legislative act requiring companies to disclose non-financial information. It applied to large public-interest entities (PIEs) with more than 500 employees – including listed companies, banks, and insurance firms – covering around 11,000 companies across the EU. The directive required disclosures on environmental, social and employee-related issues, human rights, anti-corruption and bribery, and board diversity policies. While its objective was to improve transparency and accountability regarding companies' societal and environmental impacts and to provide investors with better insights into non-financial risks, the NFRD allowed flexibility in reporting by permitting the use of international, European, or national frameworks (e.g., the Global Reporting Initiative (GRI)[435], the Sustainability Accounting Standards Board (SASB), the International Integrated Reporting Framework (IIRC), the Task Force on Climate related Financial Disclosures (TCFD), the United Nations (UN) Guiding Principles Reporting Framework, the UN Global Compact, , OECD Guidelines). This flexibility, however, led to fragmentation and limited comparability of reports. Its narrow scope, absence of standardized requirements, and lack of external assurance highlighted the directive's limitations and set

[434] Financing a Clean and Competitive Transition Monitoring Capital Flows to Sustainable Investments. The EU Platform on Sustainable Finance, 2025, 92 p., https://finance.ec.europa.eu/document/download/87c48ab4-34d2-4cd7-997e-efc1310e62c5_en?filename=250311-sustainable-finance-platform-report-capital-flows_en.pdf

[435] Global Reporting Initiative. 2025, https://www.globalreporting.org/

the stage for its replacement by the Corporate Sustainability Reporting Directive (CSRD).

On 21 April 2021, the European Commission announced the adoption of CSRD in line with commitments under the European Green Deal. The CSRD will amend the existing Non-Financial Reporting Directive (NFRD) and will significantly increase reporting requirements for companies within its scope, aiming to broaden the sustainability information available to stakeholders.

The Directive will apply to three categories of companies:

1. All companies whose securities are listed on an EU regulated market – this includes both EU and non-EU companies whose debt or equity securities are traded on such markets.

2. "Large" EU companies, defined as those exceeding certain thresholds for assets, revenues, and workforce size for two consecutive years.

3. Subsidiaries of non-EU companies operating in the EU will be required to report if they exceed these thresholds. In addition, EU entities that are parent companies of groups exceeding certain thresholds for assets, revenue, and workforce size over two consecutive years will also have to report. Consolidated sustainability reporting will further be required from non-EU headquartered companies at the global level if they generate a specified amount of turnover in the EU and have at least one subsidiary or branch in the EU meeting certain criteria.

Starting from 2025-27, all large companies (whether listed or not), parent companies meeting two of the following three criteria[436]: 250 employees and/or turnover above €50 million and/or total assets above €20 million – as well as subsidiaries of non-EU companies with net revenue in the EU exceeding €150 million for two consecutive financial years, will fall under the reporting scope. Note: small and medium-sized listed companies

[436] Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022. European Union, 2022, https://eur-lex.europa.eu/eli/dir/2022/2464/oj

will have an additional three years to comply, meaning they will begin reporting in 2027.

The Corporate Sustainability Reporting Directive (CSRD) significantly expands the scope of sustainability reporting, requiring all large companies operating in the EU above defined thresholds – not just listed and public-interest entities – to comply with new obligations. A core principle of the directive is double materiality, which mandates that organizations disclose both their impacts on people and the environment as well as how environmental and social issues pose financial risks and opportunities. Reporting must align with the EU Taxonomy, ensuring consistency in classifying sustainable economic activities, and comply with the European Sustainability Reporting Standards (ESRS), which specify the ESG indicators to be disclosed. In addition, CSRD reporting must provide the data needed for compliance with the Sustainable Finance Disclosure Regulation (SFDR), thereby supporting investor transparency. A standardized digital format of reports to facilitate integration into a centralized database, and independent audit.

The European Commission has already put forward proposals to streamline reporting, which will be reviewed by both the European Parliament and the European Council.

This forms part of the Omnibus 2025 initiative aimed at reducing sustainability reporting and due diligence requirements (Omnibus 2025). In February 2025, the European Commission introduced two omnibus proposals (COM(2025) 801 and COM(2025) 812) to ease sustainability reporting and due diligence obligations under the CSRD, EU Taxonomy (EUT), and CSDDD. The initiatives aim to reduce regulatory burdens while aligning with the EU's Competitiveness Compass (2025).

Key proposed changes include:

– Postponement of CSRD deadlines. Second-wave companies (large undertakings) move from 2025 to 2027; third-

wave companies (listed SMEs, small credit institutions, captive insurers) move from 2026 to 2028.

– Narrower CSRD scope. Limited to large EU undertakings and parent groups with >1,000 employees; non-EU companies face a higher threshold of €450m EU turnover (up from €150m).

– Simplification of ESRS. Fewer data points, clearer provisions, and cancellation of sector-specific standards.

– Adjusted EU Taxonomy (EUT) rules. Mandatory only for CSRD entities with >€450m turnover; others may comply voluntarily ("opt-in"). Number of required data points to be reduced.

– CSDDD modifications. Lighter obligations and a one-year delay in implementation (to 2028).

The adoption of the CSRD represents a significant step toward the standardization of ESG reporting across the EU. By introducing harmonized requirements, even taking into account the changes currently under discussion, the directive creates a unified framework that enhances comparability, transparency, and reliability of sustainability information. This development not only strengthens investor confidence but also positions the EU as a global leader in shaping consistent ESG disclosure standards.

3. Climate-Related Financial Disclosures.

At present, there is no single standardized structure for ESG reporting, and only a broad consensus exists regarding the issues that such reports should address. Originally, ESG disclosures were developed primarily for investors, with a focus on information relevant to the sustainability performance of publicly listed companies. Over time, however, the scope of ESG reporting has expanded, reflecting the growing expectations of diverse stakeholders and the increasing integration of sustainability into corporate strategy.

In practice, ESG information is most commonly disclosed through standalone sustainability reports. An increasing number of

companies also provide supplementary disclosures via dedicated website sections, allowing stakeholders to access ESG performance data and progress updates in near real time. This trend highlights the demand for greater transparency, accessibility, and timeliness of sustainability information, going beyond traditional annual reporting cycles.

To determine what and how to disclose, firms rely on established international frameworks. The most widely used include:

– Global Reporting Initiative (GRI Standards). Internationally recognized standards focusing on the environmental and social impacts of organizations and their activities, addressing the information needs of a wide range of stakeholders.

– Sustainable Accounting Standards Board (SASB Standards). Standards designed to emphasize financially material ESG factors, particularly relevant to investors.

– International Sustainability Standards Board (ISSB Standards). Global standards for sustainability and climate-related disclosures established under the IFRS Foundation. The ISSB aims to enhance consistency and comparability of ESG reporting. As of 2024, its standards are referenced by regulators and stock exchanges in over 20 countries and applied by more than 1,000 companies worldwide.

The coexistence of multiple reporting systems has encouraged many firms to adopt hybrid approaches, combining GRI, SASB, and increasingly ISSB standards, to satisfy the differing requirements of investors, regulators, and other stakeholders. This fragmentation underscores the importance of ongoing global harmonization efforts to strengthen comparability, transparency, and credibility of ESG information.

Despite the progress made, companies face significant obstacles in implementing robust sustainability reporting:

1.Lack of standardization. A universally accepted set of ESG reporting standards is still under development, resulting in inconsistencies and limiting comparability across firms and jurisdictions.

2.Data quality and reliability. Collecting, verifying, and standardizing ESG data remains complex, raising concerns about the accuracy and reliability of disclosures.

3. Materiality determination. Companies often struggle to identify which ESG issues are most material to their business and how to prioritize them effectively.

4. Costs and resources. ESG reporting is resource-intensive, demanding significant investments of time, expertise, and financial capacity.

5. Insufficient incentives. In the absence of strong investor or regulatory pressure, some companies perceive limited benefits from engaging in comprehensive ESG disclosure.

6. Weak links to financial information. ESG data are often insufficiently connected to financial metrics, reducing their utility for integrated analysis and decision-making.

The European Securities and Markets Authority (ESMA), in its 2023–2028 Strategy, identified the preservation of investor trust in ESG investments as a key priority. It aims to achieve this by fostering high-quality disclosures and reducing the risk of greenwashing in financial markets[437]. Within this framework, regulation of reporting standards is directed toward sustainable finance in two principal dimensions: (i) the creation of climate benchmark labels and (ii) the enhancement of transparency through mandatory ESG disclosure requirements. In particular, ESMA introduced two benchmark categories: the EU Climate Transition Benchmark (EU CTB), which supports progressive decarbonization pathways, and the EU Paris-Aligned Benchmark

[437] Sustainable Finance. European Securities and Markets Authority, 2025, https://www.esma.europa.eu/esmas-activities/sustainable-finance

(EU PAB), which ensures alignment with the Paris Agreement objective of limiting global warming to 1.5°C above pre-industrial levels[438]. For financial institutions, these benchmarks provide standardized tools to design investment products that credibly integrate climate objectives, thereby addressing both regulatory compliance and investor demand for sustainable strategies.

Concerns about the credibility of ESG disclosures remain strong among market participants. A 2024 global survey conducted by the EY Climate Change and Sustainability Services (CCaSS) team in collaboration with the Institutional Investor LLC Custom Research Lab shows that a majority of institutional investors believe greenwashing is a growing challenge, and they stress that corporate sustainability reports lack the necessary accuracy and reliability. Importantly, investors also perceive sustainability not merely as a portfolio risk, but as a strategic factor directly influencing long-term value creation and capital allocation decisions[439]. For financial institutions, this translates into mounting pressure to improve due diligence, align portfolio management with credible sustainability criteria, and ensure that ESG risks are adequately priced into lending and investment decisions.

Against this backdrop, global initiatives to harmonize ESG reporting standards have become increasingly significant. The current absence of a standardized structure creates fragmentation and inconsistency across jurisdictions, undermining comparability. Initiatives such as the International Sustainability Standards Board (ISSB) aim to harmonize disclosure practices globally, reducing information asymmetries and reinforcing market trust. For financial institutions, such harmonization is critical: it facilitates cross-border investment flows, improves the reliability of ESG data used in risk assessments, and strengthens the integrity of

[438] Sustainable Finance. European Securities and Markets Authority, 2025, https://www.esma.europa.eu/esmas-activities/sustainable-finance
[439] How can investors balance short-term demands with longterm sustainability? EY Institutional Investor Survey. December 2024. EY, 2024, https://www.ey.com/content/dam/ey-unified-site/ey-com/en-gl/insights/climate-change-sustainability-services/documents/ey-gl-institutional-investor-survey-12-2024.pdf

sustainable financial products. These efforts are thus essential not only for rebuilding investor confidence but also imply that the active engagement of financial institutions will drive fundamental changes in business practices and strategic approaches.

Conclusions

The integration of climate and sustainability considerations into financial systems has accelerated in recent years, but remains uneven and fragmented. Evidence indicates that banking and insurance regulators have strengthened climate risk oversight, with supervisory actions increasing by 18% in banking and 17% in insurance between 2021 and 2024[440]. At the same time, the growing engagement of financial institutions in global sustainability initiatives highlights a shift in market norms. The Net-Zero Banking Alliance expanded from 43 to 144 members, covering over 40% of global banking assets, with 97% of participants adopting decarbonization targets[441]. In parallel, over 1,200 financial institutions joined the UN Global Compact[442], while thousands of banks and investors report under the Global Reporting Initiative[443].

The adoption of international sustainability reporting frameworks has also expanded, with banks, insurers, and asset managers increasingly applying the IFRS Sustainability Disclosure Standards (S1 and S2), GRI Standards, and the European Sustainability Reporting Standards (ESRS) introduced under the CSRD. This enhances comparability, consistency, and reliability of ESG and climate-related reporting. Central banks have advanced the development of climate stress testing and scenario analysis (e.g., EU, UK, Japan, Mexico, Malaysia), embedding climate risk into monetary and supervisory frameworks. In the private sector,

[440] 2024 Susreg Annual Report. An Assessment of Sustainable Financial Regulations and Central Bank Activities Susreg Tracker. Susreg Tracker, 2024, https://www.wwf.sg/wp-content/uploads/2024/10/WWF_SUSREG-2024_Full-Report.pdf
[441] UNEP Finance Initiative, 2025, https://www.unepfi.org/
[442] Principles for Responsible Investment – 2024. United Nations, 2024, https://www.unpri.org/download?ac=21536
[443] Global Reporting Initiative. 2025, https://www.globalreporting.org/

ESG strategies are increasingly mainstreamed into investment, lending, and governance decisions, while the EU Taxonomy has become a global reference point for sustainable finance classification, inspiring the creation of taxonomies in jurisdictions such as Canada, South Africa, and China.

Despite this progress, persistent challenges limit the systemic effectiveness of financial sector engagement. First, the largely voluntary nature of international initiatives creates fragmented implementation and exposes markets to greenwashing risks. Second, political resistance and regulatory gaps undermine global progress: for instance, the instability of U.S. climate policy and the withdrawal of major banks from the Net-Zero Banking Alliance and the Equator Principles in 2024-2025 illustrate legal uncertainty and reduced commitment[444]. Third, the limited participation of emerging markets and smaller institutions restricts inclusiveness, while the absence of harmonized ESG definitions and divergent taxonomies undermine cross-border comparability. Persistent data gaps – particularly for SMEs, supply chains, and non-listed entities – further constrain risk assessments and disclosures. Finally, insufficient integration of nature-related risks, inadequate disclosure practices, and the prevalence of unverified sustainability claims continue to weaken market integrity and investor trust.

Financial institutions are emerging as powerful catalysts of sustainability transformation, shaping not only capital allocation but also corporate behavior, regulatory evolution, and global market standards. Through their participation in soft-law instruments and voluntary frameworks – including ISSB standards, GRI, the EU Taxonomy, and the CSRD – financial institutions contribute to embedding international environmental protection norms into the global economy. Nevertheless, the uneven implementation, lack of binding requirements, and persistent data and governance gaps underscore the need for

444 2024 Susreg Annual Report. An Assessment of Sustainable Financial Regulations and Central Bank Activities Susreg Tracker. Susreg Tracker, 2024, https://www.wwf.sg/wp-content/uploads/2024/10/WWF_SUSREG-2024_Full-Report.pdf

stronger regulatory integration and international harmonization to ensure credibility, comparability, and systemic alignment of finance with global sustainability objectives.

List of Bibliography

1. A New Are in Development. World Bank, Washington, 2023, https://hn.usembassy.gov/wp-content/uploads/sites/164/2024/05/AR2023EN.pdf

2. Activity Report 2023. The Equator Principles, https://equator-principles.com/app/uploads/Equator-Principles-Activity-Report-2023-FINAL.pdf

3. Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022. European Union, 2022, https://eur-lex.europa.eu/eli/dir/2022/2464/oj

4. ESG Policies and Standards. International Financial Corporation, 2024, https://www.ifc.org/en/what-we-do/sector-expertise/sustainability/policies-and-standards

5. EU Taxonomy for Sustainable Activities. URL: https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en, 2025

6. Financing a Clean and Competitive Transition Monitoring Capital Flows to Sustainable Investments. The EU Platform on Sustainable Finance, 2025, 92 p., https://finance.ec.europa.eu/document/download/87c48ab4-34d2-4cd7-997e-efc1310e62c5_en?filename=250311-sustainable-finance-platform-report-capital-flows_en.pdf

7. Global Reporting Initiative. 2025, https://www.globalreporting.org/

8. Green Central Banking. 2025, https://greencentralbanking.com/

9. Green Economy Transition (GET) and Paris alignment. European Bank for Reconstruction and Development, 2021, https://www.ebrd.com/home/who-we-are/ebrd-values/ebrd-

environmental-social-sustainability/EBRD-green/Green-Economy-Transition-Paris-alignment.html#get

10. Green economy transition approach 2021-2025. European Bank for Reconstruction and Development, 86 p., 2020

11. Highlights from the 2024 IFC Annual Report, 2024, https://www.ifc.org/content/dam/ifc/doc/2024/ifc-annual-report-2024-highlights-en.pdf

12. How can investors balance short-term demands with longterm sustainability? EY Institutional Investor Survey. December 2024. EY, 2024, https://www.ey.com/content/dam/ey-unified-site/ey-com/en-gl/insights/climate-change-sustainability-services/documents/ey-gl-institutional-investor-survey-12-2024.pdf

13. Implementing and delegated acts - Taxonomy Regulation. European Commission, 2025, https://finance.ec.europa.eu/regulation-and-supervision/financial-services-legislation/implementing-and-delegated-acts/taxonomy-regulation_en

14. International Finance Corporation's Performance Standards on Social & Environmental Sustainability. International Financial Corporation, 2006, https://www.ifc.org/content/dam/ifc/doc/2000/2006-ifc-performance-standards-en.pdf

15. Principles for Responsible Banking. United Nations, 2024, https://www.unepfi.org/about/

16. Principles for Responsible Investment – 2024. United Nations, 2024, https://www.unpri.org/about-us/what-are-the-principles-for-responsible-investment

17. Susreg Annual Report. An Assessment of Sustainable Financial Regulations and Central Bank Activities Susreg Tracker. Susreg Tracker, 2024, https://www.wwf.sg/wp-content/uploads/2024/10/WWF_SUSREG-2024_Full-Report.pdf

18. Susreg Tracker. 2025, https://susreg.panda.org/

19. Sustainable Finance and EU Taxonomy: Commission takes further steps to channel money towards sustainable activities. European Commission, 2025, https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1804

20. Sustainable Finance. European Securities and Markets Authority, 2025, https://www.esma.europa.eu/esmas-activities/sustainable-finance

21. The ECB's climate and nature plan 2024-2025. Economic Bulletin Issue 2, 2024, European Central Bank, https://www.ecb.europa.eu/press/economic-bulletin/html/eb202402.en.html

22. The Equator Principles July 2020. The Equator Principles, 2020, https://equator-principles.com/app/uploads/The-Equator-Principles_EP4_July2020.pdf

23. The Equator Principles, 2025, https://equator-principles.com/about-the-equator-principles/

24. UNEP FI Annual Overview 2024. United Nations, 2024, https://www.unepfi.org/industries/banking/unep-fi-annual-overview-2024/

25. UNEP Finance Initiative, 2025, https://www.unepfi.org/

26. World Bank Environmental and Social Framework. World Bank, Washington, 2016

IV. INTERNATIONAL PROTECTION OF ENVIRONMENTAL HUMAN RIGHTS

4.1. Human Rights in the Blue Lagoon: Environmental Rights Protection in Pacific Island State Frameworks

Mgr. Laura Gazdagová

Institute of International Law and European Law

University of Pavol Jozef Šafárik, Faculty of law

laura.gazdagova@student.upjs.sk

Introduction

Climate change is widely recognized as the defining global challenge of the 21st century, with its consequences disproportionately affecting the most vulnerable regions of the world. Among these, the Pacific Island States stand at the forefront, facing severe and accelerating environmental threats that pose existential risks to their populations, ecosystems, and territorial integrity. *The State of the Climate in the South-West Pacific 2023 report*, published by the World Meteorological Organization (hereinafter „WMO"), underscores the alarming reality that sea level rise in the region exceeds the global average. Between January 1993 and May 2023, sea levels in the western tropical Pacific rose at an average rate of approximately 4.52 mm per year, and 4.13 mm per year around New Zealand, both significantly above global trends. In 2023 alone, the region experienced 34 hydrometeorological events, primarily storms and floods, which collectively resulted in over 200 fatalities and affected more than 25 million people.[445] These data not only reflect the intensifying climate crisis but also raise critical questions regarding the scope and effectiveness of environmental rights protection within the legal and human rights frameworks of Pacific Island States. However, the question of how environmental protection, particularly in the context of environmental degradation, is integrated into the international legal framework of human rights

[445] World Meteorological Organization (WMO). *State of the Climate in South-West Pacific 2023 Report*, 2023. WMO-No. 1356, pp. 3-20, ISBN 978-92-63-11356-9.

remains unresolved. It is objectively accurate to say that, for many years, human rights discourse largely overlooked environmental issues. Since the later emergence of the environmental crisis, a fundamental question has arisen, whether environmental issues themselves can acquire a human rights dimension, or conversely, whether human rights issues can adopt an environmental dimension. The current process of developing environmental human rights demonstrates that human rights and environmental protection are now evolving in mutual interaction. This development, as will be further analysed in this article, confirms that within the sphere of international environmental law, as a sub-discipline of public international law, a human rights dimension has undoubtedly emerged through its interaction with international human rights law. This interaction has led to the formulation of several environmental human rights, both substantive and procedural in nature, the effective application and enforcement of which could contribute to mitigating the processes of environmental degradation on our planet.[446]

Within the substantive category, the right to a healthy environment and the right to water and sanitation can be identified. The procedural dimension of environmental human rights includes the right of access to information, the right of public participation in environmental decision-making, and the right of access to justice in environmental matters. These procedural rights serve as mechanisms that enable the effective realization of substantive environmental human rights. The formulation of both procedural and substantive environmental rights is driven by the need to deeply entrench environmental protection as a *conditio sine qua non* for life on Earth and for the realization of all other fundamental rights and freedoms. According to Knox,[447] environmental rights

[446]JANKUV, J. Mechanizmy ochrany ľudských environmentálnych práv v medzinárodnom práve verejnom, v práve Európskej únie a v právnom poriadku Slovenskej republiky. 1. vydanie. *Praha: Leges,* 2018, 200 s. ISBN 978-80-7502-309-4.

[447]KNOX, J. H. The Paris Agreement As a Human Rights Treaty. *Human Rights and 21st Century Challenges: Poverty, Conflict, and the Environment*. [online].

can be divided into three categories: *substantive rights, procedural rights, and the rights of those who are particularly vulnerable to environmental harm, such as women, children, persons with disabilities, and others*. It can be objectively stated even at this initial stage that the environmental human rights under discussion represent a dynamic and evolving legal instrument. Their effective application by individuals through international legal oversight mechanisms may contribute to the more effective resolution of environmental challenges in accordance with legal norms and the principles of sustainable development. This paper explores how Pacific Island States conceptualize and protect environmental rights in the face of climate-induced challenges, and to what extent existing legal frameworks ensure the protection of these rights in the context of rising sea levels and extreme weather events.

As part of the introduction and considering the thematic framework of this paper, it is essential to identify the Asia–Pacific region from a geographical perspective. This will enable a clearer understanding of the specific challenges and dynamics of this vast and diverse area. The Asia–Pacific region extends from Mongolia in the north to New Zealand in the south, and from Central Asia and the Islamic Republic of Iran in the west to Kiribati in the east. According to the Institute for Global Environmental Strategies, the region is divided into five subregions: South Asia, Southeast Asia, Northeast Asia, Central Asia, and the Pacific.[448] This highly dynamic region, whether in terms of politics, legal philosophy, or other aspects, faces a number of significant challenges, particularly those related to natural disasters driven by environmental degradation, large-scale and often unregulated population migration, and inadequate mechanisms for the protection and monitoring of human rights compliance for individuals living in the region. Asia and the Pacific are home to approximately 3.5 billion people, which represents 58% of the world's population, while the

Akande et al. eds., Oxford University Press, 2018. [viewed 20-06-2024]. Available from SSRN: https://ssrn.com/abstract=3192106.

[448]UN, ESCAP. *Population Data Sheet*. [online], 2003. [viewed 02-26-2025]. Available from: http://www.unescap.org/pop/data_sheet/2003/index.asp.

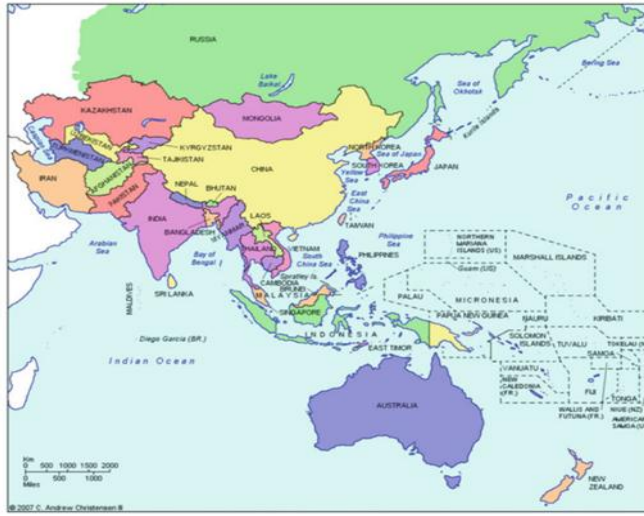
region itself covers roughly 30% of the Earth's surface. It includes some of the most populous countries in the world, including China, with approximately 1.3 billion inhabitants, and India, with around 1.2 billion, which together account for nearly 40% of the global population. Five of the ten countries responsible for half of the world's annual population growth are located in this region, namely Bangladesh, the China and India, Indonesia, and Pakistan.

Ilustraction n.o 1: The table provides a more detailed identification of the individual states belonging to the above-mentioned subregions. [449]

Subregion	Countries
Central Asia	Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
North East Asia	China, Japan, Democratic People's Republic of Korea, Republic of Korea, Russian Federation, Mongolia
South Asia	Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Maldives, Nepal, Pakistan, Sri Lanka, Turkey
South East Asia	Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Viet Nam
Pacific	Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu

Note: China includes Hong Kong and Macao Special Administrative Regions and Taiwan Province of China.

[449] *Ibid.*



Ilustration no. 2: Map of the Asia–Pacific Region. [450]

Each of the subregions is equipped with its own distinct and highly specific mechanisms for the protection and monitoring of human rights compliance. These mechanisms include various measures and procedures aimed at ensuring the implementation and enforcement of individual rights, considering the unique legal and cultural contexts of each subregion. Within the geographical scope of the issue under examination, this article focuses specifically on the Pacific, namely, the Pacific Island States, while directing attention to the countries listed in *Illustration No. 1*, which are classified as part of this subregion. Accordingly, any reference to the *Pacific* throughout this paper should be understood as referring to the states assigned to this designation within *Illustration No. 1*.

[450]OAKMAN, J. et al. State of the Art: The Context of Psychosocial Factors at Work in the Asia Pacific? In: *Psychosocial Factors at Work in the Asia Pacific*. [online]. p. 3-22, 2016. [viewed 2025-02-26]. Available from: DOI:10.1007/978-3-319-44400-0_1.

I. The Role of the Pacific Islands Forum in (Enviro)Human Rights Protection

While it is generally acknowledged that National Human Rights Institutions (hereinafter "NHRI") are particularly active and visible in the Pacific region, the Pacific Islands Forum (hereinafter "PIF") may, in certain respects, justifiably take pride in several of its notable achievements. Since its establishment in 1971, originally under the name South Pacific Forum, the PIF has functioned as the principal platform through which the island states of Oceania have articulated a unified voice on matters of global importance, thereby amplifying their collective influence and international standing. Through this forum, positions have been developed and advanced on a range of critical issues, including nuclear testing, human rights, climate change, fisheries, as well as broader security and environmental challenges.[451] PIF may be identified as an intergovernmental organization whose primary objective is to strengthen cooperation among the Pacific states. At present, the PIF comprises 18 member states. Kiribati withdrew from the Forum in 2022; however, the Government of Kiribati later reversed its position and decided to rejoin the PIF in 2023.[452]

In the *2050 Strategy for the Blue Pacific Continent* (hereinafter referred to as the "2050 Strategy"), PIF member states declared their commitment to resolving mutual disputes through their own unique Pacific way, which emphasizes consensus-based decision-making while respecting sovereignty and the principle of non-interference in the internal affairs of nations.[453] In this context, it is possible to identify characteristic of Asian legal and political thought, particularly in relation to the principle of non-interference in the internal affairs of states. This approach reflects a regional value system that places strong emphasis on state sovereignty and

[451]SHIBUYA, E. *The problems and potential of the Pacific Islands Forum*. Asia Pacific Center for Security Studies. pp. 103-106.
[452]LYONS, K. Kiribati to rejoin Pacific Islands Forum at crucial moment for regional diplomacy. In: *The Guardian*. [online], 2023. [viewed 2025-02-26]. Available from: https://www.theguardian.com/world/2023/jan/30/kiribati-to-return-to-pacific-islands-forum-at-vital-moment-for-regional-diplomacy.
[453]*Ibid*.

the autonomy of states in addressing their own domestic issues. The resolution of mutual disputes through consensus-based decision-making processes considers the specific cultural and historical contexts of the region, while promoting peaceful and diplomatic methods that minimize external influence. This *modus operandi* may be regarded as a continuation of the tradition of respect for national sovereignty and independence, a hallmark of many countries in Asia, and certainly also in the Pacific. Haas has described the so-called *„Pacific Way"* as a system of *„unified compromise"*, within which each party gives up something for the overall benefit of the collective association of states, and all decisions are adopted by consensus. This approach underscores the values of the common good and balance, whereby both individuals and states relinquish part of their interests in order to reach a consensus that reflects the needs and demands of all parties involved.[454] In our view, it remains questionable whether the Pacific states would be willing, in the interest of the common good and regional balance, to significantly depart from the *Pacific Way*, particularly in the context of increased external influence on their internal affairs. Regarding the protection and monitoring of human rights compliance, and in line with common practice within Asian regional and subregional organizations, PIF, as an intergovernmental organization, does not possess formal mechanisms for the direct protection or monitoring of individual human rights within the region. Nevertheless, within the scope of its competencies, the PIF adopts *soft law* instruments, as well as declarations and other relevant materials, through which it expresses commitments to the protection of human rights and promotes their observance as part of regional policy and cooperation. Although these documents are not legally binding, they function as tools for reinforcing the commitment of member states to the protection of human rights.

[454]HAAS, M. The Pacific Way: Regional Cooperation in the South Pacific. *New York: Praeger, 1989. American Political Science Review*. [online]. 1990;84(4):1447-1448. [viewed 2025-02-26]. Available from: DOI:10.2307/1963351

An example of such practice is the adoption of the *2023 Declaration on the Continuity of Statehood and the Protection of Persons in the Context of Sea-Level Rise Resulting from Climate Change* (hereinafter the „2023 Declaration"). The preamble of the 2023 Declaration states: *„Recalling that statehood and sovereignty of Pacific nations form the foundation of a peaceful, secure, and stable Blue Pacific region, in which individuals, communities, and nations can reach their full potential, and where the health and well-being of our peoples, as well as human rights and equality for all, can be ensured."* Further, the preamble of the 2023 Declaration affirms: *„Recognizing that the protection of individuals and communities affected by sea-level rise due to climate change entails the protection, promotion, and fulfilment of their human rights including civil, political, economic, social, and cultural rights, as well as the protection of their culture, cultural heritage, identity, and dignity, and the satisfaction of their basic needs, including through international cooperation."* This excerpt from the 2023 Declaration exemplifies a legal initiative focused on the protection of human rights in Pacific Island States in the context of climate change. The preamble expresses a strong commitment to safeguarding the statehood and sovereignty of Pacific countries, as well as ensuring conditions for their populations to fulfil their potential and to live in a safe and stable environment. It also emphasizes the importance of protecting persons affected by rising sea levels, not only in terms of physical security, but also through the preservation of their cultural identity and heritage, and by ensuring their fundamental social, economic, and political rights. Thus, the Declaration reflects the global challenge of climate change, while calling for international cooperation and solidarity to support communities at risk. The Declaration explicitly links the impacts of climate change to human rights and urges the international community to cooperate in protecting affected communities both physically and culturally.

In the context of the issues under examination and with reference to the previously mentioned *2050 Strategy for the Blue Pacific Continent*, several key provisions concerning the promotion

of human rights in the region can be identified. The leaders of Pacific Island nations, through the 2050 Strategy, reaffirm their strong commitment to ensuring the health and well-being of the region's inhabitants, as well as to promoting human rights and equality for all. The 2050 Strategy further proclaims: *"We embrace good governance, full adherence to democratic principles and values, the rule of law, the protection and promotion of all human rights, gender equality, and a commitment to just societies."* In the section *"Thematic Area – People-Centered Development – Strategy 2025"*, the Strategy recognizes that despite various initiatives across the Pacific aimed at improving health and education outcomes, further steps are needed to enhance the overall situation in the region. Continuing with the provisions of this section, Pacific leaders emphasize the necessity, lined with the principles of sustainable development, of systematically and comprehensively addressing issues of exclusion and social inequality, including gender inequality and the status of marginalized and vulnerable groups. At the same time, the Strategy underlines the urgent need to protect human rights and: *„...environmental rights, which are an integral part of ensuring a just, inclusive, and sustainable development."* In conclusion, it is important to emphasize that the protection of human rights in the Pacific region faces complex and multifaceted challenges. The role of PIF in this area lies primarily in the coordination of regional initiatives that support the protection of the fundamental rights of individuals and communities. Although Pacific states have taken limited steps toward the regional protection of environmental rights, these efforts remain insufficient. It is therefore essential to seek universal human rights protection mechanisms, particularly through the jurisdiction of United Nations treaty bodies, which have on multiple occasions acknowledged the connection between environmental degradation and the enjoyment of human rights.

II. Environmental Rights of Pacific Island States in the Evolving Jurisprudence of the ICJ and ITLOS

In its 2025 Advisory Opinion on the Obligations of States in respect of Climate Change,[455] the International Court of Justice (hereinafter „ICJ") affirmed a significant step in the development of the recognition of the right to a healthy environment itself.[456] While this right had previously been acknowledged in several regional human rights instruments, such as the African Charter on Human and Peoples' Rights (Art. 24), the Arab Charter (Art. 38), and the San Salvador Protocol (Art. 11), as well as in over 100 domestic constitutions, its legal status under general international law remained ambiguous. The right to a clean, healthy, and sustainable environment has been also politically endorsed at the multilateral level, particularly by the UN Human Rights Council in Resolution 48/13 (2021) and the UN General Assembly in Resolution A/76/L.75 (2022). A particularly significant contribution to the Opinion came from Pacific Island nations, notably through the submissions made by the Republic of Vanuatu and the Melanesian Spearhead Group. While many other states submitted written and oral observations, this article, based on its title and scop, focuses on the distinct and powerful arguments advanced by the Pacific Island States, whose very existence is acutely threatened by the climate crisis.[457] These submissions emphasized the urgent need to frame climate change within a human rights context, asserting that the burning of fossil fuels constitutes one of the human activities with the greatest impact on the Earth's climate. The Pacific submissions explicitly called attention to the role of major fossil fuel-producing countries in exacerbating climate harm, arguing that these actions are

[455]ICJ. Obligations of States in Respect of Climate Change (Request for Advisory Opinion) *Written statement of the Melanesian Spearhead Group*. 187-20240322-WRI-01-00-EN.

[456] PERERA, R. The ICJ's Recognition of an Autonomous Right to a Clean and Healthy Environment. *Blog of the European Journal of International Law*. [online], 2025. [viewed 2025-09-06]. Available from: https://www.ejiltalk.org/the-icjs-recognition-of-an-autonomous-right-to-a-clean-and-healthy-environment/

[457] NILUFEL O. ICJ Climate Change Advisory Opinion: Noteworthy Trends. *IISD*

increasingly viewed by international human rights bodies as incompatible with existing human rights obligations. This view is supported by both specific legal rulings and broader normative statements from international bodies. The Vanuatu led communication underscored that climate change already poses severe threats to a wide range of human rights, including the rights to life, health, food, water and sanitation, a healthy environment, an adequate standard of living, housing, property, self-determination, development, and cultural rights. In addition, it referenced the emerging notion of a *„safe climate"* as a substantive component of the broader right to a clean, healthy, and sustainable environment.

However, the ICJ went further, engaging in a second step by recognizing a right to a clean, healthy and sustainable environment, presenting it as *„inherent in"* a *„precondition"* to or *„essential"* for the effective enjoyment of other human rights.[458] The Court, however, does not say whether it recognizes this as a self-standing right.[459] As noted by several critics, the right is proclaimed in language that lacks clarity and therefore reflects a certain degree of vagueness.[460] For instance, it has been argued that the ICJ does not state whether the right to a clean and healthy environment is a self-standing right. When taken in its entirety, the reasoning of the Advisory Opinion, which draws on multiple sources that admit an autonomous right to a clean and healthy environment, suggests that the ICJ intended to recognize the right to a clean and healthy environment as a standalone right. According to Keller the confusion arises due to the ambiguous language the Court has used in the specific paragraph (quoted above) that outlines its conclusion. As also noted in the declaration of Judge Tladi, the Advisory Opinion seems to conflate the two approaches of

[458] Obligations of States in respect of Climate Change, 23 July 2025. *Advisory Opinion Obligations of States in respect of Climate Change posed by the General Assembly*. (adv. op. 393).
[459] KELLER H. A Right to a Clean, Healthy and Sustainable Environment: Or Perhaps Not (Yet)?. [online]. *Völkerrechtsblog*, 2025. [viewed 2025-09-02]. Available from: doi: 10.17176/20250806-122339-0.
[460] *Ibid*.

admitting the right to a clean and healthy environment as an autonomous right and treating environmental protection as necessary to realize other human rights.[461]While both these approaches can co-exist simultaneously, it would have been better if the Court had stated the existence of a stand-alone right to a clean and healthy environment in explicit, unambiguous terms without leaving room for ambiguity and contestation. Furthermore, it is not clear whether the Court treats the right to be a part of customary international law. Judges Aurescu, Bhandari and Tladi, in their separate opinions answer this question in the affirmative and note that the Advisory Opinion has not addressed the question explicitly. Such a proclamation would lead to further questions, as the ICJ heavily relies on the 2022 UNGA resolution to deduce the existence of an autonomous right to a clean and healthy environment. This is the only source with an international character ,,as opposed to regional and domestic provisions" that the Court cites as evidence of the presence of the right. As Judge Tladi explains in his declaration, the 2022 UNGA resolution *,,...serves as an important indication of opinio juris."*[462] One question stemming from this position is the extent to which *soft-law* instruments like UNGA resolutions can be considered evidence of general and consistent state practice, combined with *opinio iuris*. Even to have that debate, the ICJ should have clarified its stance in clear terms. In reaching its conclusion, the ICJ referred to international environmental instruments, prior UN reports, and regional treaties, noting broad, though not universal, support for the right. It ultimately held that a clean and healthy environment is essential for the enjoyment of rights such as life, health, and an adequate standard of living.[463] However, while strongly implying that the right is autonomous, the ICJ's language remains somewhat ambiguous, and it refrained from expressly defining the legal

[461] ICJ. *Advisory Opinion Obligations of States in respect of Climate Change*. Tladi declaration, para 27.
[462] ICJ. *Ibid*. para. 31.
[463] ICJ. *Advisory Opinion Obligations of States in respect of Climate Change*. para. 393.

content of the right or stating whether it forms part of customary international law.

It is also essential to mention the role of the International Tribunal for the Law of the Sea (where Pacific Island states also played important role) considering the Tribunal's unanimous advisory opinion issued on 21 May 2024, concerning the obligations of States to mitigate climate change and support adaptation to its effects. Notably, this opinion includes an explicit reference to human rights issues.[464] The request for the advisory opinion was submitted in 2022 by the Commission of Small Island States on Climate Change and International Law, a coalition of nations led by the Caribbean state of Antigua and Barbuda, and the Pacific Island State of Tuvalu. The group asked the Tribunal to specify the obligations of parties to the UN Convention on the Law of the Sea (hereinafter ,,UNCLOS") in relation to climate change caused by human activity and the protection of the marine environment from ocean warming and rising sea levels. The Tribunal clarified States' obligations concerning adaptation and ecosystem restoration; the protection of rare or fragile ecosystems from ocean warming and sea level rise; and the creation of marine protected areas. These obligations are essential for climate change mitigation and adaptation, as well as for maintaining healthy ecosystems, to effectively and equitably address the triple planetary crisis, biodiversity loss, global warming, and pollution, which undermines the effective realization not only of environmental human rights but of human rights more broadly.[465]

III. UN Treaty Bodies and the Protection of Environmental Rights in the Pacific Islands

Based on Knox's assertions outlined in the introduction of this article, it is a logical conclusion that United Nations (universal) human rights conventions, particularly those containing elements

[464] MAYER, B. Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law. In: *American Journal of International Law*. [online]- 119(1):153-160, 2025. [viewed 2025-02-17] Available from: doi:10.1017/ajil.2024.63.
[465] *Ibid.*

of specificity, will include provisions for the protection of at least one environmental right, namely, the right to water and sanitation. Specifically, this pertains to the **Convention on the Elimination of All Forms of Discrimination against Women**[466]**(1979)** Article 14(2)(h) of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) stipulates: „*States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on the basis of equality between men and women, their participation in and benefit from rural development and, in particular, shall ensure to such women the right to... (h) adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications."* Similarly, the Convention on the Rights of the Child[467] (1989) also contains relevant provisions regarding environmental and living conditions rights. Under the auspices of Article 24(2)(e) of the Convention on the Rights of the Child, it is declared: „*States Parties to the Convention shall pursue the full realization of this right and, in particular, shall take appropriate measures: to ensure that all segments of society, especially parents and children, are informed, individually and through community education, on child health and nutrition, the advantages of breastfeeding, hygiene, the environmental sanitation conditions of children, and the prevention of accidents, and to ensure that all segments of society have access to education and are supported in the use of basic knowledge of child health and nutrition."*

Similarly, the Convention on the Rights of Persons with Disabilities[468] (2006), in Article 28(2)(a), provides: „*...States Parties recognize the right of persons with disabilities to social protection and to the enjoyment of that right without*

[466] UN GA. *Convention on the Elimination of All Forms of Discrimination Against Women, United Nations, Treaty Series*. vol. 1249, 1979.
[467] UN GA. *Convention on the Rights of the Child, United Nations, Treaty Series*. vol. 1577, 1989.
[468]UN General Assembly. *Convention on the Rights of Persons with Disabilities*. Resolution adopted by the General Assembly A/RES/61/106, 2007.

discrimination on the basis of disability, and shall take appropriate steps to safeguard and promote the realization of this right, including measures to: (a) ensure equal access by persons with disabilities to clean water supply services, and to ensure access to appropriate and affordable services, devices, and other assistance for disability-related needs." Other UN human rights treaties implicitly recognize the right to water. According to Sancin, who has extensively addressed the issue of protection of the right to water and sanitation in her scholarly articles, access to safe drinking water is a fundamental element of social development [469], this is also confirmed by the implicit recognition of the right to water as a fundamental human right through the adoption of Article 11 of the International Covenant on Economic, Social and Cultural Rights (hereinafter referred to as the ,,Covenant"). Article 11 of the Covenant establishes in paragraph 1 the obligation of the States Parties to recognize the right of everyone to an adequate standard of living for themselves and their family, including adequate food, clothing, housing, and to the continuous improvement of living conditions.

Within the discussed issue, an established legal consensus has emerged in the international community that, in situations where domestic remedies fail, international courts and human rights bodies provide subsidiary and appropriate redress to individuals in the position of complainants. This approach constitutes one of the key objectives of quasi-judicial bodies established under the auspices of the United Nations. These bodies play a significant role in ensuring the observance of fundamental rights and freedoms, thereby contributing to the effective protection of individuals against violations of their rights at the global level. UN treaty bodies, within their jurisdiction over interstate complaints, individual communications, and state reports under the reporting procedure, issue non-binding legal opinions which are of a

[469]SANCIN,V., JUHART, M.: The Right to Safe Drinking Water in International Law and in Slovenia's legal framework and implementation. In: *Journal of Agriculture and Environmental law*. [online]. 34/2024. 2024. [viewed 17.02.2025]. pp. 111. Available from: https://doi.org/10.21029/JAEL.2023.34.106.

recommendatory nature. For the purposes of this study, it is important to also mention the activities of the UN Committees in relation to their General Comments (hereinafter also referred to as „GC"). The purpose of the GCs is to interpret and clarify key provisions, not only in connection with the reporting obligations of the States Parties but also by providing guidance and proposing approaches to the implementation of the relevant convention's provisions or thematic issues. However, GCs may also address broader, cross-cutting issues such as the role of national institutions for the rights of persons with disabilities, violence against women, minority rights, or the application of human rights in the context of climate change. Their highly authoritative character, which is based on the provisions of the Convention, is also recognized in international law, specifically in Article 31 of the 1969 Vienna Convention on the Law of Treaties,[470] which stipulates that treaties require continuous contextual interpretation. By ratifying the convention, States accept that the UN Committees play a key role in interpreting the entrenched rights and monitoring their proper implementation in the respective countries. References to the GC as authoritative interpretations of the law of UN human rights treaties should, therefore, be recognized by States as part of their obligations arising from the respective treaties within the framework of arguments in judicial proceedings or complaints. Given the fact that there is no central enforcement mechanism within International Human Rights Law, whether States Parties ultimately respect, protect, and fulfill the rights under the Convention, including the related GC, depends on their commitment to uphold human rights within their domestic legal systems.

Legend no. 1 of abbreviations for UN Committees (EN) used in the text:

CCPR: Human Rights Committee

[470] United Nations. *Vienna Convention on the Law of Treaties, United Nations, Treaty Series*, vol. 1155, 1969.

CESCR: Committee on Economic, Social and Cultural Rights

CEDAW: Committee on the Elimination of Discrimination against Women

CRC: Committee on the Rights of the Child

CERD: Committee on the Elimination of Racial Discrimination

CRPD: Committee on the Rights of Persons with Disabilities

In its General Comment No. 15,[471] CESCR defined the right to water and the right to sanitation as human rights that entitle everyone to sufficient, safe, acceptable, physically accessible, and affordable water for personal and domestic use. Although CESCR did not explicitly refer to the right to water and sanitation, it emphasized that these rights are an integral part of the right to an adequate standard of living. CESCR also highlighted that the right to clean and safe water is inherently linked to the rights to health, adequate housing, and food. General Comment No. 15 set forth three main criteria for fulfilling the right of access to safe drinking water: *„...the availability of water in sufficient and continuous quantities for personal and domestic uses by every individual; the quality of water must be free from microorganisms, chemical substances, and radiological hazards that pose a threat to human health; and water must be physically and economically accessible to everyone.*" These criteria further affirm that access to water is generally regarded as an element of social development in every society and should never be used as a tool for political or economic coercion.[472] Furthermore, General Comment No. 15 asserts that the right to safe drinking water should also be derived from Article 12 of the International Covenant on Economic, Social and Cultural

[471] UN Economic and Social Council, *General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant)*, E/C.12/2002/11, UN Committee on Economic, Social and Cultural Rights (CESCR), 2003.
[472]SANCIN, V. - JUHART, M. *Op.cit 21.*

Rights, which recognizes *„...the right of everyone to the enjoyment of the highest attainable standard of physical and mental health."* General Comment No. 14[473] of the CESCR addresses the right to the highest attainable standard of health, as established in Article 12 of the International Covenant on Economic, Social and Cultural Rights. In relation to environmental rights, this comment emphasizes that a healthy environment is essential for the full enjoyment of the right to health. This includes the obligation of States to ensure that environmental policies and regulations protect human health from the harmful effects of pollution, climate change, and environmental degradation.

A highly relevant element in relation to the subject matter under review is General Comment No. 36 of the CCPR, specifically its provisions concerning Article 6 of the International Covenant on Civil and Political Rights. Drawing on GC 36 and the premise of the natural law conception of human rights, the CCPR has affirmed the right to life as the supreme right from which States may not derogate. In GC 36, the Committee extensively discussed issues relating to the death penalty, weapons of mass destruction, abortion, effective control, and climate change.[474] General Comment No. 36[475] also contains an important paragraph linking the issue of climate change and the right to life, where it declares: *„The implementation of the obligation to respect and ensure the right to life, and in particular the right to life with dignity, depends, inter alia, on measures taken by States Parties to protect the environment and safeguard it from harm, pollution, and climate change caused by public and private actors."* Another advancement in the implicit protection of the right to the

[473] UN Economic and Social Council, *General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12 of the Covenant)*, E/C.12/2000/4, UN Committee on Economic, Social and Cultural Rights (CESCR). 2000.
[474]CCPR. *Adoption of the General Comment no. 36 on the Right to Life*. [online], 2018. [viewed 2025-09-07]. Available from:: https://ccprcentre.org/ccprpages/adoption-of-the-general-comment-no-36-on-the-right-to-life.
[475] UN Human Rights Committee (HRC), *General comment no. 36, Article 6 (Right to Life)*, CCPR/C/GC/35, 2019.

environment is the adoption of General Comment No. 26[476] on children's rights and the environment by the CRC, which serves as a guardian over the implementation of human rights enshrined in the Convention on the Rights of the Child. In GC 26, the CRC emphasizes the urgent need to address the adverse effects of environmental degradation, with particular attention to climate change, considering the protection of children's rights. Through GC 26, the CRC also confirms that children have the right to a clean, healthy, and sustainable environment.[477] Regarding the activities of CEDAW and its General Comment No. 37, States Parties to the Convention should address both the general obligations to ensure substantive equality between women and men in all areas of life, as well as specific guarantees related to those rights under the Convention on the Elimination of All Forms of Discrimination against Women that may be particularly affected by climate change. These include extreme weather events, melting of polar ice caps and glaciers, droughts, and rising sea levels. The purpose of GC 37 is to emphasize the urgency of mitigating climate change and to highlight the necessary steps to achieve gender equality as a factor that strengthens the resilience of individuals and communities worldwide in the context of climate change and disasters. Continuing with CEDAW's work, it is important to mention General Recommendation No. 24 [478](hereinafter "Recom. 24"), which reaffirmed the commitment of States Parties to ensure adequate access to water as an essential element for health and the full enjoyment of the right to health. Women and girls are often the most vulnerable to issues concerning the availability, quality, and safety of water. This problem is particularly pronounced in rural areas, impoverished countries, and traditional communities, where

[476] CRC. *General comment No. 26 (2023) on children's rights and the environment, with a special focus on climate change*, 2023. CRC/C/GC/26.
[477]OHCHR. *General comment No. 26 (2023) on children's rights and the environment with a special focus on climate change*. [online], 2023. [viewed 2025-09-07]. Available from: https://www.ohchr.org/en/documents/general-comments-and-recommendations/crccgc26-general-comment-no-26-2023-childrens-rights.
[478] UN Committee on the Elimination of Discrimination Against Women (CEDAW), *CEDAW General Recommendation No. 24: Article 12 of the Convention (Women and Health)*, A/54/38/Rev.1, chap. I, 1999.

some States have yet to fully consider women's rights related to water access, significantly impacting their health status.

IV. The evolution of environmental human rights protection in the jurisprudence of UN quasi-judicial bodies within the Pacific Island States

Given the geographical focus of this paper, the most relevant precedent-setting case is the 2020 decision concerning the impacts of climate change on the right to life - the Teitiota v. New Zealand case.[479] In its decision, the Human Rights Committee (CCPR) had the opportunity to reflect on the applicant's access to drinking water on Kiribati. The Committee noted: *„The Committee also observed the author's statements before the domestic authorities that he faced a serious harm due to the lack of access to potable water on Tarawa, as fresh water supplies had been depleted as a result of saltwater contamination caused by sea level rise."* In this regard, the CCPR cited reports and testimony from climatologist Corcoran, noting that 60% of South Tarawa's residents relied on limited supplies of freshwater provided by public utilities. The Committee concluded that the national authorities had not sufficiently demonstrated that the applicant lacked access to drinking water in Kiribati. While acknowledging the difficulties that limited water access may pose, the CCRP stated that the applicant had failed to provide sufficient information suggesting that the freshwater supply was inaccessible, inadequate, or unsafe in a way that would constitute a foreseeable threat to health, violate the right to a dignified life, or result in unnatural or premature death. Looking at the individual opinion of Committee member Sancin, her dissenting view raises serious concerns about how the applicant's situation, and that of his family, was assessed, especially when it comes to their access to safe drinking water after returning to Kiribati.[480] She argues that the State party didn't prove the family would have reliable access to water that wouldn't pose health risks. She makes the important point that *„drinking water"* isn't

[479] UN CCPR: *Ioane Teitiota v. New Zealand*, CCPR/C/127/D/2728/2016, 2020.
[480] *Ibid.*

necessarily the same as *„safe"* water, especially for children who had never been exposed to the local conditions before.[481] One of her key arguments is that the evidence submitted about water scarcity was never challenged by the State party. In fact, expert reports, including those from the UN, confirmed that Kiribati's water policies were never actually put into practice. Because of this, she argues that it was wrong to put the burden of proof on the applicant. Instead, the State, under its positive obligation, should have demonstrated that returning to Kiribati would not threaten the family's right to life. For all these reasons, she believes the situation was not assessed objectively and disagrees with the CCPR conclusion that there was no violation of Article 6(1) of the Covenant.

Reflecting the above-mentioned *„Climate Advisory Opinion,"* the ICJ has declared the principle of non-refoulement applicable in the context of climate change (adv. op. 378). The ICJ notably pointed to prominent statements in this regard in the Teitiota v. New Zealand case. From now on, asylum authorities will have to consider non-refoulement when examining asylum applications from so-called *„climate migrants."* However, the ICJ does not clearly explain what this principle, which forms part of *ius cogens*, entails in concreto. Judge Aurescu, in his separate opinion, suggests that climate non-refoulement includes positive obligations to take proactive measures to prevent refoulement and to ensure that other rights are respected during individuals' stay in the State's territory. He mentions, inter alia, a duty to conduct individualized risk assessments, an obligation to admit those seeking protection, and to issue temporary residence permits.[482] At a time when asylum laws are being tightened almost everywhere in the world, these statements are important yet politically controversial. They will require further clarification through case law at both the national and international levels. It is important to note, however, that these cases are exceptional primarily because

[481] UN CCPR: *Ioane Teitiota v. New Zealand*, CCPR/C/127/D/2728/2016, 2020. Individual opinion of Committee member Vasilka Sancin.
[482] KELLER H. *Op. cit.14.*

the CCPR explicitly recognized the existence of a link between environmental protection and human rights in the context of individual assessments, drawing upon relevant jurisprudence from regional judicial bodies in its reasoning.

In the context of the CCPR's body of 'environmental jurisprudence', it is also relevant to examine the decision in *Daniel Billy et al. v. Australia (the Torres Strait Islanders complaint)* ".[483] The facts of the case concern a complaint submitted to the CCPR by a group of eight Indigenous inhabitants of the Torres Strait Islands, who are Australian nationals. These individuals come from small, low-lying islands ,Boigu, Poruma, Warraber, and Masig, which form part of Australia's Torres Strait region. The complainants argued that climate change, including severe flooding and rising sea levels, has had a serious negative impact on their traditional way of life, culture, and livelihoods. Flooding has damaged ancestral graves, threatening their spiritual connection to their forebears, while changing weather patterns have degraded the land, reducing access to traditional food sources. The islanders further claimed that the Australian government had failed to take sufficient action to protect their rights against the effects of climate change, particularly in terms of infrastructure adaptation and the reduction of greenhouse gas emissions. The complaint primarily alleges violations of their rights under the International Covenant on Civil and Political Rights, specifically the rights to culture, privacy, and life. [484] In September 2022, the CCPR, acting within its mandate, recognized that Australia had violated the declared rights of the affected Indigenous inhabitants. Among other measures, Australia was obligated to take further action to protect the community, provide compensation, and engage in consultations with local

[483] UN CCPR. *Daniel Billy and others v Australia* (Torres Strait Islanders Petition). CCPR/C/135/D/3624/2019, 2019.
Climate Change Litigation Database. *Petition of Torres Strait Islanders to the United Nations Human Rights Committee alleging violations stemming from Australia's inaction on climate change*. [online]. [viewed 2025-06-22]. Available from::https://climatecasechart.com/non-us-case/petition-of-torres-strait-islanders-to-the-united-nations-human-rights-committee-alleging-violations-stemming-from-australias-inaction-on-climate-change/.

communities to assess their needs. This reflects an evolving *modus operandi* of the CCPR regarding the other *„climate"* cases. The decision marks a significant step in the fight against climate change, highlighting the need for stronger national and international efforts to protect Indigenous communities and their traditional rights.[485] Moreover, CCPR decisions are non-binding and therefore have merely a recommendatory nature, which significantly complicates their enforceability at the national level.

Conclusion

The protection of environmental rights in the Pacific Island States remains an emerging and increasingly important dimension of regional human rights discourse. Pacific leaders have recognized the intrinsic link between environmental sustainability and the realization of fundamental human rights, particularly within the broader framework of sustainable development. Nonetheless, regional mechanisms for enforcing these rights are still in the process of evolving and face considerable legal and institutional challenges. The PIF plays a valuable role in fostering regional cooperation and policy alignment, but more robust legal instruments and implementation strategies may be needed to fully address the unique vulnerabilities of Pacific communities. In the absence of binding regional mechanisms, international human rights bodies such as the UN Treaty Bodies offer important forums for raising awareness and seeking accountability.

The Daniel Billy et al. v. Australia decision serves as a notable example of how international treaty bodies can contribute to the development of environmental rights (even implicitly), particularly by recognizing the lived experiences of Indigenous communities affected by climate change. Although the CCPR's findings are not legally binding, they carry normative weight and reflect a growing recognition of the interdependence between environmental protection and the enjoyment of rights such as life, culture, and privacy. At the same time, it is important to acknowledge that CCPR

and other UN treaty bodies function in an advisory capacity. Their influence depends largely on states' willingness to engage constructively with recommendations. This reality highlights the continued importance of strengthening both national and international frameworks to ensure the effective protection of environmental rights, particularly in vulnerable regions like the Pacific. As climate-related risks intensify, so too must our collective efforts to integrate environmental considerations into the broader human rights agenda.

List of Bibligraphy

CCPR. *Adoption of the General Comment no. 36 on the Right to Life*. [online], 2018. [viewed 2025-09-07]. Available from:: https://ccprcentre.org/ccprpages/adoption-of-the-general-comment-no-36-on-the-right-to-life.

Climate Change Litigation Database. *Petition of Torres Strait Islanders to the United Nations Human Rights Committee alleging violations stemming from Australia's inaction on climate change*. [online]. [viewed 2025-06-22]. Available from::https://climatecasechart.com/non-us-case/petition-of-torres-strait-islanders-to-the-united-nations-human-rights-committee-alleging-violations-stemming-from-australias-inaction-on-climate-change/.

CRC. *General comment No. 26 (2023) on children's rights and the environment, with a special focus on climate change*, 2023. CRC/C/GC/26.

HAAS, M. The Pacific Way: Regional Cooperation in the South Pacific. *New York: Praeger, 1989. American Political Science Review*. [online]. 1990;84(4):1447-1448. [viewed 2025-02-26]. Available from: DOI:10.2307/1963351

ICJ. *Advisory Opinion Obligations of States in respect of Climate Change*. Tladi declaration, para 27.

ICJ. Obligations of States in Respect of Climate Change (Request for Advisory Opinion) *Written statement of the Melanesian Spearhead Group*. 187-20240322-WRI-01-00-EN.

JANKUV, J. Mechanizmy ochrany ľudských environmentálnych práv v medzinárodnom práve verejnom, v práve Európskej únie a v právnom poriadku Slovenskej republiky. 1. vydanie. *Praha: Leges,* 2018, 200 s. ISBN 978-80-7502-309-4.

KELLER H. A Right to a Clean, Healthy and Sustainable Environment: Or Perhaps Not (Yet)?. [online]. *Völkerrechtsblog*, 2025. [viewed 2025-09-02]. Available from: doi: 10.17176/20250806-122339-0.

KNOX, J. H. The Paris Agreement As a Human Rights Treaty. *Human Rights and 21st Century Challenges: Poverty, Conflict, and the Environment*. [online]. Akande et al. eds., Oxford University Press, 2018. [viewed 20-06-2024]. Available from SSRN: https://ssrn.com/abstract=3192106.

LYONS, K. Kiribati to rejoin Pacific Islands Forum at crucial moment for regional diplomacy. In: *The Guardian*. [online], 2023. [viewed 2025-02-26]. Available from: https://www.theguardian.com/world/2023/jan/30/kiribati-to-return-to-pacific-islands-forum-at-vital-moment-for-regional-diplomacy.

MAYER, B. Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law. In: *American Journal of International Law*. [online]- 119(1):153-160, 2025. [viewed 2025-02-17] Available from: doi:10.1017/ajil.2024.63.

NILUFEL O. ICJ Climate Change Advisory Opinion: Noteworthy Trends. *IISD*

OAKMAN, J. et al. State of the Art: The Context of Psychosocial Factors at Work in the Asia Pacific? In: *Psychosocial Factors at Work in the Asia Pacific*. [online]. p. 3-22, 2016. [viewed 2025-02-26]. Available from: DOI:10.1007/978-3-319-44400-0_1.

Obligations of States in respect of Climate Change, 23 July 2025. *Advisory Opinion Obligations of States in respect of Climate Change posed by the General Assembly*. (adv. op. 393).

OHCHR. *General comment No. 26 (2023) on children's rights and the environment with a special focus on climate change*. [online], 2023. [viewed 2025-09-07]. Available from: https://www.ohchr.org/en/documents/general-comments-and-recommendations/crccgc26-general-comment-no-26-2023-childrens-rights.

PERERA, R. The ICJ's Recognition of an Autonomous Right to a Clean and Healthy Environment. *Blog of the European Journal of International Law*. [online], 2025. [viewed 2025-09-06]. Available from: https://www.ejiltalk.org/the-icjs-recognition-of-an-autonomous-right-to-a-clean-and-healthy-environment/

SANCIN,V., JUHART, M.: The Right to Safe Drinking Water in International Law and in Slovenia's legal framework and implementation. In: *Journal of Agriculture and Environmental law*. [online]. 34/2024. 2024. [viewed 17.02.2025]. pp. 111. Available from: https://doi.org/10.21029/JAEL.2023.34.106.

SHIBUYA, E. *The problems and potential of the Pacific Islands Forum*. Asia Pacific Center for Security Studies. pp. 103-106.

UN CCPR: *Ioane Teitiota v. New Zealand*, CCPR/C/127/D/2728/2016, 2020.

UN CCPR: *Ioane Teitiota v. New Zealand*, CCPR/C/127/D/2728/2016, 2020. Individual opinion of Committee member Vasilka Sancin.

UN CCPR. *Daniel Billy and others v Australia* (Torres Strait Islanders Petition). CCPR/C/135/D/3624/2019, 2019.

UN Committee on the Elimination of Discrimination Against Women (CEDAW), *CEDAW General Recommendation No. 24: Article 12 of the Convention (Women and Health)*, A/54/38/Rev.1, chap. I, 1999.

UN Economic and Social Council, *General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12 of the Covenant)*, E/C.12/2000/4, UN Committee on Economic, Social and Cultural Rights (CESCR). 2000.

UN Economic and Social Council, *General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant)*, E/C.12/2002/11, UN Committee on Economic, Social and Cultural Rights (CESCR), 2003.

UN GA. *Convention on the Elimination of All Forms of Discrimination Against Women, United Nations, Treaty Series*. vol. 1249, 1979.

UN GA. *Convention on the Rights of the Child, United Nations, Treaty Series*. vol. 1577, 1989.

UN General Assembly. *Convention on the Rights of Persons with Disabilities*. Resolution adopted by the General Assembly A/RES/61/106, 2007.

UN Human Rights Committee (HRC), *General comment no. 36, Article 6 (Right to Life)*, CCPR/C/GC/35, 2019.

UN, ESCAP. *Population Data Sheet*. [online]. [viewed 02-26-2025] 2003. Available from: http://www.unescap.org/pop/data_sheet/2003/index.asp.

UN. *Vienna Convention on the Law of Treaties, United Nations, Treaty Series*, vol. 1155, 1969.

World Meteorological Organization (WMO). *State of the Climate in South-West Pacific 2023 Report*, 2023, WMO-No. 1356, pp. 3-20, ISBN 978-92-63-11356-9.

4.2. The Child's Right to a Healthy Environment in International Law – From Soft Law to Justiciable Rights

Doc. JUDr. PhDr. Lilla Garayová, PhD. LL.M.

Pan-European University

garay.lilla@gmail.com

Introduction

A healthy environment is essential for the realization of children's fundamental rights. For decades, international declarations and policies have talked about the importance of environmental protection for future generations, but the actual implementation of these provisions is limited to this day. We are in midst of an environmental crisis, that is not limited to one single country and cannot be confined within state borders. It is a planetary environmental crisis – from biodiversity loss to climate change and severe pollution. In these times, it is even more pressing to move the child's right from soft law statements to justiciable rights enforceable in courts. Children are the most vulnerable to environmental harm – because they suffer from heightened physical impact[486] and also, they will have to suffer from the consequences of environmental degradation for the longest.

The UN Committee on the Rights of the Child warned in 2023 that the environmental crisis poses *"an urgent and systemic threat to children's rights globally,"*[487] and stressed that governments around the world should take immediate action to protect children from these harms.

This study will provide a doctrinal analysis of how international law has evolved to recognize children's environmental rights. It

[486] UNICEF. Children face unique vulnerabilities to environmental hazards at every stage of life: Fragile Beginnings. February 2025.

[487] UN Committee on the Rights of the Child. CRC/C/GC/26: General Comment No. 26 (2023) on children's rights and the environment with a special focus on climate change. 22 August 2023.

focuses on key international treaties and soft law instruments, and also examines jurisprudence from regional, national and international courts to see how they interact with the child's right to a healthy environment. We primarily focus on recent decisions that test the justiciability of climate and environmental claims brought by youth. In the conclusion we will offer de lege ferenda proposals to strengthen the child's right to a healthy environment and its real-world implementation.

1. International Framework for Children's Environmental Rights

The UN Convention on the Rights of the Child (UNCRC)[488] does not explicitly include a right to a healthy environment. It does have some environmental dimensions. For example, in its Article 24 on the right to health it obliges State Parties to combat malnutrition and disease *"through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution."*[489] While there is no mention of a right to a healthy environment per se, the inclusion of this provision foreshadowed the idea, that a safe, pollution-free environment is essential for the fulfilment of the child's right to health.

The UNCRC also guarantees the right to life, survival and development (Article 6), the right to an adequate standard of living (Article 27), the right to education (Article 28), and a whole array of other rights – all of which can be undermined by severe environmental degradation or climate change.

The core principles of the UNCRC can also be applied here. Under Article 3, the best interests of the child must be a primary consideration in all actions concerning children. This of course includes policymaking on environmental issues. Under Article 12, children have the right to be heard in all matters affecting them.

---

[488] United Nations. Convention on the Rights of the Child. New York, 20 November 1989. United Nations, Treaty Series, vol. 1577, p. 3.
[489] Convention on the Rights of the Child. New York, 20 November 1989. United Nations, Treaty Series, vol. 1577, p. 3, art. 24(c).

This provides a basis for child participation in environmental decision-making.

Looking at the UNCRC as a whole, we can find implied obligations – that states must take reasonable measures to prevent environmental harm that would impair the rights of the child. Similarly, the African Charter on the Rights and Welfare of the Child (ACRWC)[490] does not contain the right to a healthy environment explicitly, but just like the UNCRC, it emphasizes children's rights to life, health, and development, specifically in the African context.

Although it is not a children's rights treaty, we need to mention the Paris Agreement on climate change,[491] because it recognizes the relevance of human rights to climate action. Its Preamble calls on parties to *"respect, promote and consider their respective obligations on human rights, the right to health, [and] the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations … as well as gender equality, empowerment of women and intergenerational equity".*[492] This clearly means that climate measures should be implemented consistent with states' duties to protect children. It also includes intergenerational equity as a guiding principle – which means that when addressing climate change or environmental concerns, the rights of future generations (today's and tomorrow's children) need to be a key consideration. While it is not a children's rights treaty, it has been referenced in courts in children's climate litigation.

Children also benefit from general environmental rights instruments. The UNECE Aarhus Convention (1998)[493]

---

[490] Organization of African Unity. African Charter on the Rights and Welfare of the Child. Addis Ababa, 11 July 1990, OAU Doc. CAB/LEG/24.9/49 (1990), entered into force 29 November 1999.
[491] United Nations. Paris Agreement. Paris, 12 December 2015. United Nations, Treaty Series, vol. 3156, p. 3. Entered into force 4 November 2016.
[492] Paris Agreement. Paris, 12 December 2015, United Nations, Treaty Series, vol. 3156, p. 3, entered into force 4 November 2016, Preamble.
[493] United Nations Economic Commission for Europe. Convention on Access to Information, Public Participation in Decision-making and Access to Justice in

guarantees the rights of every person – including children – to access environmental information, participate in decision-making, and seek justice for environmental harm. While it does not single out minors, the Aarhus Convention's implementation has increasingly considered how to involve children in environmental governance.[494] This aligns with the child's right to be heard, as included in Article 12 of the UNCRC.[495] The Convention's emphasis on access to justice has aided some youth-led cases, but there are still many barriers for direct child participation under the Aarhus procedures and children still engage via civil society, NGO or youth organizations.

Early international policy documents used to treat children and their right to a healthy environment more as an ethical or moral imperative, not a legal claim. For example, the 1992 Rio Declaration on Environment and Development stated that *"the creativity, ideals and courage of the youth of the world should be mobilized"* for sustainable development (Principle 21) – but does not call it an enforceable right.[496]

Over time, consensus grew that a healthy environment is precondition for all human rights, including children's rights. As a result, in 2016, the Committee on the Rights of the Child devoted a Day of General Discussion to children's rights and the environment.[497] During the DGD they have acknowledged the gap in guidance. The turning point came in the 2020s. In October

---

Environmental Matters (Aarhus Convention). Aarhus, 25 June 1998. United Nations, Treaty Series, vol. 2161, p. 447. Entered into force 30 October 2001.

[494]MARTINS, Margarida – SILK, Ruby – PAGLIARUSCO, Emma. Our Right to Be Heard: How the Aarhus Convention Can Open Its Doors to Youth," Yeenet, 2024, accessed 27 September 2025, https://yeenet.eu/our-right-to-be-heard-how-the-aarhus-convention-can-open-its-doors-to-youth/

[495] Convention on the Rights of the Child. New York, 20 November 1989. United Nations, Treaty Series, vol. 1577, p. 3, art. 12.

[496] United Nations. Rio Declaration on Environment and Development. Rio de Janeiro, 14 June 1992. UN Doc. A/CONF.151/26 (Vol. I).

[497] UN Committee on the Rights of the Child – Child Rights Connect. Concept Note – 2016 Day of General Discussion: Children's Rights and the Environment. Geneva, 23 September 2016. 6 pp. Accessed 27 September 2025. https://www.childrightsconnect.org/wp-content/uploads/2016/06/ConceptNoteDGD2016.pdf

2021, the UN Human Rights Council recognized for the first time that having a clean, healthy and sustainable environment is a human right (Res. 48/13).[498] This was followed by UN General Assembly Resolution 76/300 (July 2022), which declared the right to a healthy environment to be universal.[499] Of course, these resolutions are non-binding, but they still have a very important solidifying effect. Even the UN Committee on the Rights of the Child has affirmed in its subsequent work that the right to a healthy environment is *"necessary for the full enjoyment of a broad range of children's rights".*[500] This way general environmental rights are linked to the specific entitlements of children.[501]

The Committee went a step further in 2023, when they issued General Comment No. 26 on children's rights and the environment with a special focus on climate change.[502] General Comment 26 (GC26) represents a major soft law milestone. It is a comprehensive interpretative guidance on how the child's right to a healthy environment should be understood and interpreted under the UNCRC. It states that environmental degradation and climate change *"negatively impact the enjoyment of all children's rights"* and calls on states to undertake child-specific measures to address this threat.[503]

---

[498] United Nations Human Rights Council. Resolution 48/13: The human right to a clean, healthy and sustainable environment. A/HRC/RES/48/13, 8 October 2021.
[499] United Nations General Assembly. Resolution 76/300: The human right to a clean, healthy and sustainable environment. A/RES/76/300, 28 July 2022.
[500] CRC/C/GC/26: General Comment No. 26 (2023) on children's rights and the environment with a special focus on climate change, UN Committee on the Rights of the Child, 22 August 2023, I.A, § 8.
[501] TIGRE, Maria Antonia – ILIOPOULOS, Asteropi. "Climate Litigation and Children's Rights: Unpacking the CRC's New General Comment." Climate Law Blog, 7 September 2023, accessed 27 September 2025, https://blogs.law.columbia.edu/climatechange/2023/09/07/climate-litigation-and-childrens-rights-unpacking-the-crcs-new-general-comment/
[502] United Nations Committee on the Rights of the Child. CRC/C/GC/26: General Comment No. 26 (2023) on children's rights and the environment with a special focus on climate change. 22 August 2023.
[503] CRC/C/GC/26: General Comment No. 26 (2023) on children's rights and the environment with a special focus on climate change, UN Committee on the Rights of the Child, 22 August 2023, paras. 16–17, 59. (States must take "deliberate,

GC26 touches on substantive obligations. For example, states must ensure a safe climate and environment as part of fulfilling children's rights to life, health, an adequate standard of living, etc., and recognize the right to a clean, healthy and sustainable environment. It also includes procedural rights, by stating that children have the right to information, participation and access to remedies in environmental matters (in line with Aarhus principles, CRC Arts. 12, 13, 17). The Committee also stressed removing barriers to justice – which means allowing children to access courts or other remedies for environmental harm. GC26 very strongly advocated for child participation. The process of realizing environmental rights must be inclusive of children's voices. GC26 also includes the principle of intergenerational equity. This allows states to account for the rights and interests of future children and to apply the precautionary principle to protect against serious or irreversible environmental harm that will mostly affect the coming generations. It is worth noting that GC26 is not a binding law, but it is an authoritative interpretation of the right to a healthy environment under the UNCRC. So it is in essence a blueprint for governments, advocates and courts.

Other soft law instruments exist as well. For example, the UN Special Rapporteur on Human Rights and the Environment has issued reports highlighting child-specific environmental harms and calling for child-sensitive climate policies. In 2018 the then Special Rapporteur on the issue of human rights obligations relating to the environment released a report very much focused on the environment and how it affects children's rights.[504] The report states that environmental harm and climate change interfere with the enjoyment by children of their rights to life, health, adequate standard of living, development, play, and participation. It also identifies a duty. That is for States to adopt child-sensitive measures: for example, environmental education,

concrete and targeted measures" to protect children's rights against environmental harm).

[504] KNOX, John H. Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Children's Rights. A/HRC/37/58, 24 January 2018.

children's participation in decision-making, impact assessments with child-sensitive indicators, and access to remedy mechanisms.

In 2021 the UNICEF published a report titled The Climate Crisis Is a Child Rights Crisis, in which they introduced the Children's Climate Risk Index (CCRI).[505] The report urges governments to act in line with their UNCRC obligations to protect children's rights in the are of climate change. It states *"The global failure to confront the climate crisis … has created a child rights crisis. It is jeopardizing every child's fundamental right to health and well-being."*[506]

All of the above mentioned developments (be it soft law or hard law) have contributed to a seismic shift – viewing children's right to a healthy environment, not simply as a moral imperative, but an emerging norm of international law.

2. Children's Climate Rights and the Evolving Case Law

Before we take a closer look at the case law itself, it is important to touch on one thing. And that is why do children merit special protection in environmental matters. The disproportionate impact of environmental harm on children has been very well-documented for years. First of all, physiologically, children are less able to withstand air and water pollution, extreme heat, or vector-borne diseases that climate change worsens.[507] They are still developing, which means they are more susceptible to toxins and trauma.[508] Second of all, from a psychological and social perspective, children depend on stable environments and adult care. Their environment, their caregivers and care itself are often disrupted by climate

[505] UNICEF. The Climate Crisis Is a Child Rights Crisis: Introducing the Children's Climate Risk Index. New York, August 2021. ISBN 978-92-806-5276-5.
[506] Ibid.
[507] PERERA, Frederica – NADEAU, Kari. "Climate Change, Fossil-Fuel Pollution, and Children's Health." New England Journal of Medicine, 2022, vol. 386(24), pp. 2303-2314. doi:10.1056/NEJMra2117706.
[508] SHEFFIELD, Perry E. – LANDRIGAN, Philip J. "Global Climate Change and Children's Health: Threats and Strategies for Prevention." Environmental Health Perspectives, 2011, vol. 119(3), pp. 291-298, doi:10.1289/ehp.1002233.

disasters (from floods displacing families to crop failures causing malnutrition). Thirdly, economically, children generally have no assets or income, making them more vulnerable to deprivation caused by ecosystem collapse. And last of all, children and young people will simply live far longer, so the consequences of today's unsustainable practices will affect them for a longer period of time. A scientific study found that a child born in 2020 may face a sevenfold increase in climate-related extreme events over their lifetime compared to someone born in 1960.[509] In real terms, UNICEF estimates one billion children live in countries at extremely high risk from the climate crisis, with millions already displaced by weather disasters – 20,000 child displacements every single day in recent years.[510] These numbers are absolutely astounding. But beyond their shock factor, they help ground the legal case that children have a distinct right to protection from environmental harm. Courts and human rights bodies have begun to recognize this in their decisions. In recent years we have seen a change in how courts view children – shifting from viewing them as passive victims to seeing them as rights-holders and even protagonists in environmental litigation.

One of the first cases that dealt with children's environmental rights was a case from the Philippines, *Minors Oposa vs. Factoran.*[511] The case was brought by a group of forty-five children, who represented themselves and also the generations yet to be born, and The Philippine Ecological Network, Inc. They primarily sued to stop destructive deforestation on the basis of their fundamental constitutional right to a balanced and healthful. Their action was however dismissed at lower court which they appealed to the Supreme Court of the Philippines. The Supreme Court first

[509] THIERY, Wim – et al. "Intergenerational Inequities in Exposure to Climate Extremes." Science, 2021, vol. 374(6564), pp. 158-160. doi:10.1126/science.abi7339.
[510] UNICEF. Children Displaced in a Changing Climate: Preparing for a Future Already Underway. New York, October 2023, accessed 28 September 2025, https://www.unicef.org/media/145951/file/Climate%20displacement%20report%20%28English%29.pdf
[511] Supreme Court of the Philippines. Minors Oposa v. Factoran. G.R. No. 101083, 30 July 1993.

had to decide about their standing, which it upheld – including on behalf of future generations, meaning they recognized the principle of intergenerational responsibility. The Supreme Court proclaimed that *"every generation has a responsibility to the next to preserve [the environment]".*[512] On page 7 of the decision the Court states the following: *"This case, however, has a special and novel element. Petitioners minors assert that they represent their generation as well as generations yet unborn. We find no difficulty in ruling that they can, for themselves, for others of their generation and for the succeeding generations, file a class suit. Their personality to sue in behalf of the succeeding generations can only be based on the concept of intergenerational responsibility insofar as the right to a balanced and healthful ecology is concerned. Such a right, as hereinafter expounded, considers the "rhythm and harmony of nature." Nature means the created world in its entirety."*[513] The Court stated in the decision that the right to a balanced and healthful ecology was a fundamental right and that it was assumed to exist from the inception of humankind. Most importantly, the court found in favour of the applicants, and held that children could enforce this principle judicially. This meant recognizing a justiciable right to a healthy environment for present and future children. While the Oposa judgment was a domestic one, it had a global impact. It laid a foundation for subsequent climate cases and it has been cited in legal scholarship and by environmental tribunals as well. To this day it serves as an early example of children's environmental rights enforcement.

We have seen a continued trend over the last few years. Many cases initiated by children or on their behalf have reached the courts. These cases truly test the adequacy of existing human rights law to address global ecological threats. In *Sacchi et al. v. Argentina et al.*[514] 16 children from around the world brought a collective communication to the Committee on the Rights of the

[512] Ibid.
[513] Ibid.
[514] United Nations Committee on the Rights of the Child. Sacchi et al. v. Argentina et al. Communication No. 104/2019, Decision on Admissibility, 22 September 2021, CRC/C/88/D/104/2019.

Child under the UNCRC's Third Optional Protocol (OPIC).[515] OPIC has created a new avenue of accountability for child rights violations. It allows children to submit individual complaints to the Committee on the Rights of the Child, which is one of the most important developments in children's rights protection since the adoption of the UNCRC in 1989. In the Sacchi case the children alleged that five respondent states (Argentina, Brazil, France, Germany, Turkey) had violated children's rights by insufficient action on climate change.[516] Their failure to reduce emissions led to foreseeable human rights harms. This was the first climate case before the Committee. In 2021, the Committee dismissed the petition on admissibility grounds, finding that the young claimants had not exhausted domestic remedies in the respondent countries under Article 7(e) of the OPIC.[517] The exhaustion of domestic remedies rule is present in other international complaints procedures as well, which is a demonstration of state sovereignty. However, for children, this requirement can be a significant hurdle. Children often face obstacles in accessing courts or administrative remedies – they may lack legal standing due to age, lack financial resources for litigation, or be dependent on adults who are unwilling to sue. From the wording it is clear, that the Committee can waive strict exhaustion if domestic remedies are unreasonably prolonged or unlikely to bring effective relief. While the Committee in the Sacchi case found the communication to be inadmissible, it was not a defeat for the movement itself. The Committee's reasoning was important in establishing that climate change can fall within human rights jurisdiction. The Committee stated that States bear responsibility for extraterritorial impacts of emissions

[515] United Nations. Optional Protocol to the Convention on the Rights of the Child on a Communications Procedure. New York, 19 December 2011. United Nations, Treaty Series, vol. 2983, p. 3. Entered into force 14 April 2014.
[516] TIGRE, Maria Antonia – ILIOPOULOS, Asteropi. "Climate Litigation and Children's Rights: Unpacking the CRC's New General Comment." Climate Law Blog, 7 September 2023. Accessed 28 September 2025. https://blogs.law.columbia.edu/climatechange/2023/09/07/climate-litigation-and-childrens-rights-unpacking-the-crcs-new-general-comment/
[517] United Nations Committee on the Rights of the Child. Sacchi et al. v. Argentina et al. Communication No. 104/2019, Decision on Admissibility, 22 September 2021, CRC/C/88/D/104/2019.

– i.e. a country can be held accountable under the CRC for carbon pollution that contributes to harming children beyond its borders. They also emphasised that climate harm to children was not an abstract future problem but a real and foreseeable threat backed by scientific evidence. The case was significant from a children's right perspective, also because it introduced child-friendly proceedings. The Committee invited the children to an oral hearing. They were allowed to voice how climate change affected their lives. In its decision the Committee recognized the linkage between environmental protection and children's rights to life, health, and development. This decision was published before the existence of GC26 and very importantly it was a milestone leading to GC26. In this case the Committee effectively acknowledged a child's right to a healthy environment within the UNCRC framework.

In a parallel effort in Europe, *Duarte Agostinho and Others v. 33 States*[518] six Portuguese children (aged 8 to 21) lodged a complaint with the European Court of Human Rights (ECtHR) against 33 Council of Europe member states. They argued that these governments' collective failure to enact adequate climate mitigation measures violated the children's rights to life (ECHR Article 2), private/family life (Article 8), and freedom from discrimination (Article 14).[519] The children described specific climate impacts they were suffering (extreme heat, wildfires in Portugal) and contended that as young people they would endure worsening harms in the future. On 30 November 2020, the European Court of Human Rights expedited the case and communicated it to 33 respondent states, requesting their submissions by the end of February 2021. The case attracted extensive third-party interventions, from the Council of Europe Commissioner for Human Rights to child rights NGOs. In

[518] European Court of Human Rights. Duarte Agostinho and Others v. 33 States. Applications Nos. 39371/20 and others, Grand Chamber, Judgment of 9 April 2024.

[519] Council of Europe. Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights, ECHR). Rome, 4 November 1950. European Treaty Series No. 5. Entered into force 3 September 1953.

September of 2023, the Court held a hearing. On April 9, 2024, in a much-anticipated decision, the Grand Chamber declared the application inadmissible. Regarding extraterritorial jurisdiction, the Court held that there were no grounds to extend its judicial application as argued by the applicants. Consequently, territorial jurisdiction was recognized only in relation to Portugal. However, since the applicants had not exhausted domestic remedies in Portugal, the complaint against Portugal was also found inadmissible. Despite this outcome, the case itself managed to advance the law. This case, together with the *KlimaSeniorinnen v Switzerland* case,[520] were the first climate related cases based on human rights to be heard by the ECtHR.[521] The case confirmed that if ruled admissible, the Court will consider climate cases under the European Convention on Human Rights.

Outside Europe, the Inter-American human rights bodies have also dealt with the question of environmental rights that implicitly benefit children. In 2017, the Inter-American Court of Human Rights issued Advisory Opinion OC-23/17.[522] This advisory opinion was important, because it pronounced the right to a healthy environment as a fundamental human right. The Court recognized states' obligations to current and future generations in environmental protection.

The ICJ Advisory Opinion on Climate Change[523] is also changing the scene and will likely erode justiciability barriers in the future. It was requested by the UN to clarify states' obligations to protect the

[520] European Court of Human Rights. Verein KlimaSeniorinnen Schweiz and Others v. Switzerland. Application No. 53600/20, Grand Chamber, Judgment of 9 April 2024.
[521] On the very same day, the ECtHR issued a separate Grand Chamber ruling in Verein KlimaSeniorinnen v. Switzerland – concerning elderly Swiss women suing over heatwave deaths. The Court in Klimaseniorinnen found Switzerland's inadequate climate policy did violate the applicants' right to respect for private and family life (Article 8 ECHR), becoming the first international court to find a State in breach of human rights for climate inaction.
[522] Inter-American Court of Human Rights. Advisory Opinion OC-23/17, Environment and Human Rights. 15 November 2017, requested by the Republic of Colombia.
[523] International Court of Justice. Obligations of States in respect of climate change, Advisory Opinion, 23 July 2025.

climate for present and future generations. The ICJ unanimously concluded that states have binding duties under international law to prevent significant environmental harm and must protect the climate system for the benefit of present and future generations. It stressed that no state can escape responsibility and that failure to act with due diligence could entail legal consequences. The ICJ stated that customary international law requires states to adopt preventive and precautionary measures to avoid climate harm. This has to be done through various means – including the regulation of private actors.

At the national level, courts around the world have seen a surge of lawsuits by children and youth seeking to enforce climate and environmental rights. These cases often rely on constitutional rights to life, health, environment, or statutory duties, and many explicitly frame the issue as protecting the interests of the younger generation. The outcomes have been mixed, but an increasing number of courts have ruled in favour of young plaintiffs. We can clearly see an emerging body of jurisprudence. Each case – whether domestic or international – contributes to this body. Each case incrementally develops the legal toolkit for protecting children's environmental rights. Each case gives concrete content to a once abstract notion of a child's right to a healthy environment.

3. Future Directions and Reflections

Despite all the success outlined in the previous section, we have to mention that the formal legal architecture for protecting children's environmental rights is still underdeveloped. In this section we will explore some de lege ferenda proposals – for the law as it ought to be.

One potential future direction is to codify what is now emerging in soft law into binding law. For instance, drafting an Optional Protocol to the UNCRC on Environmental Rights could be considered. As we mentioned above, the UNCRC does not explicitly outline environmental rights, but the interpretation of the Committee is that it is fully applicable to children's environmental rights as well. Having a dedicated optional protocol to the UNCRC

would mean explicitly recognizing every child's right to a safe, clean, healthy and sustainable environment. It could also strengthen procedural rights - requiring states to offer child-friendly environmental education, access to information, and effective remedies (e.g. ombudspersons for future generations[524] or youth complaint mechanisms at national levels). While treaty processes are slow, the near-universal acceptance of the CRC could ease consensus on this addition.

At the domestic level, laws and constitutions could explicitly integrate children's rights into environmental governance. One concrete step would be to enact legislation that would mandate a child rights impact assessment for any environmental or climate policy. Just as some countries require environmental impact assessments, a child-focused impact assessment would evaluate how proposed projects or laws affect children's health, development, and futures. Another approach is through constitutional reform. Many national constitutions now include environmental rights, but few mention future generations or children specifically. Including provisions that guarantee the rights of future children or imposes a duty of the state as a fiduciary for future citizens could be transformative. This already exists in some countries - Norway is a great example. Article 112 of the Norwegian Constitution states that *"Every person has the right to an environment that is conducive to health and to a natural environment whose productivity and diversity are maintained. Natural resources shall be managed on the basis of comprehensive long-term considerations which will safeguard this right for future generations as well."*[525] Hungary is another example, in its Constitution, the Fundamental Law of Hungary Article P on natural resources states the following *"Natural resources, in particular*

[524] This institute currently exists in Hungary. It is a Deputy Commissioner for Fundamental Rights, tasked with protecting the interests of future generations, mainly focusing on environmental issues and the preservation of the nation's common heritage. The current Ombudsman is Professor Gyula Bándi, who was re-elected for a 2023-2029 term and has extensive experience in environmental law.
[525] Constitution of the Kingdom of Norway (Grunnloven) of 17 May 1814, Lovdata. Official English Translation.

agricultural land, forests and the reserves of water, biodiversity and cultural assets, shall form the nation's common heritage; the State and every person shall be obliged to protect, sustain and preserve them for future generations."[526] Hungary even created the office of the Parliamentary Commissioner for Future Generations, established in 2008. After the Fundamental Law came into force in 2012, this office was integrated into the broader Office of the Commissioner for Fundamental Rights, with a Deputy Commissioner specifically responsible for future generations.

Removing practical barriers for child litigants is also essential. States should implement the recommendations of UNCRC General Comment No. 26 to ensure effective access to remedies. Procedural hurdles should be removed or lowered – for example by lowering court fees for youth plaintiffs or creating expedited procedures when a claim involves potential irreparable harm to children. Internationally, expanding avenues like the UNCRC communication procedure (OPIC) and ensuring their child-friendly operation is critical. Here the faster handling of climate related complaints would help immensely. Or even the non-exhaustion of domestic remedies rule, which impacts admissibility – it should be applied in a child-sensitive manner.

Law reforms should also guarantee that children have a seat at the table in environmental decision-making. This could mean youth quotas or advisory councils in climate bodies, integration of youth delegates in national delegations to climate negotiations, and locally, inclusion of students and children in community environmental planning. A right to environmental education is another critical step. Making environmental and climate literacy part of the mandatory curriculum could be a step toward the right direction (as GC26 suggests, linking Article 29 CRC on education to sustainability).

Philosopher Hannah Arendt wrote that education is where we decide whether we *"love the world enough to assume responsibility*

[526] Fundamental Law of Hungary (Alaptörvény). Ministry of Justice, 25 April 2011, amended by subsequent amendments.

for it"[527] – meaning the responsibility to preserve the world's goodness for our children. This ethic of *amor mundi* (love of the world) resonates deeply in the context of environmental stewardship. Every legal victory for children's environmental rights is an act of love and responsibility by the present generation towards the next. Laws alone are not enough. We need an ethos that respects children's environmental rights.

Finally, it is worth noting the potential impact of the ICJ's Advisory Opinion requested by the UN General Assembly on climate obligations. The very question put to the ICJ explicitly mentioned *"for States and for present and future generations"*, making it clear that the questions were inherently about intergenerational duties. The ICJ's opinion (issued July 2025) did not disappoint.[528] It affirmed that states have obligations under multiple areas of international law (climate treaties, human rights law, environmental law) to protect the climate system, and that breaching these duties could incur responsibility to other states, affected peoples, and individuals of present and future generations. Philosopher Hans Jonas, in his Principle of Responsibility, argued that our ethical duties extend into the future because of the power of our technological society to destroy that future.[529] This principle now finds resonance in courts recognizing duties to future children. Much remains to be done to fully realize this right everywhere, but the trajectory is set. In bearing witness to this transformation, one cannot help but feel a cautious optimism that our legal systems are rediscovering a fundamental truth: the well-being of our children and the well-being of our planet are one and the same.

[527] ARENDT, Hannah. The Crisis in Education. In: ARENDT, Hannah. Between Past and Future: Eight Exercises in Political Thought. New York: Viking Press, 1961, p. 193.
[528] International Court of Justice. Obligations of States in respect of climate change, Advisory Opinion, 23 July 2025.
[529] JONAS, Hans. Das Prinzip Verantwortung. Versuch einer Ethik für die technologische Zivilisation. Frankfurt am Main: Insel, 1979.

Conclusion

In international law, the concept of a child's right to a healthy environment has undergone major changes in the past few years. This study surveyed these changes. Instruments like the UNCRC – while not originally explicit on environmental rights – have been reinterpreted to impose clear duties on states to address climate change, pollution, and ecological harm as part of fulfilling children's rights. Global agreements, like the Paris Climate Agreement, acknowledge children and intergenerational equity, meaning that today's youth and future generations hold legitimate legal interests in environmental protection.

The paper examined a range of recent jurisprudence, which is an emerging body of work. The cases explored in this paper are all contributing to transitioning environmental rights from principle to practice. We are seeing this happen at the level of international and regional bodies (UN Committee on the Rights of the Child in Sacchi; European Court of Human Rights in Klimaseniorinnen; the Inter-American system; and even the ICJ via its climate advisory opinion). At the national level, courts in various jurisdictions have delivered decisions recognizing that government inaction on climate or environmental degradation violates the rights of children. Children suffer disproportionate harm from environmental hazards and will live to see the worst impacts of climate change. The jurisprudence acknowledges these vulnerabilities, whether in the form of judicial dicta about irreversible burdens on the young or the acceptance of precautionary principles to protect future children's rights.

The study also touched on Central European perspectives, noting that while countries like Slovakia, Hungary, and Czechia have fewer high-profile youth climate cases, their legal frameworks (often with constitutional environmental rights) and civil society activism are gradually aligning with the broader trend.

The child's right to a healthy environment is gaining traction as a justiciable right – one that children can invoke in court to seek remedies. The soft law is hardening. We have explored the UN

resolutions declaring a healthy environment a human right, and General Comment 26 guiding states on implementation. As de lege ferenda proposals, the paper suggested formalizing these gains through new legal instruments or amendments (e.g. an optional protocol on environmental rights), improving access to justice for children, and embedding child rights in climate governance at all levels. The ethical dimension is clear - how we respond to the environmental crisis now defines the very concept of justice between generations. The trajectory in law and jurisprudence gives reason for hope. We see a growing recognition of the fact, that ensuring a liveable planet for children is an enforceable duty today, and it is the key to environmentally just future. What we need besides stronger legal frameworks, courts willing to explore the right to a healthy environment is the ethos of *amor mundi* - a commitment to love the world enough to preserve it for those to come.

List of Bibliography

ARENDT, Hannah. The Crisis in Education. In: ARENDT, Hannah. Between Past and Future: Eight Exercises in Political Thought. New York: Viking Press, 1961, p. 193.

Constitution of the Kingdom of Norway (Grunnloven) of 17 May 1814, Lovdata. Official English Translation.

Council of Europe. Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights, ECHR). Rome, 4 November 1950. European Treaty Series No. 5. Entered into force 3 September 1953.

CRC/C/GC/26: General Comment No. 26 (2023) on children's rights and the environment with a special focus on climate change, UN Committee on the Rights of the Child, 22 August 2023, I.A, § 8.

European Court of Human Rights. Duarte Agostinho and Others v. 33 States. Applications Nos. 39371/20 and others, Grand Chamber, Judgment of 9 April 2024.

European Court of Human Rights. Verein KlimaSeniorinnen Schweiz and Others v. Switzerland. Application No. 53600/20, Grand Chamber, Judgment of 9 April 2024.

Fundamental Law of Hungary (Alaptörvény). Ministry of Justice, 25 April 2011, amended by subsequent amendments.

Inter-American Court of Human Rights. Advisory Opinion OC-23/17, Environment and Human Rights. 15 November 2017, requested by the Republic of Colombia.

International Court of Justice. Obligations of States in respect of climate change, Advisory Opinion, 23 July 2025.

JONAS, Hans. Das Prinzip Verantwortung. Versuch einer Ethik für die technologische Zivilisation. Frankfurt am Main: Insel, 1979.

KNOX, John H. Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Children's Rights. A/HRC/37/58, 24 January 2018.

MARTINS, Margarida – SILK, Ruby – PAGLIARUSCO, Emma. Our Right to Be Heard: How the Aarhus Convention Can Open Its Doors to Youth," Yeenet, 2024, accessed 27 September 2025, https://yeenet.eu/our-right-to-be-heard-how-the-aarhus-convention-can-open-its-doors-to-youth/

Organization of African Unity. African Charter on the Rights and Welfare of the Child. Addis Ababa, 11 July 1990, OAU Doc. CAB/LEG/24.9/49 (1990), entered into force 29 November 1999.

Paris Agreement. Paris, 12 December 2015, United Nations, Treaty Series, vol. 3156, p. 3, entered into force 4 November 2016, Preamble.

PERERA, Frederica – NADEAU, Kari. "Climate Change, Fossil-Fuel Pollution, and Children's Health." New England Journal of Medicine, 2022, vol. 386(24), pp. 2303-2314. doi:10.1056/NEJMra2117706.

SHEFFIELD, Perry E. – LANDRIGAN, Philip J. “Global Climate Change and Children’s Health: Threats and Strategies for Prevention.” Environmental Health Perspectives, 2011, vol. 119(3), pp. 291-298, doi:10.1289/ehp.1002233.

Supreme Court of the Philippines. Minors Oposa v. Factoran. G.R. No. 101083, 30 July 1993.

THIERY, Wim – et al. “Intergenerational Inequities in Exposure to Climate Extremes.” Science, 2021, vol. 374(6564), pp. 158-160. doi:10.1126/science.abi7339.

TIGRE, Maria Antonia – ILIOPOULOS, Asteropi. “Climate Litigation and Children’s Rights: Unpacking the CRC’s New General Comment.” Climate Law Blog, 7 September 2023, accessed 27 September 2025, https://blogs.law.columbia.edu/climatechange/2023/09/07/climate-litigation-and-childrens-rights-unpacking-the-crcs-new-general-comment/

UN Committee on the Rights of the Child – Child Rights Connect. Concept Note – 2016 Day of General Discussion: Children’s Rights and the Environment. Geneva, 23 September 2016. 6 pp. Accessed 27 September 2025. https://www.childrightsconnect.org/wp-content/uploads/2016/06/ConceptNoteDGD2016.pdf

UNICEF. Children Displaced in a Changing Climate: Preparing for a Future Already Underway. New York, October 2023, accessed 28 September 2025, https://www.unicef.org/media/145951/file/Climate%20displacement%20report%20%28English%29.pdf

UNICEF. Children face unique vulnerabilities to environmental hazards at every stage of life: Fragile Beginnings. February 2025.

UNICEF. The Climate Crisis Is a Child Rights Crisis: Introducing the Children’s Climate Risk Index. New York, August 2021. ISBN 978-92-806-5276-5.

United Nations Committee on the Rights of the Child. CRC/C/GC/26: General Comment No. 26 (2023) on children's rights and the environment with a special focus on climate change. 22 August 2023.

United Nations Committee on the Rights of the Child. Sacchi et al. v. Argentina et al. Communication No. 104/2019, Decision on Admissibility, 22 September 2021, CRC/C/88/D/104/2019.

United Nations Economic Commission for Europe. Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention). Aarhus, 25 June 1998. United Nations, Treaty Series, vol. 2161, p. 447. Entered into force 30 October 2001.

United Nations General Assembly. Resolution 76/300: The human right to a clean, healthy and sustainable environment. A/RES/76/300, 28 July 2022.

United Nations Human Rights Council. Resolution 48/13: The human right to a clean, healthy and sustainable environment. A/HRC/RES/48/13, 8 October 2021.

United Nations. Convention on the Rights of the Child. New York, 20 November 1989. United Nations, Treaty Series, vol. 1577, p. 3.

United Nations. Optional Protocol to the Convention on the Rights of the Child on a Communications Procedure. New York, 19 December 2011. United Nations, Treaty Series, vol. 2983, p. 3. Entered into force 14 April 2014.

United Nations. Paris Agreement. Paris, 12 December 2015. United Nations, Treaty Series, vol. 3156, p. 3. Entered into force 4 November 2016.

United Nations. Rio Declaration on Environment and Development. Rio de Janeiro, 14 June 1992. UN Doc. A/CONF.151/26 (Vol. I).

4.3. The Right to Food in the Context of Climate Change[530]

Mgr. Petra Paľuchová

Department of International Law and International Relations, Comenius University, Faculty of Law

petra.paluchova@flaw.uniba.sk

Introduction

Perhaps most experts and laypeople currently agree that climate change is one of the most significant challenges of the 21st century, or at least that issues related to maintaining the quality of the environment and a stable global climate on Earth are among the most pressing topics of our time. However, this topic is not just a reflection of the repeatedly discussed ecological problem, but has a far-reaching impact on many aspects of human life, from public health and economic stability to fundamental human rights. Although climate change is naturally associated primarily with environmental issues, a deeper reflection in the field of law brings us to the core of the legal system, to the protection of fundamental human rights and freedoms, which are the priority object of protection, whether in social, economic, or, last but not least, environmental issues. In other words, even when it comes to climate change in law, we are ultimately always talking about people and the protection of their fundamental rights.

One of the rights critically affected by climate change and the associated changes in environmental quality is the right to adequate nutrition. However, the fact that climate change has a direct and immediate impact on the availability, accessibility, adequacy, and stability of food does not receive as much attention as discussions on greenhouse gas emissions, deforestation restrictions, or other measures, which are mainly of a technical

[530] This article was written with the support of the VEGA project n. 1/0713/23 - *International legal protection of environmental rights - quo vadis?*

nature. However, food security is a matter of human dignity and survival.

From an international law perspective, the above can be reflected in the right to food, which is traditionally enshrined in a number of international legal documents. Its basic foundation is provided by Article 11 of the International Covenant on Economic, Social and Cultural Rights (hereinafter also referred to as „*ICESCR*"), which recognizes „*the right of everyone to an adequate standard of living for himself and his family, including adequate food*" and obliges states to take measures to eliminate hunger. In practice, however, the application of this right is rather problematic.[531]

However, the rest of this article is based on the assumption that securing the right to food cannot be strictly separated from other goals pursued by environmental policies around the world. Climate change, accompanied by temperature fluctuations, changes in total precipitation, extreme weather events, and soil degradation, has a direct impact on the security of this right, which ultimately affects all other human activities and the development of society.[532]

The aim of this article is to analyze how the right to food is enshrined and interpreted in international law, and whether and how it is affected by climate change. Particular attention will be paid to existing international legal instruments, in particular the aforementioned ICESCR, General Comment No. 12 of the UN

[531] *International Covenant on Economic, Social and Cultural Rights*, 16 December 1966, General Assembly resolution 2200A (XXI).

[532] However, these problems currently affect populations in the countries of the so-called Global South the most, which is why discussions about so-called "climate justice" are resonating just as strongly. In international law, this is a principle that focuses on the fact that the damage caused by climate change disproportionately affects certain (vulnerable) nations and communities and on the ways in which responsibility for such actions should be fairly distributed. In this context, for the sake of completeness, attention may also be drawn to the recent advisory opinion of the International Court of Justice, in which the court effectively states that inaction in the fight against climate change may have legal consequences and emphasizes the obligation of states to protect the climate for present and future generations. See: *Obligations of states in respect of climate change* (Advisory Opinion), ICJ reports (25 july 2025).

Committee on Economic, Social and Cultural Rights, as well as agreements on climate change, such as the Framework Convention on Climate Change, the Kyoto Protocol and the Paris Agreement. This analysis will be carried out with the aim of identifying the main gaps between states' legal obligations in the area of climate protection and in the area of ensuring the right to food, and proposing possible *de lege ferenda* solutions that could lead to bridging these gaps.

From a methodological point of view, the article primarily uses the method of analysis when working with the text of international legal instruments and the norms enshrined therein, with soft law instruments, and when examining the practice of international bodies. The article aims to contribute to the discussion on how the law can be used to respond effectively to the deepening impacts of climate change on basic human needs and rights.

1. The Right to Food in International Law

The right to food is classified as an economic, social, and cultural right. In terms of its international legal basis, this right has undergone a relatively long development. Its origins can be traced back to the Universal Declaration of Human Rights of 1948[533] (hereinafter also referred to as „*UDHR*"), in which it was first enshrined and Article 25(1) of which stipulates that „*Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, ...*".[534]

Although the declaration is not legally binding, its standards have served as the basis for enshrining this right in other international legal instruments, whether hard law or soft law. In addition, there is no shortage of debate as to whether this right has acquired customary character. The recognition of the right to food as customary international law depends on finding sufficient state practice (the element of *usus longaevus*) and establishing a rule that is binding on all states (*opinio iuris*). Custom as a general

[533] *Universal Declaration of Human Rights*, 10 December 1948, A/RES/217 (III).
[534] UDHR, Art. 25 par. 1.

practice recognized as law requires both elements: the practice of states over time and the expression of the conviction that this practice is mandatory.[535] However, treaties and other normative instruments can also serve to prove the existence of customary international law. According to some authors, however, it has been proven that *„the right to food has been endorsed more often and with greater unanimity and urgency than most other human rights, while at the same time being violated more comprehensively and systematically than probably any other right*."[536] In addition, a look back at many historical examples could also serve as evidence, in the sense that both the obligation of the state government to provide food and the right of people to food and nutrition were recognized.[537] This right is also recognized at the national level in the domestic legal systems of many states.[538] It is also part of many international texts, some of which were created before the United Nations was founded. Whether and to what extent these texts create obligations for the contracting parties must be assessed in the light of general international law and the UN Charter.[539] Although there are many different opinions on this, most authors argue that *„under international law there is*

[535] SVÁK, Ján – MAREČEK, Lukáš et al. *Medzinárodné právo verejné a úvod do verejného medzinárodného práva*, 2023. p. 137.
[536] ALSTON, Philip. International Law and the Human Rights to Food. In: ALSTON, Philip – TOMASEVSKI, Katarina (eds.). *The Right to Food*, 1984. p. 9.
[537] SPITZ, Pierre. Right to Food for Peoples and the People: A Historical Perspective. In: ALSTON, Philip – TOMASEVSKI, Katarina (eds.). *The Right to Food*, 1984. p. 170-75.; ROBERTSON, Robert. The Right to Food in International Law. In: MAHONEY, Kathleen E. – MAHONEY, Paul (eds.). *Human Rights in the 21st Century. A Global Challenge,* 1992. p. 451.
[538] FAO. Document IGWG RTFG 2/INF 1, Recognition of the right to food at the national level, Information Paper, Rome, 2003. 21 p. Available at: https://www.fao.org/4/j0574e/j0574e.pdf. See also: ZIEGLER, Jean – GOLAY, Christophe – MAHON, Claire – WAY, Sally-Anne. The Definition of the Right to Food in International Law. In: *The Fight for the Right to Food*. International Relations and Development Series, 2011, p. 16. https://doi.org/10.1057/9780230299337_2
[539] FAO. THE RIGHT TO FOOD GUIDELINES. INFORMATION PAPERS AND CASE STUDIES, 2006. Available at: https://openknowledge.fao.org/server/api/core/bitstreams/05fa798c-2204-4af7-94a3-d4d0a29d5748/content. p. 104-106.

currently found, minimally a treaty right conjoined with a customary right to be free from hunger."[540]

Although today the right to food is a relatively well-structured human right with a defined normative content, which is already enforceable in national courts in several countries around the world, the problems of hunger and malnutrition only came to the attention of social science disciplines in the last 20 years of the 20th century. After being enshrined in the UDHR, this right remained an ambitious goal until the 1970s, when it attracted the attention of the international community as a result of one of the most disruptive global food crises of the century.[541]

Today, it is naturally recognized that everyone has the right to live with dignity and without hunger. Based on the classification of this right among economic and social rights, it is possible to agree with the view that this right also embodies the international community's interest in protecting human dignity, which is, after all, the basis of the UDHR.[542]

This human right can be understood to include both the right to solid food and the right to liquid food (and therefore safe water). It can also be argued that this right embodies the practical idea that all people should have a decent standard of living, in particular sufficient food and drink, both in times of peace and in times of war.[543] The right to food is therefore a human right. In addition to its human rights dimension, this right is also protected under international humanitarian law.[544] Its practical significance for states means that governments must not take measures that lead to

---

[540] BUCKINGHAM, Donald E. A Recipe for Change: Towards an Integrated Approach to Food under International Law. *Pace International Law Review*, 1994, Vol. 6(2), pp. 285–321. https://doi.org/10.58948/2331-3536.1141.
[541] GRUNI, Giovanni. *The EU, World Trade Law and the Right to Food : Rethinking Free Trade Agreements with Developing Countries*, 2018. p. 28, 29.
[542] ZIEGLER, Jean – GOLAY, Christophe – MAHON, Claire – WAY, Sally-Anne. The Definition of the Right to Food in International Law. In: *The Fight for the Right to Food*. International Relations and Development Series, 2011, p. 15. https://doi.org/10.1057/9780230299337_2
[543] *Ibid*.
[544] PEJIC, Jelena. The right to food in situations of armed conflict: The legal framework. *International Review of the Red Cross*, 2001, Vol. 83(844), p. 1098.

increased hunger, food insecurity, and malnutrition, and that governments must protect people from actions that could violate this right.[545]

Authors Ziegler, Golay, Mahon, and Way define this right as follows: „*The right to food is the right to have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensures a physical and mental, individual and collective, fulfilling and dignified life free of fear*."[546]

From an international legal perspective, the aforementioned ICESCR brought about a key shift towards the legal binding nature of this right, enshrining in Article 11 not only „*the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions...*",[547] but also „*the fundamental right of everyone to be free from hunger...*"[548]

The States Parties to the abovementioned Covenant have undertaken to progressively realize this right individually and through international co-operation, by taking the necessary measures to (*a*) To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and

---

[545] ZIEGLER, Jean – GOLAY, Christophe – MAHON, Claire – WAY, Sally-Anne. The Definition of the Right to Food in International Law. In: *The Fight for the Right to Food*. International Relations and Development Series, 2011, p. 15. https://doi.org/10.1057/9780230299337_2

[546] *Ibid*. This definition is inspired by General Comment No. 12 (see below) and comes from the former Special Rapporteur on the Right to Food. See: PROMOTION AND PROTECTION OF ALL HUMAN RIGHTS, CIVIL, POLITICAL, ECONOMIC, SOCIAL AND CULTURAL RIGHTS, INCLUDING THE RIGHT TO DEVELOPMENT. Report of the Special Rapporteur on the right to food, Jean Ziegler. UNGA A/HRC/7/5, 10 January 2008. par. 17.

[547] ICESCR, Art. 11 par. 1.

[548] *Ibid*., Art. 11 par. 2.

utilization of natural resources; as well as (*b*) Taking into account the problems of both food-importing and food-exporting countries, to ensure an equitable distribution of world food supplies in relation to need.[549]

It can be said that the relatively vague wording used by the ICESCR itself, while giving states a certain degree of flexibility in fulfilling their obligations under the treaty (covenant), is often problematic in practice in terms of the actual enforceability of the guaranteed right.

In this context, the adoption of the Optional Protocol,[550] which introduced an individual complaint mechanism before the UN Committee on Economic, Social and Cultural Rights (hereinafter also referred to as „*CESCR*"), was a significant milestone in strengthening the enforceability of this right. Pursuant to Article 2 of the Optional Protocol communications may be submitted by or on behalf of individuals or groups of individuals, under the jurisdiction of a State Party, claiming to be victims of a violation of any of the economic, social and cultural rights set forth in the Covenant by that State Party.[551] The right to food has thus become potentially enforceable at the international level, similar to other economic and social rights.

In view of the continuing problems of interpretation and application, CESCR adopted General Comment No. 12 in 1999,[552] in which it defined in detail the content, scope, and structure of the right to food. The comment established three basic types of obligations for states *in concreto* to respect, to protect and to fulfil (facilitate and provide) the right.[553]

---

[549] *Ibid*.
[550] *Optional Protocol to the International Covenant on Economic, Social and Cultural Rights*, 10 December 2008, A/RES/63/117 (hereinafter also referred to as „***Optional Protocol***").
[551] *Ibid*., Art. 2 par. 1.
[552] *General Comment No. 12 on the right to adequate food*, 12 May 1999, E/C.12/1999/5 (hereinafter also referred to as „***General comment n. 12***" or only as „***Comment***").
[553] Originally three levels of obligations were proposed: to respect, protect and assist/fulfil. The Committee decided to maintain the three levels of obligation, even

The Commentary itself states the obligation to fulfil incorporates both an obligation to facilitate and an obligation to provide. *The obligation to respect* existing access to adequate food requires States parties not to take any measures that result in preventing such access. *The obligation to protect* requires measures by the State to ensure that enterprises or individuals do not deprive individuals of their access to adequate food. *The obligation to fulfil* (facilitate) means the State must pro-actively engage in activities intended to strengthen people's access to and utilization of resources and means to ensure their livelihood, including food security. Finally, whenever an individual or group is unable, for reasons beyond their control, to enjoy the right to adequate food by the means at their disposal, States have the obligation to fulfil (provide) that right directly. This obligation also applies for persons who are victims of natural or other disasters.[554]

Comment ultimately expands the definition of these obligations and adds that the right to food does not mean handing out free food to everyone. Rather, the right to food means that Governments must respect, protect and fulfil the right to food, as clarified in the Comment. The obligation to respect means that Governments must not violate the right to food (e.g. evict people from their land, destroy crops). The obligation to protect means that Governments must protect their citizens against violations by other actors (e.g. by instituting regulations on food safety). The third obligation to fulfil the right to food means that the Government must first facilitate the right to food by providing an enabling environment for people to feed themselves (e.g. engage in land reform, stimulate employment), and secondly the Government must be the provider of last resort in cases where people cannot feed themselves for

though the intermediate level of *to facilitate* had been proposed as a Committee category. Furter see: UN Centre for Human Rights. Right to adequate food as a human right, 1989. Available at: https://digitallibrary.un.org/record/82605?ln=es&v=pdf.

[554] General Comment n. 12, par. 15.

reasons beyond their control (e.g. social safety net programmes, food stamps, food in prison).[555]

This international legal basis was further developed with the adoption of the Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (hereinafter also referred to as the „Voluntary Guidelines on the Right to Food").[556]

The guidelines were developed after years of intergovernmental negotiations under the auspices of the Food and Agriculture Organization (hereinafter also referred to as the „*FAO*") and an Intergovernmental Working Group was established as a subsidiary body of the Committee on World Food Security on October 29, 2002,[557] to assist in their development. From an institutional perspective, the right to food was also strengthened by the creation of the position of UN Special Rapporteur on the Right to Food in 2000,[558] who is responsible for presenting annual reports to the Human Rights Council and to the General Assembly on the activities connected to the right to food implementation, monitoring of the situation throughout the world, undertaking country visits providing him with a firsthand account on the situation concerning the right to food in a particular country, communicating with States, participating in seminars, conferences and expert meetings as well as many other activities aimed at safeguarding the right in question.[559]

---

[555] *Ibid*., par. 18.
[556] FAO. VOLUNTARY GUIDELINES to support the progressive realization of the right to adequate food in the context of national food security, 2005. Available at: https://www.fao.org/4/y7937e/y7937e00.htm.
[557] FAO. THE RIGHT TO FOOD GUIDELINES. INFORMATION PAPERS AND CASE STUDIES, 2006. Available at: https://openknowledge.fao.org/server/api/core/bitstreams/05fa798c-2204-4af7-94a3-d4d0a29d5748/content. p. 2.
[558] Office of the High Commissioner for Human Rights. Commission on Human Rights resolution 2000/10, 17 April 2000.
[559] UNITED NATIONS. About the mandate. Special Rapporteur on the right to food, 2025. Available at: https://www.ohchr.org/en/special-procedures/sr-food/about-mandate.

Although the Voluntary Guidelines on the Right to Food are a soft law instrument, their impact is not negligible. It can be said that, like many other soft law instruments in international law, they have significantly influenced the development of international and national policy, ultimately leading to the adoption of binding hard law. Their normative power, therefore, does not stem from their legal (non)enforceability, but from their widespread acceptance as a reference point for interpreting the obligations of the state under Article 11 of the ICESCR and related international instruments.[560]

In addition to its primary provision in the ICESCR and its accompanying documents, the right to food has also been reflected in several other universal and regional international treaty instruments that extend its application in specific areas of human rights protection. From a universal perspective, examples include International Covenant on Civil and Political Rights of 1966 (in Art. 6), Convention on the Elimination of All Forms of Discrimination Against Women of 1979 (in Art. 12), Convention on the Rights of the Child of 1989 (in Art. 24 and 27) as well as Convention on the Rights of Persons with Disabilities of 2006 (in Art. 25 and 28). In terms of its international legal basis of regional significance, it is worth mentioning the 1988 Additional Protocol to the American Convention on Human Rights in the area of Economic, Social, and Cultural Rights, the so called Protocol of San Salvador (in Art. 12), the 2003 Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa, the so called Maputo Protocol (in Art. 15), the 1990 Cairo Declaration on Human Rights in Islam (in Art. 17), the 2012 ASEAN Human Rights Declaration (in Art. 28).

It seems worth of pointing out neither the European Convention on Human Rights nor the European Social Charter explicitly

[560] SÖLLNER, Sven. The "Breakthrough" of the Right to Food: The Meaning of General Comment No. 12 and the Voluntary Guidelines for the Interpretation of the Human Right to Food. *Max Planck Yearbook of United Nations Law*, 2007, Vol. 11, p. 408, 409. See also: RIEDEL, Eibe. Standards and Sources: Farewell to the Exclusivity of the Sources Triad in International Law?. *European Journal of International Law*, 1991, Vol. 2, p. 59.

mention a right to food. The European Convention on Human Rights focuses on civil and political rights. The right to food however can be protected indirectly under its provisions if a violation of it is connected to other protected rights, such as the prohibition of degrading treatment enshrined in its Article 3. The European Social Charter on the other hand requires states to promote effective access to essential services like food for those in poverty and thus inferres this right through other articles, particularly article 30 which protects individuals against poverty and social exclusion.

Based on the above, a difference between regional systems can be observed, which does not go unnoticed. While other regional systems, for example in Africa and Latin America, explicitly recognize the right to food, Europe lags behind in this respect. This problem has been pointed out by both the lay and professional public. Hilal Elver, former UN Special Rapporteur on the Right to Food, stated that „*...75 years after the Universal Declaration of Human Rights and almost 60 years after the International Covenant on Economic, Social and Cultural Rights, bringing the right to food into European legislative process is long overdue. It's a short-sighted and unfortunate reality that neither the European Social Charter nor individual European constitutions recognize this right*." In reality, however, millions of people in Europe struggle with food insecurity, and many more cannot afford a healthy and adequate diet.[561] This issue has been transformed into a European Citizens' Initiative for the right to food.[562]

It can be said that over the decades, the right to food has evolved from an originally moral postulate without legal binding force into

[561] FAO. Forging a new path: European Citizens' Initiative for the Right to food, 2025. Available at: https://www.fao.org/right-to-food/news-and-events/news/news-detail/Forging-a-new-path-European-Citizens%27-Initiative-for-the-Right-to-food-/en.
[562] EUROPEAN COMMISSION DECISION (EU) 2025/1445 of 8 July 2025 on the request for registration, pursuant to Regulation (EU) 2019/788 of the European Parliament and of the Council, of the European citizens' initiative entitled 'Food is a Human Right for All! Guaranteeing healthy, just and sustainable food systems' (notified under document C(2025) 4607), 1 August 2025.

a legally binding institution of international human rights law, whose obligations are gradually being reflected in regional and national standards. However, its implementation remains uneven across different parts of the world. All regions, however, share a common denominator in the form of deepening environmental and climate crises, which currently represent a global problem that transcends the borders of individual states, regions, and even legal systems. In this context, inconsistency in the fight against food insecurity is an even more pressing problem. It further reduces the availability of food resources and exposes the limitations of existing legal rules. Ensuring this right is therefore currently also dependent on environmental factors. On this basis, it seems appropriate to focus on the basic determinants of the right to food, as defined by international law in terms of availability, accessibility, stability, and adequacy, so that, last but not least, it is possible to subsequently focus on whether and how they are affected by climate change. The next section of this article will therefore be devoted to this issue.

2. The Normative Content of the Right to Food and its Dimensions in International Law

As noted above, the right to adequate food is firmly established in international law. The most significant provision is found in Article 11 of the ICESCR, which recognizes „*...the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions*...“ and calls upon States Parties to take appropriate measures to implement this right, stating that: „*The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international co-operation based on free consent*.“[563] The right to adequate food thus includes the „*right to an adequate standard of living ... including adequate food*,“[564] as well as the „*fundamental right to be free from hunger*.“[565]

[563] ICESCR, Art. 11 par. 1.
[564] *Ibid.*
[565] *Ibid.*, Art. 11 par. 2.

These two concepts of the right to food represent, so to speak, different levels of protection within the same right. Freedom from hunger is, in the sense of the General Comment n. 12 described as more immediate, requiring more urgent steps to be ensured.[566] The wording of paragraph 2 of Article 11 of the ICESCR also points in this direction.

It seems vital to note that the right to freedom from hunger is the only right in the ICESCR termed „*fundamental*." The said attribute was meant to highlight the essential meaning of this right for the enjoyment of all other economic, social and cultural and civil and political rights, indeed.[567]

On the other hand, the first paragraph of Article 11 is considered to be much broader than the second one. With the right to freedom from hunger only recognising the justified claim to food in order to prevent hunger and imposing the corresponding core obligations to take the necessary actions to mitigate and alleviate hunger (par. 2), the right to adequate food is a part of the right to an adequate standard of living.[568] The right to adequate food thus *vice versa* does not mean merely the absence of hunger or even malnutrition. It encompasses a number of qualitative requirements for food safety and diversity, as well as adequate nutritional value, so that individuals are able to lead active, healthy, and dignified lives. The Comment at the same time, however, points out that the right to adequate food shall therefore not be interpreted in a narrow or restrictive sense which equates it with a minimum package of calories, proteins and other specific nutrients.[569]

This is linked to the very definition of this right, or rather its normative content, pointing out that „*the right to adequate food is realized when every man, woman and child, alone or in*

[566] General Comment n. 12, par. 1.
[567] SÖLLNER, Sven. The "Breakthrough" of the Right to Food: The Meaning of General Comment No. 12 and the Voluntary Guidelines for the Interpretation of the Human Right to Food. *Max Planck Yearbook of United Nations Law*, 2007, Vol. 11, p. 398.
[568] *Ibid*.
[569] General Comment n. 12, par. 6. See also: COHEN, Mathilde. The Right to Food. *Max Planck Encyclopedia of Comparative Constitutional Law*, 2017, p. 4.

community with others, have physical and economic access at all times to adequate food or means for its procurement."[570]

Normative content of the right to food traditionally evolves (or rather evolved) around its three main dimensions being: adequacy, availability and accessability.

According to some authors, this content, in the sense of General Comment No. 12, has evolved around the notion of adequacy,[571] while according to Committee the core content of the right to adequate food implies *the availability* of food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture as well as *the accessibility* of such food in ways that are sustainable and that do not interfere with the enjoyment of other human rights.[572] Hence the remaining two dimensions.

Adequacy as such implies that the food must satisfy the dietary needs of every individual, his physical and mental growth, taking into account age, living conditions, health status, gender, cultural and religious preferences, etc. The food must be safe and adequate protective measures by both public and private means must be taken to prevent contamination of foodstuffs through adulteration and/or through bad environmental hygiene or inappropriate handling at different stages throughout the food chain. Care must also be taken to identify and avoid or destroy naturally occurring toxins.[573]

Availability of food tends to be specified in accordance with the textation of par. 12 of the Comment pursuant to which it refers to the possibilities either for feeding oneself directly from productive land or other natural resources, or for well functioning distribution,

---

[570] General Comment n. 12, par. 6.
[571] SÖLLNER, Sven. The "Breakthrough" of the Right to Food: The Meaning of General Comment No. 12 and the Voluntary Guidelines for the Interpretation of the Human Right to Food. *Max Planck Yearbook of United Nations Law*, 2007, Vol. 11, p. 398.
[572] General Comment n. 12, par. 8.
[573] *Ibid.*, par. 9-11.

processing and market systems that can move food from the site of production to where it is needed in accordance with demand.[574]

Last but not least, *accessibility* encompasses both economic and physical accessibility. Economic accessibility means that the financial costs of obtaining adequate food must not compromise the fulfilment of other basic needs. Economic accessibility applies to all forms of acquiring food and reflects whether individuals can effectively enjoy the right to adequate food. Socially vulnerable groups such as landless persons and other particularly impoverished people may need targeted support measures. Physical accessibility implies that adequate food be available to everyone, including physically or socially vulnerable individuals, i. e. children, elderly people, the physically disabled, or those affected by natural disasters. Special attention should also be given to indigenous population whose access to their ancestral lands may be often at risk.[575]

This three-dimensional view of the right to food forms the core of his understanding of human rights. However, it can be argued that this concept reflects its original development rather than its current state.[576]

This perception was gradually expanded through the work of the FAO. In its concept of food security, the FAO developed a four-dimensional model that also includes the component of stability.[577] *Inter alia*, for the sake of completeness, it should also be noted that, among other things, the term *utilization* is often used in this concept instead of *adequacy*, emphasizing the biological and hygienic aspects of food use, and thus, in practice, ensuring that

[574] *Ibid*., par. 12.
[575] *Ibid*., par. 13.
[576] CLAPP, Jennifer – MOSELEY, William G – BURLINGAME, Barbara – TERMINE, Paola. Viewpoint: The case for a six-dimensional food security framework. *Food Policy*, 2022, Vol. 106, pp. 1–10. https://doi.org/10.1016/j.foodpol.2021.102164.
[577] See: FAO. Food Security. Policy Brief Issue 2, 2006. 4 p. Available at: https://www.fao.org/fileadmin/templates/faoitaly/documents/pdf/pdf_Food_Security_Cocept_Note.pdf.

food is not only available and accessible, but also nutritionally usable and safe for health.[578]

According to some authors, although we tend to take these pillars of food security for granted today, mainly because they provide us with a concise overview, it is also necessary to consider the fact that the four-pillar approach has evolved gradually over the course of 50 years, during which these dimensions have gained significance in response to broader events and scientific findings that have led to a growing understanding of the various aspects of food security. They emphasize that although the literature on the development of this concept usually presents the pillars as attributes added over the decades (from availability, through access and adequacy, or utilization, to finally stability), in reality, stability and access have been priorities from the very beginning.[579]

Following on from the above, we will also continue to work with a four-dimensional understanding of this right in this article, or rather its normative content, which thus includes utilization, access (or accessibility), availability, and stability.

Of all the dimensions of the right to food, it is stability that is most significantly disrupted by climate change. While the previous three components are mainly influenced by immediate economic, social, or technological factors, stability involves a long-term aspect reflecting the ability of the food system to maintain an adequate level of food production at a particular time.

The author believes that it is precisely this time dimension that makes stability most vulnerable to climate change, which naturally disrupts the predictability of harvests and thus the quantity and

[578] See also: WEBB, Patrick – COATES, Jennifer – FRONGILLO, Edward A – ROGERS, Beatrice Lorge – SWINDALE, Anne – BILINSKY, Paula. Measuring Household Food Insecurity: Why It's So Important and Yet So Difficult to Do. *The Journal of Nutrition*, 2006, Vol. 136 (5), p. 1405. https://doi.org/10.1093/jn/136.5.1404S

[579] CLAPP, Jennifer – MOSELEY, William G – BURLINGAME, Barbara – TERMINE, Paola. Viewpoint: The case for a six-dimensional food security framework. *Food Policy*, 2022, Vol. 106, pp. 1–10. https://doi.org/10.1016/j.foodpol.2021.102164.

quality of food supplies. Climate change has a major impact on food systems, namely agriculture, livestock production, forestry, and fisheries, through rising temperatures, extreme weather events, changing precipitation patterns, and other climatic factors. While these systems are the basis of food security, they also contribute to climate change through greenhouse gas emissions from various related activities. It is therefore a reciprocal relationship in which climate change and food production are mutually dependent and also influence the four dimensions of food security mentioned above. For the sake of completeness, it should be noted that in some regions there may be some short-term positive effects, such as a longer growing season or increased fertility of certain crops, the overall impact of climate change on food production systems is predominantly negative and leads to increased food insecurity, which manifests itself, among other things, in hunger, malnutrition, loss of income, and deepening poverty, especially in more „vulnerable" regions.[580]

In this way, viewing the right to food in the context of climate change through these four dimensions, with an emphasis on stability, appears to be the most effective approach.

In concrete terms, food availability is reduced by lower agricultural yields. This leads to food shortages. Accessibility is limited by economic barriers, not excluding rising food prices. Meanwhile, utilization is threatened by dietary deficits due to declining food quality and safety. Last but not least, stability is disrupted by fluctuating supplies and unstable prices due to unpredictable climatic conditions.[581]

The following text will therefore focus on the link between the right to food and climate change, and whether and how climate

[580] MUTALEA, Bornwell – DAIA, Shouhan – Chena, Ziqi – MAULU, Sahya. Enhancing food security amid climate change: assessing impactsand developing adaptive strategies. *Cogent Food & Agriculture*, 2025, Vol. 11 (1), p. 3. https://doi.org/10.1080/23311932.2025.2519800
[581] *Ibid*.

change is gradually changing the conditions for the effective realization of this fundamental human right.

3. Climate Change as a Threat to Food Security

It can be said that the relationship between climate change and food security is not surprising, but most likely not fully understood in all its aspects. The links between them are observable in many ways and they influence each other. Examples include rising temperatures, changing precipitation patterns, and the increasing frequency of extreme weather events, including droughts, floods, and storms, which weaken agricultural productivity by destroying crops, killing livestock, and ultimately destabilizing the food market. An equally problematic related phenomenon is rising sea levels, which cause higher soil salinity in coastal areas, making them unsuitable for agriculture. Thus, although some regions may experience partially positive effects, such as a longer growing season or improved fertility of certain crops, it can be concluded that the impact of climate change on food security is predominantly negative.

Also worth mentioning is the negative impact on vulnerable groups such as small farmers, women, children, and indigenous communities, whose already weak position due to existing social and economic inequalities is further exacerbated by climate impacts.[582]

International climate protection is enshrined primarily in the United Nations Framework Convention on Climate Change (hereinafter also referred to as „***UNFCCC***"),[583] the Kyoto Protocol[584] and the Paris Agreement,[585] which can be characterized

[582] Further see: UNESCO. Who bears the costs? Addressing inequalities from climate change and climate action, 2025. 84 p. https://doi.org/10.54678/GIXE7906

[583] *United Nations Framework Convention on Climate Change*. New York, 9 May 1992.

[584] *Kyoto Protocol to the United Nations Framework Convention on Climate Change*. Kyoto, 11 December 1997.

[585] *Paris Agreement*. Paris, 12 December 2015 (hereinafter also referred to as „***Paris Agreement***").

as key instruments for addressing global climate challenges.[586] However, these treaties pursue the general goal of reducing greenhouse gas emissions. Naturally, one would search in vain for an explicit mention of the right to food in them, except for the recognition of the need for food security.

Article 2 of the UNFCCC explicitly states that the stabilization of greenhouse gas concentrations should be achieved in a manner that does not threaten food production.[587] The fundamental priority of protecting food security and ending hunger is similarly confirmed by Article 2 of the Paris Agreement.[588]

However, it is difficult to interpret these provisions as a direct legal obligation on the part of states to implement the right to food. It is clear from their wording that they proclaim the goals towards which the contracting parties should strive and are thus predominantly declaratory in nature.[589] In practice, strategies and

[586] JANKUV, Juraj. *Environmentalizácia medzinárodného práva verejného a jej vplyv na právo Európskej únie a právny poriadok Slovenskej republiky*, 2021. p. 286 – 289.

[587] Pursuant to Art. 2 UNFCCC: „*The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner*."

[588] Pursuant to Art. 2 Paris Agreement: „*This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by: … (b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and …*"

[589] For the sake of completeness, however, it should be noted that they cannot be ignored as legally irrelevant, since a teleological interpretation under Article 31 par. 1 of the Vienna Convention on the Law of Treaties continues to be relevant. In accordance with the said provision: „*A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose*." (*Vienna Convention on the Law of Treaties*, Vienna, 23 May 1969).

measures are often adopted without systematic consideration of their impact on food security.

As a result, however, the protection of the right to food, or rather the assurance of food security within the framework of climate protection, is politically conditional, despite the fact that the adverse effects of climate change on this right are undeniable and well known.

As the Human Rights Institute of Columbia Law School points out in its study, climate change affects all dimensions of the right to food,[590] thereby threatening food security itself. The Intergovernmental Panel on Climate Change (hereinafter also referred to as „*IPCC*") also drew attention to this issue (as UN body for assessing the science related to climate change issues, established by the United Nations Environment Programme and the World Meteorological Organization in 1988)[591] already in 2007, when he also stated that all four dimensions of food security, namely food availability (i.e., production and trade), stability of food supplies, access to food, and food utilization will likely be affected by climate change. Importantly, food security will depend not only on climate and socioeconomic impacts, but also, and critically so, on changes to trade flows, stocks, and food-aid policy. Climate change impacts on food production (food availability) will be mixed and vary regionally. For instance, a reduction in the production potential of tropical developing countries, many of which have poor land and water resources, and are already faced with serious food insecurity, may add to the burden of these countries.[592] Similar reports from many authorities, organizations,

[590] Human Rights Institute, Columbia Law School. Climate Change and the Right to Food: A Comprehensive Study, 2009. Available at: https://scholarship.law.columbia.edu/human_rights_institute/65/. p. 49.
[591] UNITED NATIONS. United Nations Framework Convention on Climate Change (UNFCCC) and Climate, Peace and Security, 2025. Available at: https://www.un.org/climatesecuritymechanism/en/united-nations-framework-convention-climate-change-unfccc-and-climate-peace-and-security.
[592] Intergovernmental Panel on Climate Change (IPCC). Fourth Assessment Report: Climate Change 2007, 4AR WG2, Chapter 5: Food, Fibre, and Forest Products, 2007. Available at: https://archive.ipcc.ch/publications_and_data/ar4/wg2/en/ch5.html.

and institutions are only increasing. The IPCC itself addressed this issue repeatedly in its sixth report and reiterated that: „*With further warming, climate change risks will become increasingly complex and more difficult to manage. Multiple climatic and non-climatic risk drivers will interact, resulting in compounding overall risk and risks cascading across sectors and regions. Climate-driven food insecurity and supply instability, for example, are projected to increase with increasing global warming, interacting with non-climatic risk drivers such as competition for land between urban expansion and food production, pandemics and conflict*."[593]

It is also important to refer to the recent report by the United Nations High Commissioner for Human Rights, which comprehensively addresses the impact of climate change on the realization of the right to food and, above all, confirms that the climate crisis poses a fundamental threat to the fulfillment of the right to food.[594]

It can be said that rising temperatures, changes in precipitation, extreme weather events, soil degradation, and biodiversity loss are transforming what was originally a socio-economic right into a kind of environmentally conditioned right. In other words, climate change is altering the conditions under which states can fulfill their obligations under Article 11 of the ICESCR.

According to the FAO climate change should be understood as a determinant of the material content of the right to food, not as an external factor. In this context, the organisation explicitly states that the most effective measures should be those that address a combination of environmental stresses and factors. Where possible, adaptation strategies should address social inequalities,

[593] Intergovernmental Panel on Climate Change (IPCC). Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, 2023. doi: 10.59327/IPCC/AR6-9789291691647 p. 15.
[594] United Nations General Assembly, Human Rights Council. A/HRC/55/37. Measures for minimizing the adverse impact of climate change on the full realization of the right to food. Report of the United Nations High Commissioner for Human Rights.

such as differences in land tenure and lack of access to resources such as credit, education and decision-making that affect people's ability to adapt. Food security considerations should be made explicit in adaptation of among others climate change and variability, which can be achieved by raising awareness of policy-makers and providing incentives. Adaptation to climate change must also occur through the prevention or removal of maladaptive practices, so the ones that increase vulnerability rather than reducing it.[595] The organization as such ultimately promotes an integrated, human rights-based approach to food security and nutrition that strengthens legal, policy, and institutional environments, which can be interpreted as the obligation of states to protect food security as a fundamental human rights commitment, not just a political priority and believes it is the key to tackle the root causes of hunger and malnutrition and to achieve zero hunger.[596]

In view of the above, it would be appropriate to argue that a similar approach, i.e. the integration of human rights into climate policy, should also be applied at the level of international and domestic law. As mentioned earlier, climate treaties, including the UNFCCC and the Paris Agreement, recognize the importance of food security, but do not guarantee its protection.

One way to improve this situation would be to include the right to food (and related food security) in national strategies and policies. In concrete terms, this could include the *mandatory* inclusion of human rights indicators in the sense of issues related to the right to food in nationally determined contributions, while the systematic assessment of the impact of climate measures on vulnerable groups of the population, including small farmers, should not be overlooked.

---

[595] FAO. Climate Change Adaptation and Mitigation in the Food And Agriculture Sector, 2008. Available at: https://openknowledge.fao.org/server/api/core/bitstreams/03c8b471-e4b0-4f13-9142-71f2d87f1f45/content. p. 4.

[596] FAO. Policy Support and Governance Gateway. Right To Food, 2025. Available at: https://www.fao.org/policy-support/policy-themes/right-to-food/en.

The Paris Agreement system rests on a structure of the so called NDCs standing for „nationally determined contributions" (Articles 3 and 4) freely set by States parties.[597] Currently, many countries include the agriculture sector in their NDCs, but very few countries set targets in relation to other stages of the food system, such as food loss and waste reduction, sustainable diets or food consumption. Although some include the food system in their country, they mostly remain focused on the stage of food production and not the later stages where large emissions from food loss and waste consumption occur.[598] This could be seen as a way to effectively fulfill human rights obligations under Article 11 of the ICESCR.

In terms of possible solutions, there is naturally at least one other option, namely ensuring the protection of the right to food *ex post*, which in practice means a shift from preventive action to prevent violations through climate policy to reactive protection against violations. It should be emphasized in this context that this would, of course, be unlikely to bring immediate benefits in practice to individuals whose lives and human dignity are already negatively affected by a lack of adequate nutrition. Nevertheless, it can be said that any court decisions issued in their favour, whether at the national or international level, could set an important precedent with the potential to influence the further development of legal protection of the right to food.

Kunz also comes up with interesting conclusions in this regard, following up on the same issue, which she also addressed in relation to climate change, but from a different perspective, when she examined the potential of using climate litigation as a tool to ensure food security. The author pointed out that such legal proceedings are slow and often fail due to admissibility criteria. It is also

[597] DUPUY, Pierre-Marie – VIÑUALES, Jorge E. *International Environmental Law*. 2nd edition, 2018. p. 189.
[598] WWF. Enhancing NDCs for Food Systems Recommendations for Decision-Makers, 2020. Available at: https://climatepromise.undp.org/sites/default/files/research_report_document/undp-ndcsp-wwf-unep-foodwaste-ndc-guide.pdf. p. 9.

important to note that they usually only determine an existing violation of the law, sometimes many years after the violation occurred. Last but not least, it should be noted that judgments are not binding *erga omnes*, but are characterized by *inter partes* binding force. Although they can serve as precedents, they do not oblige other states to enforce the judgment. As a result, the author herself acknowledges that fair food security requires comprehensive international cooperation and the willingness of states within the entire international community to support the most affected areas of the world.[599]

Conclusion

The right to food is one of the human rights recognized in several international legal instruments, notably Article 11 of the ICESCR. Despite the fact that ensuring its protection is affected by climate change. Nevertheless, this right is only marginally included in climate policies and is part of the commitments that states have under the UNFCCC and the Paris Agreement.

The aim of this article was to highlight the unsustainability of this situation and identify the need to link this right on two levels, human rights and environmental, including on a practical level, in an effort to outline possibilities for strengthening existing rules and practices.

As the author is aware, this topic also reflects a gap in legal science in our environment, where the issue in question has not yet been analyzed. The discussion on human rights in the context of climate change remains largely focused on individual issues (e.g., migration), while the right to food, which is one of the most affected, is, in our opinion, neglected. That is why the aim of this paper was to contribute to the opening of a scientific discussion on

[599] KUNZ, Anna. "Eradicating hunger through climate litigation?" – An assessment of the opportunities and challenges of enforcing the human right to food through courts. *European Journal of Futures Research*, 2024, Vol. 12, p. 8, 9. https://doi.org/10.1186/s40309-024-00236-2.

the need to legally anchor this connection and on the possibilities for its practical implementation.[600]

The analysis showed that key international treaties in the field of international climate protection, such as the UN Framework Convention on Climate Change and the Paris Agreement, do reflect the importance of food security, but this link is rather declarative and is not reflected in practice, or at least only minimally. States rarely include the right to food in their climate commitments, as was pointed out in the example of NDCs.

The article pointed out that protecting the right to food could be seen as an integral part of climate protection. Some organizations and institutions rightly point out that a human rights -based approach that would take into account the human rights dimension even in environmental issues, which are often of a technical nature, would ensure that measures taken in the name of climate protection do not simultaneously contribute to deepening inequalities and threatening food security, which, as we pointed out in the article, often occurs.

Last but not least, the article also pointed out that the issue under consideration opens up the dimension of judicial protection of the right to food through climate litigation. Although legal proceedings cannot be considered an effective tool for individuals whose dignity is already affected by a lack of adequate nutrition, their significance in the context of this article lies in their long-term developmental effect. The decision-making activities of national and international courts have the potential to support an evolutionary interpretation of existing human rights obligations, thereby contributing to the gradual formation of a stronger

[600] It should also be emphasized that some authors have pointed to the absence of a comprehensive analysis that would adapt the analysis of the impact of climate change on the right to food to its perception through its four dimensions. Further see: MUTALE, Bornwell – DAIA, Shouhan – Chena, Ziqi – MAULU, Sahya. Enhancing food security amid climate change: assessing impactsand developing adaptive strategies. *Cogent Food & Agriculture*, 2025, Vol. 11 (1), p. 2. https://doi.org/10.1080/23311932.2025.2519800

foundation for the protection of the right to food in times of climate crisis.

Ultimately, the author feels it necessary to state here that the analysis in question can also be seen as an example of testing whether the international community and the international legal order are prepared and capable of addressing current environmental problems. Future developments in international law should therefore focus not only on adopting new commitments, but also, and perhaps primarily, on efforts to link existing commitments, their interconnection and understanding (including that between climate stability and human dignity), their interpretation and, last but not least, their consistent implementation in practice.

Bibliography

1. DUPUY, Pierre-Marie – VIÑUALES, Jorge E. *International Environmental Law*. 2nd edition. Cambridge: Cambridge University Press, 2018. 522 p.

2. GRUNI, Giovanni. *The EU, World Trade Law and the Right to Food : Rethinking Free Trade Agreements with Developing Countries*. Oxford: Bloomsbury Publishing, 2018. 219 p.

3. JANKUV, Juraj. *Environmentalizácia medzinárodného práva verejného a jej vplyv na právo Európskej únie a právny poriadok Slovenskej republiky*. Praha: Leges, 2021. 388 p.

4. SVÁK, Ján – MAREČEK, Lukáš et al. *Medzinárodné právo verejné a úvod do verejného medzinárodného práva*. 1. vydanie. Bratislava: Wolters Kluwer, s. r. o., 2023. 972 p.

5. ALSTON, Philip. International Law and the Human Rights to Food. In: ALSTON, Philip – TOMASEVSKI, Katarina (eds.). *The Right to Food*. The Hague: Martinus Nijhoff Publishers, 1984, pp. 9-68.

6. ROBERTSON, Robert. The Right to Food in International Law. In: MAHONEY, Kathleen E. – MAHONEY, Paul (eds.).

Human Rights in the 21st Century. A Global Challenge. Leiden: Brill, 1992, pp. 451–457.

7. SPITZ, Pierre. Right to Food for Peoples and the People: A Historical Perspective. In: ALSTON, Philip – TOMASEVSKI, Katarina (eds.). *The Right to Food*. The Hague: Martinus Nijhoff Publishers, 1984, pp. 169-186.

8. ZIEGLER, Jean – GOLAY, Christophe – MAHON, Claire – WAY, Sally-Anne. The Definition of the Right to Food in International Law. In: *The Fight for the Right to Food*. International Relations and Development Series. London: Palgrave Macmillan, 2011, pp. 15–22. https://doi.org/10.1057/9780230299337_2

9. BUCKINGHAM, Donald E. A Recipe for Change: Towards an Integrated Approach to Food under International Law. *Pace International Law Review*, 1994, Vol. 6(2), pp. 285–321. https://doi.org/10.58948/2331-3536.1141

10. CLAPP, Jennifer – MOSELEY, William G – BURLINGAME, Barbara – TERMINE, Paola. Viewpoint: The case for a six-dimensional food security framework. *Food Policy*, 2022, Vol. 106, pp. 1–10. https://doi.org/10.1016/j.foodpol.2021.102164

11. COHEN, Mathilde. The Right to Food. *Max Planck Encyclopedia of Comparative Constitutional Law*, 2017, p. 1–14.

12. KUNZ, Anna. "Eradicating hunger through climate litigation?" – An assessment of the opportunities and challenges of enforcing the human right to food through courts. *European Journal of Futures Research*, 2024, Vol. 12, pp. 1–11. https://doi.org/10.1186/s40309-024-00236-2

13. MUTALE, Bornwell – DAIA, Shouhan – Chena, Ziqi – MAULU, Sahya. Enhancing food security amid climate change: assessing impactsand developing adaptive strategies. *Cogent Food & Agriculture*, 2025, Vol. 11 (1), pp. 1–21. https://doi.org/10.1080/23311932.2025.2519800

14. PEJIC, Jelena. The right to food in situations of armed conflict: The legal framework. *International Review of the Red Cross*, 2001, Vol. 83(844), pp. 1097–1109.

15. RIEDEL, Eibe. Standards and Sources: Farewell to the Exclusivity of the Sources Triad in International Law?. *European Journal of International Law*, 1991, Vol. 2, pp. 58–84.

16. SÖLLNER, Sven. The "Breakthrough" of the Right to Food: The Meaning of General Comment No. 12 and the Voluntary Guidelines for the Interpretation of the Human Right to Food. *Max Planck Yearbook of United Nations Law*, 2007, Vol. 11, pp. 391–415.

17. WEBB, Patrick – COATES, Jennifer – FRONGILLO, Edward A – ROGERS, Beatrice Lorge – SWINDALE, Anne – BILINSKY, Paula. Measuring Household Food Insecurity: Why It's So Important and Yet So Difficult to Do. *The Journal of Nutrition*, 2006, Vol. 136 (5), pp. 1404S-1408S. https://doi.org/10.1093/jn/136.5.1404S

18. *Obligations of states in respect of climate change* (Advisory Opinion), ICJ reports (25 july 2025).

19. *International Covenant on Economic, Social and Cultural Rights*, 16 December 1966, General Assembly resolution 2200A (XXI).

20. *Optional Protocol to the International Covenant on Economic, Social and Cultural Rights*, 10 December 2008, A/RES/63/117.

21. *United Nations Framework Convention on Climate Change*. New York, 9 May 1992.

22. *Kyoto Protocol to the United Nations Framework Convention on Climate Change*. Kyoto, 11 December 1997.

23. *Universal Declaration of Human Rights*, 10 December 1948, A/RES/217 (III).

24. *Vienna Convention on the Law of Treaties*, Vienna, 23 May 1969.

25. *General Comment No. 12 on the right to adequate food*, 12 May 1999, E/C.12/1999/5.

26. *Paris Agreement*. Paris, 12 December 2015.

27. EUROPEAN COMMISSION DECISION (EU) 2025/1445 of 8 July 2025 on the request for registration, pursuant to Regulation (EU) 2019/788 of the European Parliament and of the Council, of the European citizens' initiative entitled 'Food is a Human Right for All! Guaranteeing healthy, just and sustainable food systems' (notified under document C(2025) 4607), 1 August 2025.

28. FAO. Climate Change Adaptation and Mitigation in the Food And Agriculture Sector, Rome, 2008. 16 p. Available at: https://openknowledge.fao.org/server/api/core/bitstreams/03c8b471-e4b0-4f13-9142-71f2d87f1f45/content.

29. FAO. Document IGWG RTFG 2/INF 1, Recognition of the right to food at the national level, Information Paper, Rome, 2003. 21 p. Available at: https://www.fao.org/4/j0574e/j0574e.pdf.

30. FAO. Food Security. Policy Brief Issue 2, 2006. 4 p. Available at: https://www.fao.org/fileadmin/templates/faoitaly/documents/pdf/pdf_Food_Security_Cocept_Note.pdf.

31. FAO. Forging a new path: European Citizens' Initiative for the Right to food, 2025. Available at: https://www.fao.org/right-to-food/news-and-events/news/news-detail/Forging-a-new-path-European-Citizens%27-Initiative-for-the-Right-to-food-/en.

32. FAO. Policy Support and Governance Gateway. Right To Food, 2025. Available at: https://www.fao.org/policy-support/policy-themes/right-to-food/en.

33. FAO. THE RIGHT TO FOOD GUIDELINES. INFORMATION PAPERS AND CASE STUDIES, Rome, 2006. 37 p.

Available at: https://openknowledge.fao.org/server/api/core/bitstreams/05fa798c-2204-4af7-94a3-d4d0a29d5748/content.

34. FAO. VOLUNTARY GUIDELINES to support the progressive realization of the right to adequate food in the context of national food security, Rome, 2005. 37 p. Available at: https://www.fao.org/4/y7937e/y7937e00.htm.

35. Human Rights Institute, Columbia Law School. Climate Change and the Right to Food: A Comprehensive Study, 2009. 155 p. Available at: https://scholarship.law.columbia.edu/human_rights_institute/65/.

36. Intergovernmental Panel on Climate Change (IPCC). Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, 2023. doi: 10.59327/IPCC/AR6-9789291691647

37. Intergovernmental Panel on Climate Change (IPCC). Fourth Assessment Report: Climate Change 2007, 4AR WG2, Chapter 5: Food, Fibre, and Forest Products, 2007. Available at: https://archive.ipcc.ch/publications_and_data/ar4/wg2/en/ch5.html.

38. Office of the High Commissioner for Human Rights. Commission on Human Rights resolution 2000/10, 17 April 2000.

39. PROMOTION AND PROTECTION OF ALL HUMAN RIGHTS, CIVIL, POLITICAL, ECONOMIC, SOCIAL AND CULTURAL RIGHTS, INCLUDING THE RIGHT TO DEVELOPMENT. Report of the Special Rapporteur on the right to food, Jean Ziegler. UNGA A/HRC/7/5, 10 January 2008.

40. UN Centre for Human Rights. Right to adequate food as a human right, New York, 1989. 73 p. Available at: https://digitallibrary.un.org/record/82605?ln=es&v=pdf.

41. UNESCO. Who bears the costs? Addressing inequalities from climate change and climate action, 2025. 84 p. https://doi.org/10.54678/GIXE7906

42. United Nations General Assembly, Human Rights Council. A/HRC/55/37. Measures for minimizing the adverse impact of climate change on the full realization of the right to food. Report of the United Nations High Commissioner for Human Rights.

43. UNITED NATIONS. About the mandate. Special Rapporteur on the right to food, 2025. Available at: https://www.ohchr.org/en/special-procedures/sr-food/about-mandate.

44. UNITED NATIONS. United Nations Framework Convention on Climate Change (UNFCCC) and Climate, Peace and Security, 2025. Available at: https://www.un.org/climatesecuritymechanism/en/united-nations-framework-convention-climate-change-unfccc-and-climate-peace-and-security.

45. WWF. Enhancing NDCs for Food Systems Recommendations for Decision-Makers, Berlin, 2020. 44 p. Available at: https://climatepromise.undp.org/sites/default/files/research_report_document/undp-ndcsp-wwf-unep-foodwaste-ndc-guide.pdf.

V. RECONCILING ENERGY LAW AND ENVIRONMENTAL PROTECTION: INTERNATIONAL LEGAL DIMENSIONS

5.1. The Right to Clean Energy: The International Law Dimensions[601]

Prof. Mgr. Yuliia Vashchenko, PhD.

Comenius University Bratislava, Faculty of Law

yuliia.vashchenko@uniba.sk

Access to reliable, sustainable, clean, and affordable modern energy services is a precondition for the full enjoyment of many human rights: civil, political, economic, social, and cultural. The legal regulation of the use of energy resources traditionally belongs to national states. However, in the last decades, the international legal aspects of energy relations have become more and more important, in particular, due to increase of environmental issues connected with the energy sector, as one of the biggest polluters. Therefore, scholars from all over the world elaborate arguments for the international recognition of the right to access to modern energy services as a human right. In the modern literature, attention is paid to the specificities of approaches used within energy and environmental law. The elaboration of the adequate legal mechanisms of fulfilment and protection of the right to clean energy as a component of the right to access to modern energy services is a common task of energy and environmental law that requires joint efforts at all levels.

This contribution is devoted to the analysis of the doctrinal aspects of the right to clean energy as a component of the right to access to modern energy services via the prism of the international energy, environmental and human rights law and elaboration of the solutions for its encouragement.

Our normal everyday life is difficult to imagine without access to modern energy services, first of all, to electricity. Access to reliable, sustainable, clean, and affordable energy services is vital for active participation of people in economic, social, and cultural

[601] This work was supported by the Slovak Research and Development Agency under the Contract no. APVV-24-0543.

life. Energy access is a precondition for the realization of the majority of human rights, e.g., right to life, right to health, right to adequate standard of living (including right to adequate housing, right to adequate food, and right to adequate clothes), right to education, right to adequate working conditions, right to equality, right to healthy environment, etc.

However, even in 21st century people in different parts of the Globe lack access to modern energy services due to the level of economic development of the country/region, energy poverty, armed conflicts. Lack of access to modern energy resources negatively influences people's life, especially such vulnerable categories of energy consumers, as children, women, persons with disabilities.

Goal 7 of the United Nations Sustainable Development Goals[602] (SDG 7) calls for "affordable, reliable, sustainable and modern energy for all" by 2030. Increase of use of energy from renewable energy sources and introduction of energy efficiency measures are among the key targets under SDG 7.

In 2023, the General Assembly of the United Nations (UN GA) proclaimed 26 January as the International Day of Clean Energy (Resolution 77/327 of 25 August 2023)[603]. In this Resolution, the UN GA, in particular, reaffirmed the above-mentioned Resolution on SDG, noted that the transitions to affordable, reliable, sustainable and modern energy for all should be just, inclusive, equitable and secure, in line with national circumstances, in order to achieve universal access by 2030, while recognizing the need to increase the share of renewable and clean energy, including as a cooking source in urban areas, to significantly reduce negative health impacts and contribute to decreased greenhouse gas

[602] Resolution adopted by the General Assembly on 25 September 2015 No 70/1. Transforming our world: the 2030 Agenda for Sustainable Development. Available at: https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf (accessed on 12.10.2025).

[603] Resolution 77/327 of the General Assembly of the United Nations of 25 August 2023 "International Day of Clean Energy". Available at: https://docs.un.org/en/a/res/77/327 (accessed on 12.10.2025).

emissions to achieve the goals of the Paris Agreement1 and the Sharm el-Sheikh Implementation Plan.

Considering the importance of the access to modern energy services for the majority of human rights the question arises – can the access to modern energy services be considered as a human right itself?

The right to access to modern energy services is often considered in connection with the human rights from the second generation – economic and social rights, first of all, in relation to the right to adequate standard of living (right to decent or right to dignified life).

The President Obama, at the Press Conference with President Hu of the People's Republic of China on 19 January 2011, talking about the tackling poverty, said: "*We believe part of justice and part of human rights is people being able to make a living and having enough to eat and having shelter and having electricity*."[604] Thus, the electricity access was considered via prism of human rights, in frames of the right to adequate standard of living.

In the recent decades, scholars debate on the recognition of the right to access to energy as a human right. First of all, Bradbrook, A. J., Gardam, J. G., Cormier M. in their research[605] provide arguments for the usage the human-right approach for access to energy. Bradbrook A. J., while considering the right to access to

---

604 Press Conference with President Obama and President Hu of the People's Republic of China, January 19, 2011 Available at: https://obamawhitehouse.archives.gov/the-press-office/2011/01/19/press-conference-president-obama-and-president-hu-peoples-republic-china (accessed on 12.10.2025).

605 E.g., BRADBROOK, Adrian J. Access to energy services in a human rights framework, 2006. Available at: http://www.un.org/esa/sustdev/sdissues/energy/op/parliamentarian_forum/bradbrook_hr.pdf (accessed on 12.10.2025); BRADBROOK, Adrian J., GARDAM Judith G., CORMIER, Monique. A Human Dimension to the Energy Debate: Access to Modern Energy Services. *Journal of Energy and Natural Resources Law*, 2008, 26(4), pp. 525–552. Available at: http://www.tandfonline.com/doi/abs/10.1080/02646811.2008.11435198#.VbDX3Pntmko (accessed on 12.10.2025).

energy in the scope of socio-economic rights (as one of possible options), points out that *"irrespective of the difficulties in identifying and enforcing socio-economic rights the existence of a concrete norm undoubtedly provides a focus for efforts at both the national and international level to bring pressure to bear on States to fulfil their responsibilities to their citizens."*[606]

Duvic-Pauli L-A. analyses the perspectives of the international recognition of the right to energy and possible contribution of the Sustainable Development Goals (SDG 7) to this process. She pays attention that SDGs try to put human rights at the centre of the policy process that would lead to the recognition of new human rights[607]. However, in relation to SDG 7 she points out that the question of its contribution to human rights is made more complex than in relation to other SDGs (e.g., water, food) because access to energy has not been recognized as a human right yet. In her opinion, the right to energy might benefit from increased recognition of climate rights deriving from existing human rights. Also, the scholar pays attention to the successful recognition of the right to water and sanitation by the UNGA in 2010. However, in her opinion, the first target of SDG 7 could be considered just as a *"first step in the development of the right to energy because it does not explicitly endorse the sustainability dimensions of SDG 7",* and recognition of a right to energy would be a long way[608].

---

[606] BRADBROOK, Adrian J. Access to energy services in a human rights framework, 2006. Available at: http://www.un.org/esa/sustdev/sdissues/energy/op/parliamentarian_forum/bradbrook_hr.pdf (accessed on 12.10.2025);

[607] DUVIC-PAOLI, Leslie Anne, From Aspirational Politics to Soft Law? Exploring the International Legal Effects of Sustainable Development Goal 7 on Affordable and Clean Energy (March 30, 2021). *Melbourne Journal of International Law, Vol. 22, No. 1, 2021*. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3930550 (accessed on 12.10.2025).

[608] DUVIC PAOLI, Leslie Anne, From Aspirational Politics to Soft Law? Exploring the International Legal Effects of Sustainable Development Goal 7 on Affordable and Clean Energy (March 30, 2021). *Melbourne Journal of International Law, Vol. 22, No. 1, 2021*. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3930550 (accessed on 12.10.2025).

Tully, S. R. also follows the human right approach to the energy access (first of all, electricity access), stressing that such approach reflects a very distinctive (albeit limited) dimension[609].

Huhta, K. in her research on energy justice in the context of human rights law offers to use human rights in the energy sector in two ways: to refer to energy as a human right in and of itself and to refer more broadly to human rights law's application to the energy sector and its impact in that context[610]. The scholar supports the approach to energy as a derivative human right that is a precondition for the fulfilment and enjoyment of other treaty-based human rights and concentrates on the human rights implications of activities in the energy sector and importance of giving energy justice a legally binding framework[611].

As concludes Wawryk, A.S., *"this issue of universal access to energy services will continue to receive growing legal attention, through: the possible development of a framework for access to energy services as a human right; increasing national and international action to expand access to energy, promote energy efficiency, and invest in renewable energy in developing countries, which must be underpinned by law; and by a myriad of issues related to the provision of baseload power and transmission of electricity."*[612]

---

[609] TULLY, Stephen R. The Human Right to access electricity. *The Electricity Journal, 2006, volume 19, issue 3, pp. 30–39*. Available at: https://www.sciencedirect.com/science/article/pii/S1040619006000236 (accessed on 12.10.2025).

[610] HUHTA, Kaisa. (2023). Conceptualising Energy Justice in the Context of Human Rights Law. *Nordic Journal of Human Rights, 41(4), 378–392*. Available at: https://www.tandfonline.com/doi/epdf/10.1080/18918131.2023.2210443?needAccess=true (accessed on 12.10.2025).

[611] HUHTA, K. (2023). Conceptualising Energy Justice in the Context of Human Rights Law. *Nordic Journal of Human Rights, 41(4), 378–392*. Available at: https://www.tandfonline.com/doi/epdf/10.1080/18918131.2023.2210443?needAccess=true (accessed on 12.10.2025).

[612] WAWRYK, Alex. International Energy Law: An Emerging Academic Discipline (June 2, 2014). *U. of Adelaide Law Research Paper No. 2014-16*. Available at: https://ssrn.com/abstract=2445267 or http://dx.doi.org/10.2139/ssrn.2445267 (accessed on 12.10.2025).

It is stated in the Preamble to the Energy Charter Treaty that the broader energy cooperation is essential for economic progress and more generally for social development, energy poverty alleviation, and a better quality of life[613]. Thus, the connection between the access to energy and economic progress and a quality of life (standard of living) is emphasized.

The right to access to modern energy services has not been recognized yet as a human right in the international human rights law instruments. However, it is considered as a precondition to the realization of many human rights. For a long period of time, access to energy (first of all, to electricity) was considered as a precondition of the right to adequate standard of living.

The right to adequate standard of living is stipulated in Art. 25 of the Universal Declaration of Human Rights[614], in accordance with which everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. Later, the right to adequate standard of living was stipulated by International Covenant on Economic, Social and Cultural Rights[615] (legally binding legal instrument). As referred to in Art. 11(1) of this Covenant, "everyone has the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions". Thus, similar to the above-mentioned Universal Declaration of Human Rights, the Covenant does not specify energy access as a

[613] The Energy Charter Treaty (1994). Available At: https://www.energycharter.org/process/energy-charter-treaty-1994/energy-charter-treaty/ (accessed on 12.10.2025).
[614] United Nations General Assembly. (1948). Universal declaration of human rights (Document No. 217 (III) A). Available at: https://www.un.org/en/about-us/universal-declaration-of-human-rights (accessed on 12.10.2025).
[615] International Covenant on Economic Social and Cultural Rights, 16 December 1966. Available at: https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-economic-social-and-cultural-rights (accessed on 12.10.2025).

precondition for the right to adequate standard of living. However, Committee on Economic, Social and Cultural Rights in the General Comment No 4 "The right to adequate housing (Art.11 (1))" from 13.12.1991[616] stipulated: *"All beneficiaries of the right to adequate housing should have sustainable access to … energy for cooking, heating and lighting…"* Thus, the Committee considers the access to energy as a precondition for the right to adequate standard of living, and, precisely, of the right to adequate housing.

The same approach is used in the frames of the European Social Charter (revised) of 1996[617]. In Art. 31 of this Charter, that stipulates the right to housing, it is states that "With a view to ensuring the effective exercise of the right to housing, the Parties undertake to take measures designed: to promote access to housing of an adequate standard; to prevent and reduce homelessness with a view to its gradual elimination; to make the price of housing accessible to those without adequate resources.". The European Committee of Social Rights in its Conclusions of 2003 (France)[618] states that "adequate housing" means a dwelling which is structurally secure, safe from a sanitary and health point of view and not overcrowded, with secure tenure supported by the law, and a dwelling is safe from a sanitary and health point of view if it possesses all basic amenities, such as water, heating, waste disposal; sanitation facilities; electricity. Also, it is stated that public authorities must guard against the interruption of essential services such as water, electricity and telephone. Thus, access to energy, and, exactly electricity and heating access, is considered as a precondition for the right to adequate housing.

---

[616] CESCR General Comment No. 4: The Right to Adequate Housing (Art. 11 (1) of the Covenant) 13 December 1991. Available at: https://www.refworld.org/legal/general/cescr/1991/en/53157 (accessed on 12.10.2025).
[617] European Social Charter (revised) (ETS No. 163), 1996. Available at: https://www.coe.int/en/web/conventions/full-list?module=treaty-detail&treatynum=163 (accessed on 12.10.2025).
[618] Council of Europe. Digest of the case law of the European Committee of Social Rights (2008). Available at: https://rm.coe.int/168049159f (accessed on 12.10.2025).

The next instrument of international human rights law related to the right to access to modern energy services is Convention on the Elimination of All Forms of Discrimination against Women (UN, 1979)[619]. According to Art. 14 (p.2, "h") States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, that they participate in and benefit from rural development and, in particular, shall ensure to such women the right to enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications. It should be emphasized, that, in comparison with the above-mentioned legal instruments, where there are no provisions directly related to the access to energy as a precondition for realization of the right to adequate standard of living, in the CEDAW the electricity access is considered as a condition for realization of the right to equality by women in rural areas. Moreover, access to electricity is considered in this legal instrument as an element of the right to adequate living conditions, together with the right to housing, not as a part of the latter.

But, as was mentioned above, the right of access to energy services is essential not only for the full enjoyment of the right to adequate standard of living, but for other human rights.

The Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights "Protocol of San Salvador" (1988)[620] in Art. 11 stipulates the right to a healthy environment, which is defined as the right to live in a healthy environment and to have access to basic public services. It should be noted that access to energy (first of all, to electricity) is traditionally considered as basic (universal) public service. Thus, it

[619] Convention on the Elimination of All Forms of Discrimination against Women. New York, 1979. Available at: https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-elimination-all-forms-discrimination-against-women (accessed on 12.10.2025).
[620] Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights "Protocol of San Salvador" (1988). Available at: https://www.oas.org/en/sare/social-inclusion/protocol-ssv/docs/protocol-san-salvador-en.pdf (accessed on 12.10.2025).

can be concluded that in this document right to access to energy is considered as a precondition for the right to healthy environment.

The World Health Organization (hereinafter – WHO) pays attention to the dependence on and distribution of the right to heath and many other human rights, in particular, right to adequate standard of living and right to adequate housing[621], that depends on energy access, according to the opinions of the treaty bodies of the International Covenant on Economic, Social and Cultural Rights and of the European Social Charter (revised). The WHO emphasizes that energy and health are inextricably linked. Access to clean, sustainable and affordable energy, stipulated in SDG 7, plays a crucial role in advancing health (SDG 3). According to the WHO, the links between energy and health are particularly evident in homes and health-care facilities. Access to clean and sustainable energy in homes is essential to protect people's health from household air pollution due to the use of polluting stoves and fuels such as coal and biomass. Access to clean and reliable energy in health-care facilities is important to ensure the delivery of essential health care services for disease prevention and treatment[622]. The recent situation with the Covid-19 can be provided as an example. Thus, the WHO also recognizes the importance of energy access not only for the full enjoyment of the right to adequate standard of living, but in healthcare services as well.

In 2021, the author of this contribution published a paper devoted to the encouragement of the right to access to modern energy services for the one of the most vulnerable categories of

[621] World Health Organization. Human Rights. Available at: https://www.who.int/en/news-room/fact-sheets/detail/human-rights-and-health (accessed on 12.10.2025); Office of the United Nations High Commissioner for Human Rights, World Health Organization. The Right to Health: Fact Sheet No. 31. Available at: https://www.ohchr.org/sites/default/files/Documents/Publications/Factsheet31.pdf (accessed on 12.10.2025).

[622] The World Health Organization. Energy and Health. Available at: https://www.who.int/health-topics/energy-and-health#tab=tab_1 (accessed on 12.10.2025).

energy consumers – children[623]. In the first section of this paper, the author, based on the above-mentioned human rights approach, offers the analysis of the children's right to access to modern energy services via the prism of the Convention on the Rights of the Child[624] (hereinafter – CRC). The author paid attention, that despite the lack in the CRC of a special provision devoted to modern energy access, it is undoubtedly crucial for the expression of all groups of children's rights, whether universal (i.e., belonging to all human beings), special (i.e., belong especially to children), or specific (i.e., belonging to children from specific social groups). Access to energy is a precondition for the full enjoyment of the majority of children's rights: survival rights (the right to life and the right to health); development rights (the right to education, play, leisure, cultural activities, access to information, and freedom of thought, conscience, and religion); protection rights (against all forms of abuse, neglect, and exploitation); and participation rights (the right to the expression of one's own opinion and to participation in decision-making processes at the national, regional, and local levels). In particular, the links between the energy access and such children's rights stipulated by the CRC as, e.g., the right to health, the right to education, the right to adequate protection of a child from any form of violence, neglect, or negligence, the right to equality, and the right to be heard have been analysed.

Currently, the above-mentioned approach concerning the consideration of the children's right to access to modern energy services via the prism of the CRC is reflected in General Comment No 26 on children's rights and the environment, with a special focus

[623] VASHCHENKO, Yuliia. Access to modern energy services through the prism of children's rights: an overview from the perspective of the Convention on the rights of the child and the policy and law approaches of certain EU Member States and Ukraine. *International Comparative Jurisprudence*, 7(1), 75-87. Available at: http://dx.doi.org/10.13165/j.icj.2021.06.006 (accessed on 12.10.2025).
[624] UN General Assembly. (1989). Convention on the Rights of the Child, 20 November 1989. *UN Treaty Series, 1577, 3.* Available at: https://www.ohchr.org/en/professionalinterest/pages/crc.aspx (accessed on 12.10.2025).

on climate change (hereinafter – GC 26) issued by the Committee on the Right of the Child in 2023[625].

Firstly, the children's right to health (Art. 24 of CRC) depends on the access to energy. Thus, as referred to in para. 43 of GC 26, health protection also applies to the conditions that children need to lead a healthy life, such as a safe climate, safe and clean drinking water and sanitation, sustainable energy, adequate housing, access to nutritionally adequate and safe food and healthy working conditions. It should be emphasized that sustainable energy is mentioned together with adequate housing (not as a part of the right to adequate housing) and with the right to safe and clean drinking water and sanitation (which is the newly recognized human right).

Secondly, the link between the right to adequate standard of living (Art. 27 of CRC) is emphasized. Thus, in para. 46 of GC 26 the Committee underlines that this right should be realized sustainably, with respect, in particular, to energy use. As referred to in para. 48 of GC 26, in order to encourage the right to adequate housing, homes should have safe and sustainable sources of energy for cooking, heating, lighting and appropriate ventilation and be free from mould, toxic substances and smoke. It is stated in para. 49 of GC 26 that no forced evictions for children are possible without prior provision of adequate alternative accommodation, including relocation linked to development and infrastructure projects addressing energy and/or climate mitigation and adaptation action.

Thirdly, the access to energy services is linked to the right to education (Arts. 28 and 29 (1) (e)). According to para. 55 of GC 26, states should build safe, healthy and resilient infrastructure for effective learning. This includes, in particular, the construction of buildings and classrooms with adequate heating and cooling and

[625] CRC/C/GC/26: General comment No. 26 (2023) on children's rights and the environment with a special focus on climate change. Available at: https://www.ohchr.org/en/documents/general-comments-and-recommendations/crcgc26-general-comment-no-26-2023-childrens-rights (accessed on 12.10.2025).

access to sufficient, safe and acceptable drinking water and sanitation facilities. Environmentally friendly school facilities, such as those with lighting and heating sourced from renewable energy and edible gardens, can benefit children and ensure compliance by States with their environmental obligations. Thus, in this provision the Committee also pays attention to necessity of use energy from renewable energy sources.

Fourthly, it is stated in GC 26 that in order to encourage the right to a clean, healthy and sustainable environment the states, in particular, should equitably phase out the use of coal, oil and natural gas, ensure a fair and just transition of energy sources and invest in renewable energy, energy storage and energy efficiency to address the climate crisis (para. 65 (d)). Thus, based on this provision it can be concluded that the children's right to clean energy shall be encouraged through fair and just energy transition, energy storage and energy efficiency measures.

And, finally, the energy access issues are specifically targeted in the CG 26 in the section related to the obligation of States to respect, protect and fulfil children's rights. In particular, states must take urgent steps to fulfil their obligation to facilitate, promote and provide for the enjoyment by children of their rights, including their right to a clean, healthy and sustainable environment, such as by transitioning to clean energy and adopting strategies and programmes to ensure the sustainable use of water resources (para. 68 of GC 26). Thus, the clean energy transition is defined as an important obligation in relation to the children's right to a clean, healthy and sustainable development. Also, it is stated that states should incentivize sustainable investment in and use of renewable energy, energy storage and energy efficiency, in particular by state-owned or controlled enterprises and those that receive substantial support and services from State agencies. States can also encourage community control over the generation, management, transmission and distribution of energy to increase access to and the affordability of renewable technology and the provision of sustainable energy products and services at the community level (para. 109 of GC 26). Thus, the importance of

development of the renewable energy technologies is stressed. Moreover, states should ensure that their investment agreements promote rapid reductions in greenhouse gas emissions and other measures to mitigate the causes and effects of climate change, including through the facilitation of investment in renewable energy (para. 110 of GC 26).

Considering mentioned above, the GC 26 of the Committee of the rights of the child offers is the most comprehensive approach to the connection of the access to modern energy services and human rights (children's rights in frames of the CRC). It is clearly defined that the access to energy is vital for a set of children's rights (e.g., right to health, to adequate standard of living, to education, etc.).

It should be noted that the UN GA adopted a number of resolutions (including) devoted to energy access, in particular:

- Resolution 2023 No 77/327 "International Day of Clean Energy" mentioned above;

- Resolution adopted by the General Assembly on 14 December 2022 No 77/170 "Ensuring access to affordable, reliable, sustainable and modern energy for all"[626];

- Resolution adopted by the General Assembly on 21 December 2020 No 75/221 "Ensuring access to affordable, reliable, sustainable and modern energy for all"[627];

- Resolution adopted by the General Assembly on 21 December 2012 No 67/215 "Promotion of new and renewable sources of energy"[628];

[626] Resolution adopted by the General Assembly on 14 December 2022 No 77/170 "Ensuring access to affordable, reliable, sustainable and modern energy for all". Available at: https://docs.un.org/en/A/RES/77/170 (accessed on 12.10.2025).
[627] Resolution adopted by the General Assembly on 21 December 2020 No 75/221 "Ensuring access to affordable, reliable, sustainable and modern energy for all" Available at: https://docs.un.org/en/A/RES/75/221 (accessed on 12.10.2025).
[628] Resolution adopted by the General Assembly on 21 December 2012 No 67/215 "Promotion of new and renewable sources of energy". Available at: https://docs.un.org/en/A/RES/67/215 (accessed on 12.10.2025).

- Resolution adopted by the General Assembly on 20 December 2010 No 65/151 "International Year of Sustainable Energy for All"[629].

In these Resolutions, the UN GA recognizes the importance of the encourage of energy access to all and its importance to many human rights. In particular, it is stated in Resolution adopted by the General Assembly on 14 December 2022 77/170. "Ensuring access to affordable, reliable, sustainable and modern energy for all": "5. Calls for ensuring *access to affordable, reliable, sustainable and modern energy* for all, as such services are an integral part of poverty eradication measures, human dignity, quality of life, economic opportunity, the combating of inequality, the promotion of health and the prevention of morbidity and mortality, access to education, *safe drinking water and sanitation*, food security, nutrition, disaster risk reduction and resilience, climate change mitigation and adaptation, *environmental impact reduction*, social inclusion and gender equality, including for persons affected by humanitarian emergencies;".

In author's opinion, the international community has already progressed in recognition of the new human rights that closely connected with energy access. Therefore, it is time now to consider the recognition of the right to access to modern energy services.

As was mentioned above, CEDAW, as a legally binding legal instrument, recognizes access to electricity, together with access to water, as preconditions for the right to equality and the right to adequate living conditions. 28 July 2010 *"the right to safe and clean drinking water and sanitation"* is officially recognized by the UN GA resolution (A/RES/64/292) as *"a human right that is essential for the full enjoyment of life and all human rights"*. Since 2015, the General Assembly and the Human Rights Council have recognized both the right to safe drinking water and the right to sanitation as closely related but distinct human rights. These two

[629] Resolution adopted by the General Assembly on 20 December 2010 No 65/151 "International Year of Sustainable Energy for All". Available at: https://docs.un.org/en/A/RES/65/151 (accessed on 12.10.2025).

rights are considered by the GA as components of the right to adequate standard of living[630]. In 2021, GA reaffirmed that the human rights to safe drinking water and sanitation, as components of the right to an adequate standard of living, are essential for the full enjoyment of the right to life and all human rights. Also, it reaffirms that the human right to safe drinking water entitles everyone, without discrimination, to have access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use, and that the human right to sanitation entitles everyone, without discrimination, to have physical and affordable access to sanitation, in all spheres of life, that is safe, hygienic, secure, socially and culturally acceptable and that provides privacy and ensures dignity, while reaffirming that both rights are components of the right to an adequate standard of living[631].

However, it is not possible to encourage access to sufficient, safe, acceptable, physically accessible and affordable water, as well as sanitation, without access to electricity. Therefore, the recognition of the right to access to energy as a human right is considered as a logical further step of the GA.

Moreover, on 28 July 2022 the General Assembly of the United Nations recognized the human right to a clean, healthy and sustainable environment[632]. The GA notes that the right to a clean, healthy and sustainable environment is related to other rights and existing international law and affirms that the promotion of the human right to a clean, healthy and sustainable environment requires the full implementation of the multilateral environmental agreements under the principles of international environmental law. Considering that sustainable, renewable and clean energy is a

[630] E.g., Resolution adopted by the General Assembly on 18 December 2019 No 74/141. The human rights to safe drinking water and sanitation. Available at: https://docs.un.org/en/A/RES/74/141 (accessed on 12.10.2025).
[631] Resolution adopted by the General Assembly on 16 December No 76/153. The human rights to safe drinking water and sanitation. Available at: https://docs.un.org/en/A/RES/76/153 (accessed on 12.10.2025).
[632] Resolution adopted by the General Assembly on 28 July No 76/300. The human right to a clean, healthy and sustainable environment. Available at: https://docs.un.org/en/A/RES/76/300 (accessed on 12.10.2025).

precondition for clean, healthy and sustainable environment, the recognition of the right to access to modern energy services, again, seems as a logical next step.

Key features of the right to access to modern energy services include: accessibility, affordability, sustainability, health safety, environmental safety, energy efficiency, diversification of sources of energy, use of energy from renewable sources of energy, quality of energy services.

As to the content of the right to access to modern energy services, it should be concluded, based on the legal documents and scientific approaches mentioned above, that this "umbrella" right includes such components as the right to reliable energy, right to sustainable energy, right to affordable energy, right to renewable energy (figure 1 below).

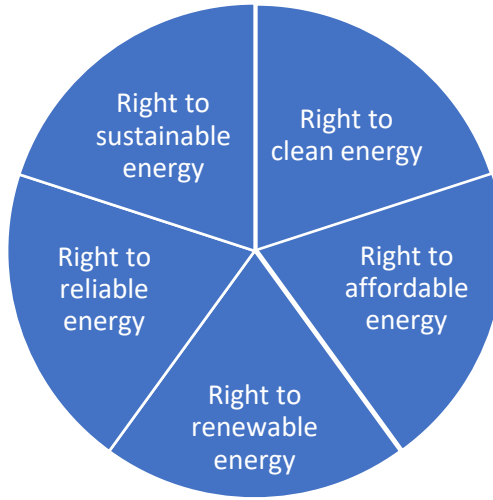


Figure 1. Right to access to modern energy services

The right to reliable energy means the right to stable, uninterrupted, high-quality delivery of energy services to energy consumers.

The right to sustainable energy means the right to access to energy from energy sources that cannot be depleted, can exist forever (e.g., wind, solar, hydropower, and their usage is not harmful for the environment. Sustainable energy can be used by current generation without harm for the future generations.

The right to renewable energy means the right to access to energy from renewable sources of energy (e.g., wind, solar, hydropower, biomass, geotherm).

The right to clean energy means the right to access to energy by means that don't have negative impact on the environment.

As can be seen from the definitions of the right to sustainable energy, the right to renewable energy, and the right to clean energy, these three components are overlapping in some parts. In particular, wind, solar, and hydropower are both renewable and sustainable energy sources, whereas, biomass is renewable, however, not sustainable, considering its negative impact on the environment due to greenhouse gas emissions, and therefore, on future generations. The nuclear energy can be considered as clean, but it is not renewable. Therefore, all these components of the right to access to modern energy services are important.

The right to affordable energy means the right to access to energy services at affordable prices.

Conclusions

Access to reliable, sustainable, clean, and affordable energy is a vital precondition for the full enjoyment of many human rights. For the last decades, scholars debate on the recognition of the right to access to modern energy services as a human right. The General Assembly of the United Nations adopted a number of resolutions related to energy access and emphasized its importance for many human rights. However, the right to access to energy has not been

recognized as a human right yet. Considering the importance of the energy access for the adequate realization of many human rights, protected by international human rights law instruments (e.g., rights to health, to adequate standard of living, to education, etc.) and newly recognized by the General Assembly of the United Nations (rights to clean and drinking water and sanitation, right to clean, healthy and sustainable environment), it will be logically and consistently to recognize the right to access to modern sustainable, reliable, affordable and clean energy services as a human right.

Bibliography:

BRADBROOK, Adrian J. Access to energy services in a human rights framework, 2006. Available at: http://www.un.org/esa/sustdev/sdissues/energy/op/parliamentarian_forum/bradbrook_hr.pdf (accessed on 12.10.2025).

BRADBROOK, Adrian J., GARDAM Judith G., CORMIER, Monique. A Human Dimension to the Energy Debate: Access to Modern Energy Services. *Journal of Energy and Natural Resources Law*, 2008, 26(4), pp. 525–552. Available at: http://www.tandfonline.com/doi/abs/10.1080/02646811.2008.11435198#.VbDX3Pntmko (accessed on 12.10.2025).

DUVIC-PAOLI, Leslie Anne. From Aspirational Politics to Soft Law? Exploring the International Legal Effects of Sustainable Development Goal 7 on Affordable and Clean Energy (March 30, 2021). *Melbourne Journal of International Law, Vol. 22, No. 1, 2021*. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3930550 (accessed on 12.10.2025).

HUHTA, Kaisa. Conceptualising Energy Justice in the Context of Human Rights Law. *Nordic Journal of Human Rights, 41(4), 378–392*. Available at: https://www.tandfonline.com/doi/epdf/10.1080/18918131.2023.2210443?needAccess=true (accessed on 12.10.2025).

TULLY, Stephen R. The Human Right to access electricity. *The Electricity Journal, 2006, volume 19, issue 3, pp. 30–39*. Available

at:
https://www.sciencedirect.com/science/article/pii/S1040619006000236 (accessed on 12.10.2025).

VASHCHENKO, Yuliia. Access to modern energy services through the prism of children's rights: an overview from the perspective of the Convention on the rights of the child and the policy and law approaches of certain EU Member States and Ukraine. *International Comparative Jurisprudence*, 7(1), 75-87. Available at: http://dx.doi.org/10.13165/j.icj.2021.06.006 (accessed on 12.10.2025).

WAWRYK, Alex. International Energy Law: An Emerging Academic Discipline (June 2, 2014). *U. of Adelaide Law Research Paper No. 2014-16*. Available at: https://ssrn.com/abstract=2445267 or http://dx.doi.org/10.2139/ssrn.2445267 (accessed on 12.10.2025).

5.2. The Energy Charter Treaty and International Environmental Law: Systemic Integration as a Tool for Treaty Reconciliation

Mgr. Denisa Hlušičková

Department of International and European Law, Faculty of Law, Palacký University in Olomouc

denisa.hlusickova01@upol.cz

Introduction

In an era of escalating climate crisis, the strong investment protection under the Energy Charter Treaty (ECT)[633] poses a significant challenge to states' environmental policy space.[634] The ECT, a binding multilateral treaty adopted in 1994, was designed to "promote long-term co-operation in the energy field, based on complementarities and mutual benefits, in accordance with the objectives and principles of the Charter"[635] and provide rules for the facilitation of the transit between the contracting parties.[636] The ECT was also expected to promote regional economic cooperation and integration, as well as reduce the remaining political tensions between East and West following the end of the Cold War.[637] Signed when global priorities were different, the static nature of investor protection under the ECT now conflicts with evolving obligations arising from international environmental and climate law. This tension raises fundamental questions about legal coherence and

[633] *Energy Charter Treaty*, 17 December 1994.
[634] See for example TIENHAARA, Kyla - DOWNIE, Christian. Risky Business? The Energy Charter Treaty, Renewable Energy, and Investor-State Disputes. *Global Governance,* 2018, Vol. 24(3), pp. 451–471. ISSN 10752846, 19426720.
[635] Article 2 of the ECT.
[636] HOBÉR, Kaj. The Energy Charter Treaty: An Overview. *The Journal of World Investment & Trade,* 2007, Vol. 8(3), pp. 324-325.
[637] ÖGÜTÇÜ, Mehmet. Eurasian Energy Prospects and Politics: Need for a Longer-Term Western Strategy. In: WAELDE, Thomas W. (ed.). *The Energy Charter Treaty: An East-West Gateway for Investment and Trade*. London: Kluwer Law International, 1996, p. 72. ISBN 90-411-0913-7.

how international law can reconcile the demands of investment protection with the imperatives of environmental governance.

A series of high-profile disputes,[638] in which foreign investors challenged domestic environmental policies and energy transition measures, highlights the profound normative conflict. Can states simultaneously pursue their international environmental obligations and comply with their obligations to foreign investors under the ECT? This conflict between regimes reflects a broader phenomenon - the fragmentation of the international legal order.[639] The nexus between the ECT and international environmental law is a clear demonstration of this issue. International investment law aims to provide a stable, predictable, and enforceable legal framework to stimulate investment flow and protect foreign investments.[640] By contrast, international environmental law seeks to protect environmental integrity, promote sustainability and preserve natural resources for future generations.[641] Even when their provisions do not directly contradict one another, their application pursue divergent objectives. In the context of the ECT, this divergence manifests itself in arbitration proceedings, where the challenge of protecting investor expectations collides with states' environmental and climate obligations.

International law offers no single optimal solution to the conflict between the international investment regime and the international environmental regime – yet the International Law Commission (ILC) emphasised[642] that such conflicts between the norms of

[638] The cases are discussed in more detail further on in this paper.
[639] UNGA. *Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law: Report of the Study Group of the International Law Commission*. A/CN.4/L.702. Geneva: United Nations, 18 July 2006.
[640] WÄLDE, Thomas. W. Sustainable Development and the 1994 Energy Charter Treaty: Between Pseudo-Action and the Management of Environmental Investment Risk. In: WEISS, Friedl. et al (eds.). *International Economic Law with a Human Face*. The Hague: Kluwer Law International, 1998, pp. 227-229.
[641] RAJAMANI, Lavanya - PEEL, Jacqueline (eds.). *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press, 2021. ISBN 978-0-19-884915-5.
[642] KOSKENNIEMI, Martti. *Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law*. Report of

different specialised regimes may be addressed through interpretative rule in Article 31(3) of the Vienna Convention on the Law of Treaties (VCLT)[643] – the principle of systemic integration.[644] Systemic integration leads to interpreting treaties and agreements not in isolation, but as a part of a broader normative framework. Applied to the ECT, this means that arbitral tribunals may interpret investment protection in conjunction with states' environmental obligations, rather than considering them as separate and unrelated areas of law. Systemic integration, thus, may provide an interpretive method for resolving the normative tensions.

This paper examines whether systemic integration can provide arbitral tribunals with a coherent method to reconcile the ECT with international environmental obligations without undermining the objectives of either. To answer this question, the paper discusses this issue in the following chapters. Chapter 2 conceptualises and demonstrates the normative conflict between the ECT and international environmental law. Chapter 3 then turns to the environmental provisions within the ECT itself and assesses to what extent these provisions may function as a counterbalance to the investor protection in Part III of the ECT. Building on these foundations, Chapter 4 outlines the conceptual and doctrinal foundations of systemic integration under Article 31(3)(c) of the VCLT and frames it within the broader discourse on fragmentation. Chapter 5 then examines how systemic integration can be applied in ECT disputes and assesses both the possibilities and limitations of this approach. The conclusions evaluate whether systemic integration can serve as a meaningful tool for reconciling the competing objectives of investment protection and environmental governance.

---

the Study Group of the International Law Commission, A/CN.4/L.682 and Add.1. Geneva: United Nations, 13 April 2006.

643 *Vienna Convention on the Law of Treaties*, 23 May 1969.

644 A term popularized by McLachlan, see MCLACHLAN, Campbell. The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention. *International and Comparative Law Quarterly*. 2005, vol. 54, pp. 279–320.

1 Normative Conflict Between the ECT and International Environmental Law

The ECT is a multilateral, legally binding treaty negotiated in the early 1990s to promote long-term energy cooperation by facilitating cross-border energy flows,[645] protecting and promoting foreign investments[646] and enhancing energy security[647]. It enshrines investor protection standards,[648] including fair and equitable treatment (FET)[649] and protection against expropriation,[650] and provides access to investor-state dispute settlement[651] (ISDS). These provisions were designed at a time when policy priorities emphasised energy market liberalisation and security of energy supply more than environmental objectives.[652]

Over the past three decades, international environmental law has undergone substantial development,[653] notably through the United Nations Framework Convention on Climate Change[654] (UNFCCC) and the Paris Agreement[655]. These agreements embody an evolving set of obligations[656] that require states to adopt

[645] Article 2 of the ECT.
[646] Part III of the ECT.
[647] Preamble, Article 2, Article 7 and Article 18 of the ECT.
[648] Part III of the ECT.
[649] Article 10(1), second sentence of the ECT.
[650] Article 13 of the ECT.
[651] Article 26 of the ECT.
[652] KONOPLYANIK, Andrey - WÄLDE, Thomas W. Energy Charter Treaty and Its Role in International Energy. *Journal of Energy & Natural Resources Law,* 2006, Vol. 24(4), pp. 524–526; WÄLDE, Thomas W. International Investment under the 1994 Energy Charter Treaty: Legal, Negotiating and Policy Implications for International Investors within Western and Commonwealth of Independent States/Eastern Europe. *Journal of World Trade*, 1995, Vol. 29(5), pp. 5–72. ISSN 1011-6702.
[653] See, RAJAMANI, Lavanya - PEEL, Jacqueline (eds.). *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press, 2021. ISBN 978-0-19-884915-5.
[654] *United Nations Framework Convention on Climate Change*, 9 May 1992, S. Treaty Doc No. 102-38, 1771 U.N.T.S. 107.
[655] *Paris Agreement to the United Nations Framework Convention on Climate Change*, 12 December 2015, T.I.A.S. No. 16-1104.
[656] On the legal character of not only the Paris Agreement, see BODANSKY, Daniel. The Legal Character of the Paris Agreement. *Review of European, Comparative & International Environmental Law*, 2016, Vol. 25(2), pp. 142–150. ISSN 2050-0386.

increasingly ambitious environmental and climate measures in response to scientific developments and environmental urgency.[657] The emphasis of ECT on stability and predictability for foreign investors may sit uneasily alongside this dynamism, especially where decarbonisation measures may strand fossil-fuel assets.[658] While the ECT seeks to promote energy security and international cooperation, protect energy investments and ensure freedom of transit for energy resources and infrastructure, international environmental law embodies regulatory dynamism and progressive norm development, such as phasing out coal, restricting oil and gas exploration or tightening emissions standards.

Therefore, this chapter conceptualises the ECT-environment law interface as a structural tension between its objectives - static investment protection and the dynamic nature of environmental governance - rather than a simple rule-to-rule conflict.[659] This tension has become evident in a growing number of high-profile disputes, where investor claims under the ECT have conflicted with state measures adopted to protect the environment or facilitate decarbonisation. These disputes are indicative not only of isolated tensions but also of a deeper systemic conflict between protecting existing energy investments and meeting international environmental commitments.

1.1 Demonstration of Conflict in the case of the ECT

The jurisprudence emerging from ISDS under the ECT illustrates the normative conflict between investment protection and environmental regulation. A growing number of arbitral awards underscores the tension between states' obligations to protect foreign investors and their concurrent commitments to achieve ambitious environmental and climate policy objectives.

---

[657] Articles 2 and 4 of the Paris Agreement; Article 2-4 of the UNFCCC.
[658] TIENHAARA - DOWNIE, op. cit.
[659] ZHU, Ying. A quasi-normative conflict: Resolving the tension between investment treaties and climate action. *Review of European, Comparative & International Environmental Law,* 2024, Vol. 33(2), pp. 183–193. ISSN 2050-0386.

A clear example is the case of *Rockhopper v. Italy*,[660] where the tribunal found Italy liable for breaching the FET standard after refusing to grant an exploitation permit for offshore drilling due to environmental concerns. Although environmental concerns were acknowledged, the dispute demonstrates how investment protections under the ECT can constrain the implementation of environmental obligations and the ability of states to enact precautionary environmental policies.

A similar dynamic occurred earlier in the case of *Vattenfall v. Germany*,[661] where the Swedish company Vattenfall challenged environmental restrictions imposed by Germany on a coal-fired power plant in Hamburg. Although the case did not result in a final award as the parties settled, the outcome required Germany to ease the environmental standards as part of the settlement.[662] The outcome reflects the potential of the ISDS mechanisms under the ECT to interfere with domestic regulatory decision-making. The possibility of such claims may lead to the phenomenon of *regulatory chill*.[663]

More recently, cases such as *Uniper v. Netherlands*[664] and *RWE v. Netherlands*[665] were initiated in response to the Dutch decision

[660] *Rockhopper Italia S.p.A., Rockhopper Mediterranean Ltd., and Rockhopper Exploration Plc. v. Italian Republic*, ICSID Case No. ARB/17/14, Final Award, 23 August 2022.
[661] *Vattenfall AB, Vattenfall Europe AG, Vattenfall Europe Generation AG & Co. KG v. The Federal Republic of Germany*, ICSID Case No. ARB/09/6, Request for Arbitration, 30 March 2009.
[662] *Vattenfall AB and others v. Federal Republic of Germany*, ICSID Case No. ARB/09/6, Award, 11 March 2011.
[663] About the term *regulatory chill*, see e.g. SCHRAM, Ashley et al. Internalisation of International Investment Agreements in Public Policymaking: Developing a Conceptual Framework of Regulatory Chill. *Global Policy*, 2018, Vol. 9(2), pp. 193–202. ISSN 1758-5880 or TIENHAARA, Kyla. Regulatory Chill and the Threat of Arbitration: A View from Political Science. In: BROWN, Chester – MILES, Kate (eds.). *Evolution in Investment Treaty Law and Arbitration*. Cambridge: Cambridge University Press, 2011, pp. 606–628. ISBN 978-1-107-01468-8.
[664] *Uniper SE, Uniper Benelux Holding B.V. and Uniper Benelux N.V. v. Kingdom of the Netherlands*, ICSID Case No. ARB/21/22, Claimants' Memorial, 20 May 2022.
[665] *RWE Innogy GmbH and RWE Innogy Aersa S.A.U. v. Kingdom of Spain*, ICSID Case No. ARB/14/34, Award, 18 December 2020.

to phase out coal-fired power plants by 2030.[666] Both companies sought compensation for stranded assets under the ECT, arguing that the measures constituted indirect expropriation and a breach of legitimate expectations. Although these cases were eventually discontinued,[667] their initiation underscored the potential for the ECT to function as an obstacle to environmental policy implementation. These cases concern measures taken to fulfil the Netherlands' obligations under the Paris Agreement and domestic decision-making[668], which highlights how investment claims can constrain states in fulfilling their international environmental and climate commitments.[669]

Taken together, these disputes demonstrate that the conflict between the ECT and international environmental law is neither hypothetical nor abstract. Jurisprudence shows how static investor protections enshrined in the ECT can delay or undermine the implementation of transformative measures required by evolving international environmental governance.

Scholarly and scientific commentary confirms these concerns. The IPCC referred to the ISDS mechanism in the ECT as being "designed to protect the interests of investor in energy projects from national policies that could lead their assets to be stranded" and that "despite improvement in the international governance of energy, it still appears that a great deal of this is still concerned with

---

[666] See the adopted Dutch law: *Wet van 11 December 2019, houdende Regels voor het produceren van elektriciteit met behulp van kolen (Wet verbod op kolen bij elektriciteitsproductie).*

[667] For Uniper, see Uniper SE. Agreement on Amended Stabilization Package: Federal Government Acquires 99 % stake in Uniper. [Press release]. *uniper.energy* [online]. 21 September 2022 [viewed 17 March 2024]. Available from: https://www.uniper.energy/news/agreement-on-amended-stabilization-package-federal-government-acquires-99-stake-in-uniper. For RWE discontinuation see *Beschluss in dem Verfahren auf Feststellung der Unzulässigkeit des Schiedsverfahrens*, Bundesgerichtshof [Federal Court of Justice], I ZB 75/22, 27 July 2023, par. 102-115.

[668] We refer to *Urgenda case*, for more information see e.g. DE GRAAF, Kars - JANS, Jan. The Urgenda Decision: Netherlands Liable for Role in Causing Dangerous Global Climate Change. *Journal of Environmental Law*, 2015, Vol. 27(3), pp. 517-527.

[669] Op. cit. n31.

promoting further development of fossil fuels".[670] This finding is echoed in academic literature. Tienhaara argues that ECT claims can actively impede the energy transition from fossil fuels and stall action on climate change, in part by inducing the phenomenon of *regulatory chill*.[671] Empirical studies confirm this conclusion. Nedeva observed that the general arbitral approach (including ECT tribunals) is focused on identifying treaty breaches and allocating compensation, thereby further undermining the perceived legitimacy of ISDS in the context of environmental governance.[672]

On the other hand, it can be the ECT argued that the treaty is designed to be energy-neutral,[673] meaning that it protects not only foreign investors in the fossil fuel industry but also investors in renewable energy sources, which can, conversely, support energy transition, decarbonization and achieving environmental objectives.[674] Indeed, numerous recent disputes have arisen in the renewable sector, particularly solar energy cases in Spain and the Czech Republic, often following the withdrawal or retroactive adjustment of subsidy schemes.[675] Yet this does not alter the fact that fossil fuel investors increasingly invoke the ECT to challenge

[670] SHUKLA, Priyadarshi et al. (eds.). *Working Group III Contribution to the Sixth Assessment Report*
of the Intergovernmental Panel on Climate Change. Geneva: IPCC, 2022, pp. 1505-1506.
[671] Op. cit. n 31.
[672] NEDEVA, Stanislava. The Neglected Public Interest in Investor-State Dispute Settlement: Environmental and Human Rights Considerations. *European Energy and Environmental Law Review*, 2024, Vol. 33(5), p. 231. ISSN 0966-1646.
[673] See Article 1(6) of the ECT.
[674] On the lack of data regarding the argument of increased investment flows in the renewable energy sector, see TIENHAARA – DOWNIE, op. cit. On this issue see also BERNASCONI-OSTERWALDER, Nathalie – BRAUCH, Markus Dietrich. *Redesigning the Energy Charter Treaty to Advance the Low-Carbon Transition. Transnational Dispute Management*, 2019, Vol. 16(1), p. 26.
In this regard Tienhaara also states that there is currently "no strong quantitative or qualitative data to show that providing legal protection to investors through ISDS translates into increased investment flows in the renewable energy sector, or in any other sector", see TIENHAARA – DOWNIE, op. cit.
[675] See for, e.g. SIMÕES, Fernando Dias. When Green Incentives Go Pale: Investment Arbitration and Renewable Energy Policymaking. *Denver Journal of International Law and Policy*, 2017, Vol. 45(2), pp. 251 – 285.

climate and energy transition measures.[676] Recent developments indicate that fossil fuel cases under the ECT remain active: between April 2022 and December 2024 alone, at least twenty-four new ISDS cases were initiated under the ECT, with two-thirds involving fossil fuel investments.[677] Recent proceedings, such as *Khan Resources v. Mongolia*,[678] concerning uranium mining, and *Ascent Resources v. Slovenia*[679] regarding shale gas extraction, illustrate how investors continue to rely on the ECT to challenge state measures restricting fossil fuel activities. Moreover, arbitral tribunals have often been reluctant to treat environmental or climate objectives as sufficient grounds to justify departures from investment protection standards, thereby limiting the regulatory autonomy of states. Therefore, the arbitration practice and approach of arbitration tribunals to date tend to demonstrate that the ECT has become a tool for locking in fossil fuel resources rather than a neutral means for dispute resolution.

2 Environmental Provisions in the ECT

The ECT does include provisions on environmental protection. However, these provisions vary considerably in scope, legal effect and enforceability as compared to investor protection in Part III of the ECT. The following subchapters examine three provisions that reflect the ECT's environmental orientation: Article 19, which articulates general environmental principles; the exception clause in Article 24(2)(i) and the Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA). Finally, the

[676] BALDON, Clémentine – CRAVEIA, Rosanne. Overview of Recent Fossil Fuel Arbitration Cases Under the Energy Charter Treaty. *Investment Treaty News* [online]. Available from: https://www.iisd.org/itn/2025/01/27/overview-recent-fossil-fuel-arbitration-cases-under-energy-charter-treaty-clementine-baldon-rosanne-craveia. [Accessed 13 September 2025]
[677] DUPRÉ, Mathilde – KPENOU, Stéphanie. Recent fossil fuel arbitration claims based on the ECT: the urgency of neutralizing the sunset clause. *Institute Veblen* [online], p. 4. Available from: https://www.veblen-institute.org/IMG/pdf/may_2025_recent_fossil_fuel_arbitration_claims_based_on_the_ect_vf-2.pdf [Accessed 13 September 2025]
[678] *Khan Resources Inc., Khan Resources B.V., and Cauc Holding Company Ltd. v. The Government of Mongolia, UNCITRAL.*
[679] *Ascent Resources Plc and Ascent Slovenia Ltd v. Republic of Slovenia, ICSID Case No. ARB/22/21.*

modernised version of the ECT and the changes it has introduced are also discussed.

2.1 Limited Applicability of Article 19 ECT

The first of these provisions is Article 19, which occupies a key role in the environmental provisions of the ECT as it explicitly articulates general environmental principles. However, the following discussion shows that the normative weakness of this provision limits its practical function to serve as a normative counterweight to investment protection standards under Part III of the ECT.

The introductory wording in Article 19 reflects general principles of international environmental law, such as *sustainable development*, *the precautionary principle*, and *the polluter pays principle*. The contracting parties "shall strive to take precautionary measures to prevent or minimize environmental degradation" in their policies and actions. Each contracting party also "shall strive to minimize in an economically efficient manner harmful Environmental Impacts, occurring either within or outside its Area from all operations within the Energy Cycle in its Area". However, these clauses are phrased in soft language and lack enforceability comparable to investment protections.[680] The commitments above are also repeatedly subjected to the criterion of economic efficiency, as evident by "to minimize in an economically efficient manner" or in the following sentence, that "in doing so each Contracting Party shall act in a Cost-Effective manner". The same is evident in the stated polluter pays principle, in which the polluter should "bear the cost of pollution, including transboundary pollution, with due regard to the public interest" but also "without distorting Investment in the Energy Cycle of

[680] SHINE, Claire. Environmental Protection Under the Energy Charter Treaty. In: WÄLDE, Thomas (ed). *The Energy Charter Treaty: An East-West Gateway for Investment and Trade*. London: Kluwer Law International, 1996, p. 522.; KOLO, Abba – WÄLDE, Thomas W. Environmental Regulation, Investment Protection and 'Regulatory Taking' in International Law. *International and Comparative Law Quarterly*, 2001, Vol. 50(4), p. 817. ISSN 0020-5893.

international trade". As such, it is more of a political commitment than a normative counterbalance to investment protection.

2.2 Exceptions Clause and Article 24(2)(i)

The hortatory nature and normative softness of Article 19, notably its reliance on aspirational language and the conditioning of obligations on economic efficiency, lead to the conclusion that the provision can be considered more of a political statement than enforceable protection. Given this limited normative value, it is necessary to focus on other provisions of the ECT that might provide states with a stronger legal foundation for defending environmental measures. Another important provision in this regard is the general exception in Article 24(2(i), which might in principle serve as a defence of the state's regulatory autonomy. However, the restrictive wording of this clause, along with its explicit inapplicability to Part III of the ECT, significantly restricts its function.

The exceptions clause in Article 24 of the ECT includes a series of exceptions that allow the contracting party to derogate from the ECT rules for various reasons. Article 24(2)(i) specifies that the rules of the ECT shall not preclude any contracting party from adopting or enforcing any measure 'necessary to protect human, animal or plant life or health'. However, this provision is notably restrictive as it does not apply to Part III of the ECT. Put differently, when a state defends an environmental measure against an FET or expropriation claim, Article 24(2)(b)(i) offers no textual basis for defence. This was also confirmed by the tribunal in RWE v. Spain, which stated that Article 24(2) militates against any expansive concept of FET standard[681] and Article 24(2)(i) can only have a subsidiary function, and environmental aims only impact the stringency of FET standard.[682] The tribunal thus implied that environmental interest regulations should determine the extent of

[681] *RWE v. Spain*, para. 447.
[682] LEVASHOVA, Yulia. New Wine in Old Wineskins? Climate Cases and the Energy Charter Treaty. In: QUIRICO, Ottavio – WILLIAMS, Katarzyna Kwapisz (eds.). *The European Union and the Evolving Architecture of International Economic Agreements*. Singapore: Springer Nature Singapore, 2023, p. 91.

FET, but should not function as an exception that forecloses liability. While general exceptions to trade law can serve as an affirmative defence against otherwise inconsistent measures, Article 24(2)(i) is textually excluded from the investment part, so that environmental measures are assessed only within the proportionality or reasonableness inquiry.[683] This practice has its consequences. If a state defends environmental measures (e.g. emission standards, permit bans) against a claim under the ECT, the state is unable to plead on Article 24(2)(i) as a categorical defence. The defence of states thus relies solely on the interpretation of investment protection provisions, placing the burden on states to justify regulatory change, rather than proving that the measures taken are necessary under the general exception.

2.3 Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA)

Given that Article 19 does not create a direct obligation on foreign investors and Article 24(2)(i) does not apply to Part II, these provisions do not provide sufficient protection against interference with regulatory autonomy. PEEREA addresses environmental issues through cooperation-based and policy-oriented obligations. The question is therefore whether the procedural elements of PEEREA might meaningfully counterbalance the disruptions of the investment protection regime.

PEEREA is a legally binding agreement that articulates policy principles and cooperative mechanisms on energy efficiency. The PEEREA requires the contracting parties to formulate strategies and clear policy aims for improving energy efficiency and thereby reducing the environmental impacts of the energy cycle.[684] The contracting parties shall also develop, implement, and regularly update energy efficiency programmes to achieve these policies.[685] However, these provisions are designed with a discretionary nature

[683] *RWE v. Spain*, para. 447.
[684] Article 5 of the PEEREA (Strategies and Policy Aims).
[685] Article 8(1) of the PEEREA

and procedural softness.[686] Moreover, Article 13 of PEEREA explicitly subordinates its provisions to those of the ECT in the event of inconsistency.[687] This reinforces the conclusion that the binding dimension of PEEREA lies in promoting cooperation and exchange of experiences between the contracting parties, rather than in providing enforceability in disputes under Part III of the ECT.

2.4Modernisation of the ECT

The previous analysis suggests that the environmental provisions included in the ECT are presented more as aspirations than as enforceable rights, which raises concerns about their effectiveness in balancing investment protection. These shortcomings were among the reasons for the recent modernisation process. In the following section, we examine the scope of these reforms and their impact on the environmental orientation of the ECT.

The modernisation of the ECT was formally adopted by the Energy Charter Conference on 3rd of December 2024,[688] following the political agreement on principles negotiated and agreed in June 2022.[689] This adoption concludes a long reform process that was delayed due to disagreements over the modernisation processes and the subsequent collective withdrawal from the ECT.[690] The amendments in Sections A and B of Annexe NI of the ECT come

[686] WÄLDE, 1998, op. cit.
[687] Article 13 of the PEEREA (Relation to the Energy Charter Treaty).
[688] *Decision Of the Energy Charter Conference, CCDEC 2024, 12 GEN, Amendments to the Energy Charter Treaty*. Available from: https://www.energycharter.org/fileadmin/DocumentsMedia/CCDECS/2024/CCDEC202412_EN.pdf
[689] *Decision Of the Energy Charter Conference, CCDEC 2022, 10 GEN, Public Communication explaining the main changes contained in the agreement in principle*. Available from: https://www.energycharter.org/fileadmin/DocumentsMedia/CCDECS/2022/CCDEC202210.pdf
[690] TROPPER, Johannes. The ECT's Long Road to Modernisation: A Story of Delays and Miscalculations, *Völkerrechtsblog* [online]. Available from: https://voelkerrechtsblog.org/the-ects-long-road-to-modernisation/ [Accessed 12.09.2025].

into force on 3rd of September 2025.[691] Their declared purpose is to reinforce the commitment of the contracting parties to environmental protection and reaffirm their obligations under international environmental agreements.

Among the most significant textual revisions is the replacement of the vague FET standard clause with an enumerated list of measures by the host state that may constitute a breach of the obligation to afford the foreign investor fair and equitable treatment.[692] This is intended to enhance legal certainty and to reduce the discretion of arbitral tribunals when balancing investment protection against public policy objectives. It mirrors developments in recent EU agreements, such as the resemblance of the definition of FET standard in the EU-Canada Comprehensive Economic and Trade Agreement (CETA),[693] where the FET standard has been exhaustively defined to constrain arbitral discretion[694] and enhance predictability[695]. There are also new provisions clarifying the concept of direct expropriation and further introducing a definition of indirect expropriation, including a list of factors to consider when determining the existence of indirect expropriation in each individual case, such as economic impact and character of the measures.[696] More specifically, the amendments explicitly state that non-discriminatory measures that are designed and applied to protect legitimate policy objectives, such as environmental protection, public health and safety, do not

[691] *Decision Of the Energy Charter Conference, CCDEC 2024, 15 GEN, Entry into Force and Provisional Application of Amendments to the Energy Charter Treaty and Changes and Modifications to its Annexes,* (1)(b)(i). Available from: https://www.energycharter.org/fileadmin/DocumentsMedia/CCDECS/2024/CCDEC202415_EN.pdf

[692] Article 4.2 of the Amendments to the ECT.

[693] COCCIOLO, Endrius – REINS, Leonie. A Critical Review of the Energy Charter Treaty from an Earth System Law Perspective. *Transnational Environmental Law*, 2025, Vol. 14(1), p. 18. ISSN 2047-1025.

[694] Article 8.10(2) of the CETA; the nature of the FET clause in CETA, see VAN HARTEN, Gus. The EU-Canada Joint Interpretive Declaration/Instrument on the CETA. *Osgoode Legal Studies Research Paper No. 6/2017*. 2017, Vol. 13(2).

[695] This is also supported given that CETA has established a permanent tribunal of the first instance and an appellate tribunal, which should lead to more consistent and coherent jurisprudence.

[696] Article 4.14 of the Amendments to the ECT.

constitute indirect expropriation. The most-favoured-nation (MFN) clause has also been limited to exclude the importance of more favourable dispute settlement provisions from other investment treaties. This means that the substantive provisions in other investment treaties do not, in themselves, constitute *treatment* to be accorded under the MFN clause in the ECT.[697]

The revised ECT text also reaffirms the sovereignty of states over their natural resources and, in a new stand-alone article, explicitly recognises the right of states to regulate in the interest of legitimate public policy objectives,[698] including environmental protection. While this seemingly addresses past concerns, its current formulation is not sufficient to strengthen carbon neutrality, as the proposed changes would still allow tribunals to reassess environmental measures and prioritise private interest over public ones.

The list of energy materials and products[699] has also been updated. Hence, it now covers the investment protection provisions of new energy sources, such as hydrogen, anhydrous ammonia (NH_3), biomass, biogas and synthetic fuels. Every five years, this list will be reviewed and updated to reflect the latest technological and political developments.[700] Among the changes is also a new *flexibility mechanism*[701] that allows contracting parties to exclude the protection of investments in fossil fuels within their territory, taking into account their individual energy security and climate goals.

However, a critical look at the reform process indicates that these changes are mostly superficial. Therefore, while the modernisation process strengthens environmental language, it fails

[697] Article 4.7 of the Amendments to the ECT.
[698] *Decision of the Energy Charter Conference, CCDEC 2022, 10 GEN, Public Communication explaining the main changes contained in the agreement in principle*. Available from: https://www.energycharter.org/fileadmin/DocumentsMedia/CCDECS/2022/CCDEC202210.pdf
[699] See Pilar 1: Updated list of Energy Materials and Products in Ibid.
[700] See Pilar 3: Review mechanism in Ibid.
[701] See Pilar 2: Flexibility in Ibid.

to address the deeper structural asymmetry between investment protection and environmental regulation. Some scholars[702] conclude similarly, arguing that the revisions are not sufficient and leave the fundamental asymmetry between investor rights and state regulatory power unchanged. It should also be emphasised that the modernisation process has been disrupted by political fragmentation and the collective withdrawal of several EU member states and the EU itself.[703] As a result, serious doubts remain as to the practical significance of the modernised version of the ECT. The absence of the EU and some member states is likely to limit its relevance for global energy governance.

2.5 Interim Conclusion

The review of the environmental provisions under the ECT reveals that these provisions do not establish enforceable obligations that might provide a counterbalance to the strong investor protection afforded under Part III. Overall, these provisions are of a soft law nature or rely on cooperation mechanisms rather than legally binding regulatory safeguards. This structural asymmetry between investor protection and environmental regulation has been consistently emphasised in the academic literature and was one of the crucial drivers of the modernisation process, which aimed to restructure the ECT to more explicitly recognise the environmental obligations of states and their right to regulate. Whether the revised ECT can achieve a balance in this asymmetry is rather unlikely; however, it remains the subject of critical scrutiny and will be a matter of application practice.

[702] For example, see COCCIOLO – REINS, op. cit., or COLLI VIGNARELLI, Mattia. Making the Energy Charter Treaty Climate-Friendly: An (Almost) Impossible Leap. In: BÄUMLER, Jelena et al. (eds.). *European Yearbook of International Economic Law 2022*. Cham: Springer International Publishing, 2023, pp. 267–293. ISBN 978-3-031-28532-5.
[703] TROPPER, op. cit.

3 Systemic Integration as a Tool for Treaty Reconciliation

The proliferation of treaties in the late 20th and early 21st centuries has intensified the issue of fragmentation in international law.[704] As states have acceded to hundreds of specialised treaties across different subject matter areas such as trade, investment, human rights or environmental protection, conflicts between regimes have become increasingly common.[705] The individual subject matter areas are considered as a part of general international law, but are often depicted as organically disconnected from each other. The whole consists of a collection of fragmentary parts, with the different parts rarely, if ever, appearing alone, without some relationship to other rules.[706] Therefore, norms arising in different subject matter areas inevitably interact and compete with each other; they do not exist in isolation.[707] This raises the question of how to interpret and apply international treaties to preserve the coherence of international law without subordinating one regime to another. The principle of systemic integration has emerged as an essential interpretative tool to address these challenges.

3.1 Conceptual Foundations of Systemic Integration

The principle of systemic integration is explicitly codified in Article 31(3)(c) of the VCLT, which requires the interpretation of treaties taking into account 'any relevant rules of international law in the relations between the parties.' The VCLT rules on treaty interpretation are widely recognised as customary international law and applicable to the interpretation of all treaties and clauses

[704] UNGA, op. cit.
[705] See e.g., ROBERTS, Anthea. Clash of Paradigms: Actors and Analogies Shaping the Investment Treaty System. *American Journal of International Law*, 2013, Vol. 107(1), pp. 45–94.
[706] KOSKENNIEMI, op. cit., p. 13
[707] SANDS, Philippe. Treaty, Custom and the Cross-fertilization of International Law. *Yale Human Rights and Development Law Journal*, 1999, Vol. 1(1), p. 89.

of the treaty.[708] The rules are set out in Articles 31-33 of the VCLT and apply to both substantive and procedural matters. As a means of treaty interpretation in international law, the principle is receiving increasing attention and is increasingly appearing in decisions of international courts and tribunals.[709]

The principle of systemic integration embeds into treaty law a recognition of the broader international legal context in which treaties operate. The ILC, in its *Report on the Fragmentation of International Law*,[710] underscored systemic integration as one of the primary interpretative techniques available to international adjudicators to manage normative tensions. At its core, systemic integration rests on the presumption that international law constitutes a unified and coherent legal order.[711] This presumption requires that individual treaties not be interpreted in isolation, as their existence, function, and operation presume the presence of other rules in the international law system. Academic literature has further elaborated on this rationale. McLachlan presents systemic integration as a function akin *to that of a master-key in a large building*,[712] allowing treaties to be read together in the broader framework of international law, rather than in isolation. Systemic integration functions as a safeguard against normative isolationism and as an impulse to integrate the disparate elements of international law into a coherent system - thereby ensuring that specialised regimes do not undermine general international law.[713]

3.2The Use of Systemic Integration in International Jurisprudence

[708] GARDINER, Richard. The Vienna Convention Rules on Treaty Interpretation. In: HOLLIS, Duncan (ed.). *The Oxford Guide to Treaties*. Oxford: Oxford University Press, 2020, p. 460 ISBN 978-0-19-884834-9.
[709] MCLACHLAN, op. cit., pp. 279–320.
[710] UNGA, op. cit.
[711] DÖRR, Oliver. Article 31: General Rule of Interpretation. In: DÖRR, Oliver – SCHMALENBACH, Kirsten (eds). *Vienna Convention on the Law of Treaties*. Berlin-Heidelberg: Springer, 2018, p. 603.
[712] MCLACHLAN, op. cit., pp. 280–281.
[713] FERIA-TINTA, Monica. The Master Key to International Law: Systemic Integration in Climate Change Cases. *Cambridge International Law Journal*, 2024, vol. 13(1), pp. 20-40.

The principle of systemic integration was initially interpreted narrowly, limited to general principles of law. Over time, it was gradually expanded to include customary international law and then treaty obligations. This understanding has been strongly shaped by international jurisprudence, as international adjudicatory bodies have increasingly relied on systemic integration when confronted with treaty conflicts and have gradually begun to apply Article 31(3)(c) of the VCLT to reconcile competing treaty regimes and maintain coherence within international law.

The International Court of Justice (ICJ) has played a crucial role in clarifying the application of systemic integration. In the *Oil Platforms* case[714], the ICJ invoked Article 31(3)(c) VCLT to reconcile treaty-specific obligations with broader customary international law principles. The ICJ was to decide whether the US attacks against Iranian oil platforms constituted a breach of the freedom of commerce and navigation. The ICJ explained that "under general rules of treaty interpretation, as reflected in the 1969 Vienna Convention on the Law of Treaties, interpretation must take into account *any relevant rules of international law applicable in the relations between parties* (Art. 31, para. 3 (c)). The Court cannot accept that Article XX, paragraph 1 (d), of the 1955 Treaty was intended to operate wholly independently of the relevant rules of international law on the use of force, so as to be capable of being successfully invoked, even in the limited context of a claim for breach of the Treaty, in relation to an unlawful use of force. The application of the relevant rules of international law relating to this question thus forms an integral part of the task of interpretation entrusted to the Court by Article XX, paragraph 2 of the 1955 Treaty".[715]

[714] See ICJ, *Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgment, 6 November 2003.
[715] See Ibid., para. 41.

The *Golder v. United Kingdom*[716] judgement marked an important starting point for the European Court of Human Rights (ECtHR) in applying the principle of systemic integration. In this case, the question arose as to whether Article 6(1) of the European Convention on Human Rights (ECHR), which guarantees the right to a fair trial, also includes the right of access to a court. The United Kingdom denied that such a right existed under the terms of the ECHR. However, the ECtHR relied on Articles 31 to 33 of the VCLT[717] and interpreted the ECHR in accordance with general principles of international law, including the principle of the rule of law and the prohibition of denial of justice. This interpretive approach was further developed in *Loizidou v. Turkey*,[718] where the ECtHR applied systemic integration[719] to questions of jurisdiction, in *Selmouni v. France*[720] or *Demir and Baykara v. Turkey*, in which the ECtHR states that the *living nature* of the ECHR must be "interpreted in the light of present-day conditions, and that it has taken account of evolving norms of national and international law in its interpretation".[721]

Also, in various World Trade Organization (WTO) cases, the panel and the Appellate Body have stated that non-WTO rules could be used to interpret ambiguous WTO provisions. In the *US-Shrimp* case, the Appellate Body of the WTO referred to international environmental treaties - including the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) –to confirm that sea turtles constituted an "exhaustible natural resource" warranting protection under Article XX(g) of GATT.[722] The *US-Shrimp* decision, therefore, illustrates the application of the principle of systemic integration beyond the

[716] *Golder v. United Kingdom*, Judgment, Merits and Just Satisfaction, App No. 4451/70, A/18, ECHR, 21 February 1975.
[717] Ibid., para 35 and para. 29.
[718] *Loizidou v. Turkey, Judgment, App No. 15318/89, ECHR, 18 December 1996.*
[719] Ibid., paras 43-44.
[720] *Selmouni v. France*, Judgment, App No. 25803/94, ECHR, 28 July 1999, paras 97-98.
[721] Demir and Baykara v. Turkey, Judgement, Application No. 34503/97, ECHR, 12 November 2008, para. 67.
[722] WTO *US-Shrimp*, WT/DS58/AB/R, 12 October 1998.

human rights context and shows that WTO rules are not applied in isolation but within the broader framework of international law.

Together, these cases demonstrate the gradual development of systemic integration into recognised interpretative practice in various international judicial bodies. Although these cases occur within different legal regimes, together they reinforce the argument that non-regime law has an important role in international dispute settlement in general. Yet, this practice is not uniform - adjudicators retain discretionary powers in interpreting and may decide not to include extraneous laws.

3.3 The Use of Systemic Integration by Arbitral Tribunals

The primary source of rules in investment arbitration is investment treaties, which determine the applicable law. The investment tribunals derive their authority from investment treaties with a narrow economic object and purpose[723] and are not generally empowered to decide non-investment issues.[724] This does not, however, imply that international investment law is a self-contained legal regime[725] or an autonomous branch of international law. As codified in Article 31(3)(c) of the VCLT, systemic integration requires tribunals to take into account "any relevant rules of international law applicable in the relations between the parties". While arbitral tribunals have been hesitant to employ systemic integration, due to uncertainty about its scope and the perception[726] of the specific nature of investment law, arbitral practice demonstrates that systemic integration is not absent. On the contrary, tribunals have used systemic integration to place treaty obligations in their broader international legal context.

[723] Ibid., paras 130 and 132, notes 110-113.
[724] *Nafta Methanex Ccorp. v. US (UNCITRAL)*, Final Award of the Tribunal on Jurisdiction and Merits of 3 August 2005, Part II, Chapter B, para. 5.
[725] KOSKENNIEMI, op. cit.
[726] WEERAMANTRY, Romesh. *Treaty Interpretation in Investment Arbitration*. Oxford: Oxford University Press, 2012, p. 95.

A seminal arbitral reference to systemic integration can be found in *Saluka v. Czech Republic* case,[727] which arose out of the failed privatisation of the Czech banking sector. The tribunal interpreted the expropriation clause, and particularly the concept of *deprivation*, relying on systemic integration to apply the international customary law concerning the right of a state to exercise its regulatory power for the maintenance of public order. The tribunal acknowledged that the Netherlands-Czech Republic BIT cannot be read in isolation but must be interpreted in alignment with other applicable rules of law.[728] Similarly, in *Tecmed v. Mexico*,[729] the tribunal balanced the state's regulatory powers with the investors' rights by interpreting the FET standard in light of broader public interest considerations, including environmental protection. Such jurisprudence illustrates the growing judicial recognition that systemic integration offers a pragmatic avenue for reconciling treaty obligations in overlapping legal regimes.

4 Systemic Integration as a Tool for Treaty Reconciliation in the ECT

The principle of systemic integration offers a doctrinal pathway to interpret investment obligations in harmony with evolving environmental commitments, rather than treating them as self-contained and isolated rules. The principle is embodied in Article 31(3)(c) of the VCLT and reinforced by Article 26(6) of the ECT, which requires that disputes be decided not only in accordance with the ECT but also with "applicable rules and principles of international law". These provisions enable arbitral tribunals to adopt an interpretive approach that avoids normative fragmentation and ensures coherence between international investment law and environmental or climate obligations.

[727] *Saluka Investments BV v. Czech Republic*, PCA Case No. 2001-4, Partial Award, 17 March 2006.
[728] Ibid., para. 254.
[729] *Tecmed, S.A. v. The United Mexican States*, ICSID Case No. ARB (AF)/00/2.

An examination of the ECT jurisprudence shows that arbitral tribunals have engaged systemic integration in their decision-making process. In *Electrabel v. Hungary*,[730] the tribunal integrated EU law as part of the relevant international legal framework when applying the ECT and assessing the conduct of Hungary. By invoking both Article 31 VCLT and Article 26(6) of the ECT, the tribunal acknowledged that the ECT cannot be interpreted in isolation from other international legal regimes. It also confirmed that there is no direct conflict between the ECT and other regimes where the subject matter differs.[731] Although the award ultimately rejected Electrabel's claims, the ruling serves as an example of systemic integration, used to reconcile ECT obligations with other binding commitments - in this instance, those arising from EU law. The interaction between the ECT and other treaties was also demonstrated in *SolEs Badajoz v. Spain*[732] case, where the tribunal stated that "when the ECT is interpreted and applied pursuant to the VCLT, treaties other than the ECT could also play a role as applicable law in a variety of ways, (…) thus under both the ECT and the law of treaties, there are circumstances in which the provisions of a treaty other than the ECT could have an impact on the substantive law to be applied in a dispute in which a breach of Part III of the ECT is alleged and thus can play a role as applicable law".[733]

Nevertheless, the full potential of systemic integration in environmental matters remains underutilised – as only a small number of awards have addressed environmental provisions and regulations. The first group of disputes concerns the ECT's own environmental provisions - specifically Article 19 and 24(2)(i) of the ECT. To the best of our data knowledge, Article 19 has only been

[730] *Electrabel S.A. v. Hungary*, ICSID Case No. ARB/07/19, Decision on Jurisdiction, Applicable Law and Liability, 30 November 2012.
[731] Ibid., para 4.176.
[732] *SolEs Badajoz GmbH v. Kingdom of Spain*, ICSID Case No. ARB/15/38, Award, 31 July 2019.
[733] Ibid., para 162.

considered in *Eiser v. Spain*,[734] *Blusun v. Italy*,[735] *NextEra Energy v. Spain,*[736] and *Stadtwerke München v. Spain*[737], and Article 24(2)(i) was only mentioned in *RWE v. Spain*,[738] where the tribunal confirmed that the impact of Article 24(2) does not apply to the investor protection provisions of Part III of the ECT. However, tribunals did not engage with environmental provisions of the ECT substantively.[739] Although such provisions can be used in legal arguments, given their broadness and aspirational nature, it is unlikely that such provisions could effectively be used to strengthen legal claims.[740] The second group involves references to international environmental or climate regulations – particularly where disputed parties themselves invoked such norms. In *Stadtwerke München v. Spain*, the tribunal referred to the UNFCCC and, in furtherance of obligations under the Kyoto Protocol, cited the EU *Directive 2001/77/EC of the European Parliament and of the Council on the Promotion of Electricity Produced from Renewable Energy Sources in the Internal Electricity Market*[741].[742] Similar references also appear in *Eiser v. Spain, Blusun v. Italy* or *Masdar Solar v. Spain*[743]. Yet in these cases, legal norms served primarily as a cursory mention to frame

[734] *Eiser Infrastructure Limited and Energía Solar Luxembourg S.à r.l. v. The Kingdom of Spain*, ICSID Case No. ARB/13/36, Award, 4 May 2017, para. 100.
[735] *Blusun S.A., Jean-Pierre Lecorcier and Michael Stein v. Italian Republic*, ICSID Case No. ARB/14/3, Final Award, 27 December 2016, para. 275.
[736] *NextEra Energy Global Holdings B.V. and NextEra Energy Spain Holdings B.V. v. Kingdom of Spain*, ICSID Case No. ARB/14/11, Decision on Jurisdiction, Liability and Quantum Principles, 12 March 2019, paras 393 and 580.
[737] *Stadtwerke München GmbH, RWE Innogy GmbH and others v. Kingdom of Spain*, ICSID Case No. ARB/15/1, Award, 2 December 2019, para. 53.
[738] *RWE Innogy GmbH and RWE Innogy Aersa S.A.U. v. Kingdom of Spain*, ICSID Case No. ARB/14/34, Award, 18 December 2020, para. 445.
[739] Further see, SHINE, op. cit., p. 520-545.
[740] VIÑUALES, Jorge E. *Foreign Investment and the Environment in International Law*. New York: Cambridge University Press, 2012, pp. 16, 38, 28; SHINE, op. cit., p. 537.
[741] Directive 2001/77/EC of The European Parliament and of the Council of 27 September 2001 on the Promotion of Electricity Produced from Renewable Energy Sources in the Internal Electricity Market, Official Journal of the European Communities Series L 283 (entered into force on 27 October 2001).
[742] *Stadtwerke München v. Spain,* paras 50-53.
[743] *Masdar Solar & Wind Cooperatief U.A. v. The Kingdom of Spain*, ICSID Case No. ARB/14/1, Award, 16 May 2018, paras 103-105.

the dispute or to consider the relevant legal norms for the decision – particularly the EU legislation. Accordingly, systemic integration – understood as considering international agreements beyond the ECT - has so far been applied mainly to clarify the relationship between EU law and the investor protections under the ECT.[744] Therefore, it cannot be said that ECT has been *greened* in arbitrations since the environmental obligations have been considered only as the *context* for assessing reasonableness and proportionality of host state conduct. A landmark case in this respect is *Rockhopper v. Italy*, regarded as the first climate-related case. While the tribunal did not integrate international climate commitments into its legal reasoning, it acknowledged that the disputed law reflected the need "to revisit national energy policies in light of the agreement recently reached in Paris during the Conference of the Parties to the UN Framework Convention on Climate Change (COP21)".[745] This indicates growing awareness of evolving environmental and climate commitments; however, such references remained once again contextual rather than legally determinative.

Emerging cases may signal a turning point.[746] The pending and recently discontinued cases, such as *Uniper v. Netherlands* and *RWE v. Netherlands* (both discontinued), and *Ascent v. Slovenia*[747] and *Towra v. Slovenia*[748] (pending), arise directly from environmental-related and climate-related measures, including coal phase-outs and the prohibition of fracking. Although no tribunal has yet applied international environmental or climate law through systemic integration in a merits determination, these cases

[744] IPP, Anja – MAGNUSSON, Anette – KJELLGREN, Andrina. 2022. *The Energy Charter Treaty, Climate Change and Clean Energy Transition. A Study of the Jurisprudence*. Climate Change Counsel, 2022, pp. 35-40.
[745] *Rockhopper v. Italy*, para. 109.
[746] As states, e.g. in DOOLEY, Josephine. The Co-Existence of Mitigation and International Investment Law: A Practical Assessment of Climate Change Action Under Less 'Green-Friendly' Investment Agreements. *The Journal of World Investment & Trade*, 2022, Vol. 23(5–6), p. 815.
[747] *Ascent Resources Plc and Ascent Slovenia Ltd v. Republic of Slovenia*, ICSID Case No. ARB/22/21, pending.
[748] *Towra SA-SPF v. Republic of Slovenia*, ICSID Case No. ARB/22/33, pending.

present an opportunity to reconcile the ECT provisions (notably the FET standard and expropriation clause) with obligations under international environmental and climate law, including the Paris Agreement.

There is also a growing academic consensus on the importance of adopting an interpretative practice in which environmental and climate norms are substantive elements within arbitral reasoning. Hinrichsen,[749] for example, argues that systemic integration can function as a reconciliation between the traditionally strong protections afforded to fossil fuel investments under the ECT and states' obligations under the international environmental and climate law. This approach positions arbitral tribunals as central fora for reconciling investor rights with sovereign regulatory powers in addressing the environmental and climate crisis. This implies that the *interpretation* becomes the critical juncture where extraneous environmental and climate norms should be integrated to mitigate normative fragmentation.[750] For such reconciliation to occur, arbitral tribunals must engage with international environmental and climate norms as a legally relevant source within the interpretive framework of investment arbitration, rather than as a policy objective in the shadows.

Yet challenges remain. Despite growing theoretical and institutional support, tribunals have seldom invoked Article 31(3)(c) of the VCLT to consider environmental or climate obligations. Instead, the tribunals tend to rely on textual literalism, avoiding broader systemic engagement. As Zhu[751] notes, this reticence may be rooted in a perceived lack of clarity on the legal status of international environmental and climate treaties *vis-à-vis* international investment agreements. Consequently, this ambiguity and the absence of interpretive guidance create the risk that environmental or climate measures adopted by host states

[749] HINRICHSEN, Eike. Reconciling International Climate Law and the Energy Charter Treaty through the Use of Integrative Interpretation in Arbitration. *Laws*, 2024, Vol. 13(2), p. 16. ISSN 2075-471X.
[750] DOOLEY, op. cit., p. 855.
[751] ZHU, op. cit.

could be found to be in breach of the ECT – which shifts the debate to the issue of *regulatory chill*.

One final note – regarding the modernisation of ECT, conclusions remain cautious. As argued in Chapter 3, the reforms amount to more of a symbolic adjustment rather than a structural transformation. The ECT continues to preserve its architecture of strong investor protection and does not impose a positive obligation to consider environmental and climate treaties in investment dispute settlement. These symbolic greening risks legitimising interpretive inertia by offering rhetorical references to sustainability while leaving arbitral discretion untouched. In practice, systemic integration will remain contingent upon the willingness of tribunals to deploy it as a reconciliatory tool. Modernisation has therefore not fundamentally altered the interpretive equation: the potential of systemic integration to reconcile the ECT with evolving environmental obligations continues to depend primarily on whether arbitral tribunals choose to embrace it as a part of their interpretive practice.

Conclusion

This article examined the persistent tension between the ECT and the evolving framework of international environmental and climate law. It demonstrated that the ECT's design, rooted in the political and economic priorities of the early 1990s, entrenched a framework of strong investor protection that now collide with the dynamic obligations emerging from international environmental governance. A review of arbitral jurisprudence further illustrated that this conflict is not merely theoretical – environmental and climate measures adopted by host states are regularly contested under the ECT, with tribunals reluctant to consider these measures as determinative. The environmental provisions of the ECT, while progressive in appearance, remain soft in nature and provide little substantive counterbalance to investor protection in Part III of the ECT.

Against this background, the article explores whether systemic integration offers a potential solution. Enshrined in Article 31(3)(c)

of the VCLT and reinforced by Article 26(6) of the ECT, it provides an interpretive method to align the robust investment protection in the ECT with international environmental and climate law. While tribunals have applied it cautiously so far, academic discourse and pending disputes may represent a possible shift towards reconciliation.

The central contribution of this paper lies in situating systemic integration as a practical interpretive tool capable of reconciling fragmentation and addressing normative conflict. In an era of escalating environmental crisis, where institutional reform of the ECT has proved limited and politically contested, interpretive practice becomes the decisive battleground. Whether the ECT can adapt to contemporary priorities depends less on formal reform and more on interpretive practice. If arbitral tribunals were to embrace systemic integration substantively, environmental and climate law could gain real relevance in arbitral reasoning. If not, the ECT risks remaining a treaty that entrenches the priorities of the past and limits the regulatory space needed for an effective global response to the environmental and climate urgency.

List of Bibliography

1. Ascent Resources Plc and Ascent Slovenia Ltd v. Republic of Slovenia, ICSID Case No. ARB/22/21.

2. BALDON, Clémentine – CRAVEIA, Rosanne. Overview of Recent Fossil Fuel Arbitration Cases Under the Energy Charter Treaty. *Investment Treaty News* [online]. Available from: https://www.iisd.org/itn/2025/01/27/overview-recent-fossil-fuel-arbitration-cases-under-energy-charter-treaty-clementine-baldon-rosanne-craveia. [Accessed 13 September 2025]

3. BERNASCONI-OSTERWALDER, Nathalie – BRAUCH, Markus Dietrich. *Redesigning the Energy Charter Treaty to Advance the Low-Carbon Transition*. *Transnational Dispute Management*, 2019, Vol. 16(1).

4. *Beschluss in dem Verfahren auf Feststellung der Unzulässigkeit des Schiedsverfahrens*, Bundesgerichtshof [Federal Court of Justice], I ZB 75/22, 27 July 2023.

5. *Blusun S.A., Jean-Pierre Lecorcier and Michael Stein v. Italian Republic*, ICSID Case No. ARB/14/3, Final Award, 27 December 2016.

6. BODANSKY, Daniel. The Legal Character of the Paris Agreement. *Review of European, Comparative & International Environmental Law*, 2016, Vol. 25(2). ISSN 2050-0386.

7. *Charter Treaty and Changes and Modifications to its Annexes,* (1)(b)(i). Available from: https://www.energycharter.org/fileadmin/DocumentsMedia/CCDECS/2024/CCDEC202415_EN.pdf

8. COCCIOLO, Endrius – REINS, Leonie. A Critical Review of the Energy Charter Treaty from an Earth System Law Perspective. *Transnational Environmental Law*, 2025, Vol. 14(1).

9. COLLI VIGNARELLI, Mattia. Making the Energy Charter Treaty Climate-Friendly: An (Almost) Impossible Leap. In: BÄUMLER, Jelena et al. (eds.). *European Yearbook of International Economic Law 2022*. Cham: Springer International Publishing, 2023. ISBN 978-3-031-28532-5.

10. CRAVEN, Matthew. Unity, Diversity and the Fragmentation of International Law. In: KLABBERS, Jan - TUORI, Taina (Eds.). *Finnish Yearbook of International Law*, *Vol. 14 (2003)*. Leiden: Brill, 2005.

11. DE GRAAF, Kars - JANS, Jan. The Urgenda Decision: Netherlands Liable for Role in Causing Dangerous Global Climate Change. *Journal of Environmental Law*, 2015, Vol. 27(3).

12. *Decision Of the Energy Charter Conference, CCDEC 2022, 10 GEN, Public Communication explaining the main changes contained in the agreement in principle.* Available from: https://www.energycharter.org/fileadmin/DocumentsMedia/CCDECS/2022/CCDEC202210.pdf

13. *Decision Of the Energy Charter Conference, CCDEC 2024, 12 GEN, Amendments to the Energy Charter Treaty*. Available from: https://www.energycharter.org/fileadmin/DocumentsMedia/CCDECS/2024/CCDEC202412_EN.pdf

14. Decision Of the Energy Charter Conference, CCDEC 2024, 15 GEN, Entry into Force and Provisional Application of Amendments to the Energy.

15. *Demir and Baykara v. Turkey*, Judgement, Application No. 34503/97, ECHR, 12 November 2008.

16. Directive 2001/77/EC of The European Parliament and of the Council of 27 September 2001 on the Promotion of Electricity Produced from Renewable Energy Sources in the Internal Electricity Market, Official Journal of the European Communities Series L 283 (entered into force on 27 October 2001).

17. DOOLEY, Josephine. The Co-Existence of Mitigation and International Investment Law: A Practical Assessment of Climate Change Action Under Less 'Green-Friendly' Investment Agreements. *The Journal of World Investment & Trade*, 2022, Vol. 23(5–6).

18. DÖRR, Oliver. Article 31: General Rule of Interpretation. In: DÖRR, Oliver – SCHMALENBACH, Kirsten (eds). *Vienna Convention on the Law of Treaties*. Berlin-Heidelberg: Springer, 2018.

19. DUPRÉ, Mathilde – KPENOU, Stéphanie. Recent fossil fuel arbitration claims based on the ECT: the urgency of neutralizing the sunset clause. *Institute Veblen* [online], p. 4. Available from: https://www.veblen-institute.org/IMG/pdf/may_2025_recent_fossil_fuel_arbitration_claims_based_on_the_ect_vf-2.pdf [Accessed 13 September 2025]

20. *Eiser Infrastructure Limited and Energía Solar Luxembourg S.à r.l. v. The Kingdom of Spain*, ICSID Case No. ARB/13/36, Award, 4 May 2017.

21. *Electrabel S.A. v. Hungary, ICSID Case No. ARB/07/19, Decision on Jurisdiction, Applicable Law and Liability, 30 November 2012.*

22. *Energy Charter Treaty*, 17 December 1994.

23. FERIA-TINTA, Monica. The Master Key to International Law: Systemic Integration in Climate Change Cases. *Cambridge International Law Journal*, 2024, vol. 13(1).

24. GARDINER, Richard. The Vienna Convention Rules on Treaty Interpretation. In: HOLLIS, Duncan (ed.). *The Oxford Guide to Treaties*. Oxford: Oxford University Press, 2020. ISBN 978-0-19-884834-9.

25. *Golder v. United Kingdom*, Judgment, Merits and Just Satisfaction, App No. 4451/70, A/18, ECHR, 21 February 1975.

26. HINRICHSEN, Eike. Reconciling International Climate Law and the Energy Charter Treaty through the Use of Integrative Interpretation in Arbitration. *Laws*, 2024, Vol. 13(2). ISSN 2075-471X.

27. HOBÉR, Kaj. The Energy Charter Treaty: An Overview. *The Journal of World Investment & Trade,* 2007, Vol. 8(3).

28. ICJ, *Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgment, 6 November 2003.

29. IPP, Anja – MAGNUSSON, Anette – KJELLGREN, Andrina. 2022. *The Energy Charter Treaty, Climate Change and Clean Energy Transition. A Study of the Jurisprudence*. Climate Change Counsel, 2022.

30. *Khan Resources Inc., Khan Resources B.V., and Cauc Holding Company Ltd. v. The Government of Mongolia, UNCITRAL.*

31. KOLO, Abba – WÄLDE, Thomas W. Environmental Regulation, Investment Protection and 'Regulatory Taking' in International Law. *International and Comparative Law Quarterly*, 2001, Vol. 50(4). ISSN 0020-5893.

32. KONOPLYANIK, Andrey - WÄLDE, Thomas W. Energy Charter Treaty and Its Role in International Energy. *Journal of Energy & Natural Resources Law,* 2006, Vol. 24(4).

33. KOSKENNIEMI, Martti. *Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law*. Report of the Study Group of the International Law Commission, A/CN.4/L.682 and Add.1. Geneva: United Nations, 13 April 2006.

34. LEVASHOVA, Yulia. New Wine in Old Wineskins? Climate Cases and the Energy Charter Treaty. In: QUIRICO, Ottavio – WILLIAMS, Katarzyna Kwapisz (eds.). *The European Union and the Evolving Architecture of International Economic Agreements*. Singapore: Springer Nature Singapore, 2023.

35. *Loizidou v. Turkey*, Judgment, App No. 15318/89, ECHR, 18 December 1996.

36. *Masdar Solar & Wind Cooperatief U.A. v. The Kingdom of Spain*, ICSID Case No. ARB/14/1, Award, 16 May 2018.

37. MCLACHLAN, Campbell. The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention. *International and Comparative Law Quarterly*. 2005, vol. 54, pp. 279–320.

38. *Nafta Methanex corp. v. US (UNCITRAL)*, Final Award of the Tribunal on Jurisdiction and Merits, 3 August 2005.

39. NEDEVA, Stanislava. The Neglected Public Interest in Investor-State Dispute Settlement: Environmental and Human Rights Considerations. *European Energy and Environmental Law Review*, 2024, Vol. 33(5). ISSN 0966-1646.

40. *NextEra Energy Global Holdings B.V. and NextEra Energy Spain Holdings B.V. v. Kingdom of Spain*, ICSID Case No. ARB/14/11, Decision on Jurisdiction, Liability and Quantum Principles, 12 March 2019.

41. ÖGÜTÇÜ, Mehmet. Eurasian Energy Prospects and Politics: Need for a Longer-Term Western Strategy. In: WAELDE, Thomas W. (ed.). *The Energy Charter Treaty: An East-West Gateway for Investment and Trade*. London: Kluwer Law International, 1996. ISBN 90-411-0913-7.

42. *Paris Agreement to the United Nations Framework Convention on Climate Change*, 12 December 2015, T.I.A.S. No. 16-1104.

43. *Protocol on Energy Efficiency and Related Environmental Aspects*, 19 December 1994.

44. RAJAMANI, Lavanya - PEEL, Jacqueline (eds.). *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press, 2021. ISBN 978-0-19-884915-5.

45. ROBERTS, Anthea. Clash of Paradigms: Actors and Analogies Shaping the Investment Treaty System. *American Journal of International Law*, 2013, Vol. 107(1).

46. *Rockhopper Italia S.p.A., Rockhopper Mediterranean Ltd., and Rockhopper Exploration Plc. v. Italian Republic*, ICSID Case No. ARB/17/14, Final Award, 23 August 2022.

47. *RWE Innogy GmbH and RWE Innogy Aersa S.A.U. v. Kingdom of Spain*, ICSID Case No. ARB/14/34, Award, 18 December 2020.

48. RAJAMANI, Lavanya - PEEL, Jacqueline (eds.). *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press, 2021. ISBN 978-0-19-884915-5.

49. SANDS, Philippe. Treaty, Custom and the Cross-fertilization of International Law. *Yale Human Rights and Development Law Journal*, 1999, Vol. 1(1).

50. SCHRAM, Ashley et al. Internalisation of International Investment Agreements in Public Policymaking: Developing a Conceptual Framework of Regulatory Chill. *Global Policy*, 2018, Vol. 9(2). ISSN 1758-5880

51. *Selmouni v. France*, Judgment, App No. 25803/94, ECHR, 28 July 1999.

52. SHINE, Claire. Environmental Protection Under the Energy Charter Treaty. In: WÄLDE, Thomas (ed). *The Energy Charter Treaty: An East-West Gateway for Investment and Trade*. London: Kluwer Law International, 1996.

53. SHUKLA, Priyadarshi et al. (eds.). *Working Group III Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Geneva: IPCC, 2022.

54. SIMÕES, Fernando Dias. When Green Incentives Go Pale: Investment Arbitration and Renewable Energy Policymaking. *Denver Journal of International Law and Policy*, 2017, Vol. 45(2).

55. *SolEs Badajoz GmbH v. Kingdom of Spain*, ICSID Case No. ARB/15/38, Award, 31 July 2019.

56. *Stadtwerke München GmbH, RWE Innogy GmbH and others v. Kingdom of Spain*, ICSID Case No. ARB/15/1, Award, 2 December 2019.

57. *Tecmed, S.A. v. The United Mexican States*, ICSID Case No. ARB (AF)/00/2.

58. TIENHAARA, Kyla - DOWNIE, Christian. Risky Business? The Energy Charter Treaty, Renewable Energy, and Investor-State Disputes. *Global Governance,* 2018, Vol. 24(3). ISSN 10752846, 19426720.

59. TIENHAARA, Kyla. Regulatory Chill and the Threat of Arbitration: A View from Political Science. In: BROWN, Chester – MILES, Kate (eds.). *Evolution in Investment Treaty Law and*

Arbitration. Cambridge: Cambridge University Press, 2011. ISBN 978-1-107-01468-8.

60. *Towra SA-SPF v. Republic of Slovenia*, ICSID Case No. ARB/22/33, pending.

61. TROPPER, Johannes. The ECT's Long Road to Modernisation: A Story of Delays and Miscalculations, *Völkerrechtsblog* [online]. Available from: https://voelkerrechtsblog.org/the-ects-long-road-to-modernisation/ [Accessed 12.09.2025].

62. UNGA. *Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law: Report of the Study Group of the International Law Commission*. A/CN.4/L.702. Geneva: United Nations, 18 July 2006.

63. *Uniper SE, Uniper Benelux Holding B.V. and Uniper Benelux N.V. v. Kingdom of the Netherlands*, ICSID Case No. ARB/21/22, Claimants' Memorial, 20 May 2022.

64. Uniper SE. Agreement on Amended Stabilization Package: Federal Government Acquires 99 % stake in Uniper. [Press release]. *uniper.energy* [online]. 21 September 2022 [viewed 17 March 2024]. Available from: https://www.uniper.energy/news/agreement-on-amended-stabilization-package-federal-government-acquires-99-stake-in-uniper

65. *United Nations Framework Convention on Climate Change*, 9 May 1992, S. Treaty Doc No. 102-38, 1771 U.N.T.S. 107.

66. VAN HARTEN, Gus. The EU-Canada Joint Interpretive Declaration/Instrument on the CETA. *Osgoode Legal Studies Research Paper No. 6/2017*. 2017, Vol. 13(2).

67. *Vattenfall AB and others v. Federal Republic of Germany*, ICSID Case No. ARB/09/6, Award, 11 March 2011.

68. *Vattenfall AB, Vattenfall Europe AG, Vattenfall Europe Generation AG & Co. KG v. The Federal Republic of Germany*, ICSID Case No. ARB/09/6, Request for Arbitration, 30 March 2009.

69. *Vienna Convention on the Law of Treaties*, 23 May 1969.

70. VIÑUALES, Jorge E. *Foreign Investment and the Environment in International Law*. New York: Cambridge University Press, 2012.

71. WÄLDE, Thomas W. International Investment under the 1994 Energy Charter Treaty: Legal, Negotiating and Policy Implications for International Investors within Western and Commonwealth of Independent States/Eastern Europe. *Journal of World Trade*, 1995, Vol. 29(5). ISSN 1011-6702.

72. WÄLDE, Thomas. W. Sustainable Development and the 1994 Energy Charter Treaty: Between Pseudo-Action and the Management of Environmental Investment Risk. In: WEISS, Friedl. et al (eds.). *International Economic Law with a Human Face*. The Hague: Kluwer Law International, 1998.

73. WEERAMANTRY, Romesh. *Treaty Interpretation in Investment Arbitration*. Oxford: Oxford University Press, 2012.

74. *Wet van 11 December 2019, houdende Regels voor het produceren van elektriciteit met behulp van kolen (Wet verbod op kolen bij elektriciteitsproductie).*

75. WTO US-Shrimp, WT/DS58/AB/R, 12 October 1998.

76. ZHU, Ying. A quasi-normative conflict: Resolving the tension between investment treaties and climate action. *Review of European, Comparative & International Environmental Law,* 2024, Vol. 33(2). ISSN 2050-0386.

VI. INTERNATIONAL LEGAL REGULATION OF ENVIRONMENTAL PROTECTION DURING ARMED CONFLICT

6.1. International Legal Aspects of Forest Protection from Fires on Radiation-Hazardous Lands Under Martial Law in Ukraine

Olena Hulak, Doctor in Law, Professor

National University of Life and Environmental Sciences of Ukraine, 03041, 15 Heroiv Oborony Str., Kyiv, Ukraine

https://orcid.org/0000-0001-9004-0185

lenagulac8118@ukr.net

Dmytrii Holiaka, PhD

National University of Life and Environmental Sciences of Ukraine, 03041, 15 Heroiv Oborony Str., Kyiv, Ukraine

https://orcid.org/0000-0001-8025-8885

Introduction

In the last decade, Ukraine has experienced a steady increase in large-scale forest fires characterized by rapid spread and significant difficulties in suppression. The lowest level of fire safety is currently observed in the Chornobyl Exclusion Zone as well as in the south-eastern regions of the country. The risks have been considerably aggravated by the full-scale military aggression of the Russian Federation and the massive bombardment of Ukrainian territory, which have extended the threat of uncontrolled fires to almost the entire state.

Since the beginning of Russian aggression in 2014, additional factors contributing to the occurrence and escalation of fire processes in ecosystems have included active hostilities and contamination of territories with explosive objects[752]. The

[752] Regional Eastern European Fire Monitoring Center. (2020). Development of a fire management
plan and decision support system for prevention, early response and radiologically safe extinguishing

Exclusion Zone proved to be particularly vulnerable, having fallen under Russian military control on the first day of the invasion (24 February 2022) and subsequently being de-occupied on 28 March 2022[753]. Despite this relatively short period of occupation, the environment suffered significant damage, while mined areas left behind created an additional layer of ecological and technogenic risks.

The issue of suppressing and preventing forest fires in the territories contaminated by radionuclides due to the Chornobyl accident is currently among the most critical environmental challenges for Ukraine. Its relevance is driven by the fact that any fire, even a local one, leads to the release of significant volumes of radioactive substances into the atmosphere. This occurs because up to 40% of all biologically available radioisotopes that have accumulated in the ecosystems are concentrated in the combustible forest litter[754].

A vivid confirmation of this threat was the catastrophic fires of 2015 and 2020. According to scientific modeling by the Norwegian Institute for Air Research, the 2015 fires became a source of cross-border transport of radioactive aerosols, which were detected in the air over a number of European states[755] (Fig.1; Fig.2). The consequences of the 2020 fires were even more devastating; they not only remobilized radionuclides but also led to billions of hryvnias in material damages, the destruction of settlements, loss of life, and the degradation of forest areas covering over 157,000

---

of forest fires in the Exclusion Zone. Ukraine. Technical report. Retrieved from https:// Retrieved from https://nubip.edu.ua/sites/default/files/u184/chrebz_fire_management_plan_fin_7_08.11.21.pdf

753 Halushchenko O. (2023). Director of the Chornobyl Radiation and Ecological Biosphere Reserve. Chornobyl Scientific and Practical Journal. 4. May, 2023.

754 Yoschenko, V., Nanba, K., Ohkubo, T., Kato, H. (2022). Behavior of Fukushima-Derived Radiocesium in Forest Ecosystems. In: Nanba, K., Konoplev, A., Wada, T. (eds) Behavior of Radionuclides in the Environment III. Springer, Singapore. https://doi.org/10.1007/978-981-16-6799-2_19

755 Zibtsev SV, Soshensky OM, Humeniuk VV, Koren VA (2019). Long-term dynamics of forest fires in Ukraine. Ukrainian journal of forest and wood science. Vol. 10. No. 3. P. 27-40. Retrieved from: https://nubip.edu.ua/sites/default/files/u184/13113-29360-1-sm1.pdf

hectares[756]. Thus, these events clearly demonstrate the complex nature of the threat, which combines environmental, social, and economic risks on a national scale.

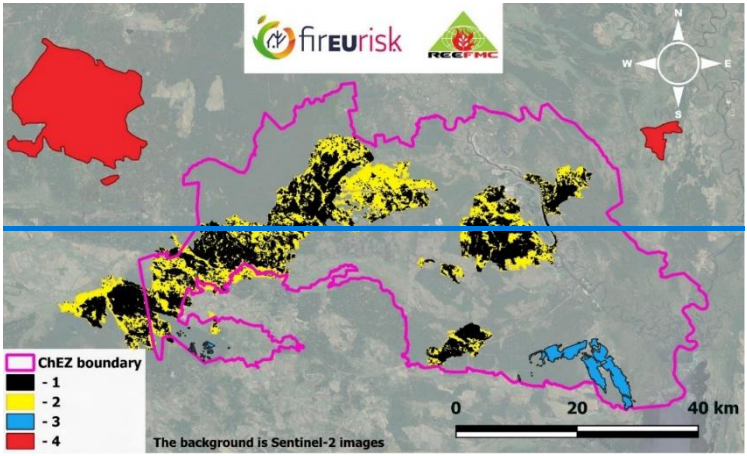


Figure 1. Spatial distribution of areas affected by wildfire in the Exclusion Zone and adjacent territories Notes: 1 – where woody vegetation died, 2 – other areas affected by landscape fires in April 2020, 3 – areas with dead trees as a result of fires in 2022, 4 – areas of burned areas traversed by fire in April 2020, which are mostly not classified as radiation hazardous land[757]

[756] Soshensky O. (2023). Forest firefighters of the Severnaya Pushcha State Enterprise in the Chernobyl Exclusion Zone have passed. Forest firefighter training course. Retrieved from: https://nubip.edu.ua/node/124627

[757] Source: compiled by the authors of this study

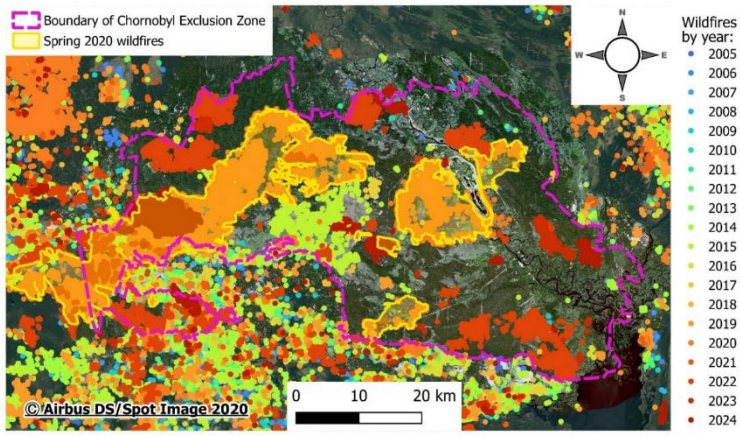


Figure 2. Spatial and temporal distribution of areas burned in the Ukrainian Exclusion Zone and adjacent territories during 2005–2024 according to the FIRMS thermal anomalies archive and manual delineation of burned areas using Sentinel-2 and Landsat-7/8 satellite data.

At the same time, a combination of factors, including active hostilities, rapid climate change, the specific structure of forest stands in the Exclusion Zone with a predominance of coniferous (mainly pine) species that accumulate significant amounts of combustible biomass, substantial cluttering of forest areas and accumulation of deadwood, insufficient density of fire protection roads, limited funding, as well as restricted access to certain forest plots due to mine hazards, creates conditions for the occurrence of forest fires. The further development of such fires will largely be determined by the consequences of the ongoing military actions on the territory of Ukraine.

The issue of forest fire protection in areas contaminated by radioactive fallout under martial law in Ukraine has, to some extent, been the subject of research by various scholars. In particular, V. Yoschenko, S. Levchuk, A. Hlukhivskyi, Yu.

Khomutynin, V. Protsak, S. Lundin, A. Kadygrib, S. Zvarych, I. Maloshtan, V. Lanshyn, M. Kovtun, and J. Chiers conducted a comprehensive analysis of radionuclide transfer and redistribution during grassland and forest fires in the Chornobyl Exclusion Zone. Their studies were carried out in the context of fire and transport modeling[758],[759]. J. Goldammer, S. Zibtsev, O. Soshenskyi, V. Myroniuk, R. Vasylyshyn, I. Budzynskyi, O. Vorotynskyi, Ye. Kalchuk, S. Sydorenko, O. Borsuk, I. Zibtseva, M. Melnikovych, J. Blaser, P. Weber, O. Patrick, S. Garcia, V. Humeniuk, and V. Meshkova conducted studies on reducing forest fire risks for settlements in Ukraine[760].

At a high scientific level, the collateral environmental damages of war and the "nuclear" legacy in Ukraine have been assessed[761]. Other studies examined the state of forest management in Ukraine in the context of the climate crisis, war, and numerous fires[762]. Research also focused on forest management practices in areas contaminated with unexploded ordnance[763]. In 2023, S. Zibtsev, O.

---

[758] Yoschenko, V.I., Kashparov, V.A., Protsak, V.P., Lundin, S.M., Levchuk, S.E., Kadygrib, A.M., Zvarich, S.I., Khomutinin, Yu.V., Maloshtan, I.M., Lanshin, V.P., Kovtun, M.V., and Tschiersch, J. (2006a). Resuspension and redistribution of radionuclides during grassland and forest fires in the Chernobyl Exclusion Zone: Part I. Fire experiments. Journal of Environmental Radioactivity. 86 (2), 143-163.

[759] Yoschenko, V.I., Kashparov, V.A., Levchuk, S.E., Glukhovskiy, A.S., Khomutinin, Yu.V., Protsak, V.P., Lundin, S.M., and Tschiersch, J. (2006b). Resuspension and redistribution of radionuclides during grassland and forest fires in the Chernobyl Exclusion Zone: Part II. Modeling the transport process. Journal of Environmental Radioactivity. 87 (3), 260-278.

[760] Soshensky O. (2023). Forest firefighters of the Severnaya Pushcha State Enterprise in the Chernobyl Exclusion Zone have passed. Forest firefighter training course. Retrieved from: https://nubip.edu.ua/node/124627

[761] Goldammer J. G., Zibtsev S., Soshenskyi O. (2023). Wildfires: Collateral damages of war and nuclear heritage in Ukraine. Bonn International News, March 2023. Retrieved from: Ausgabe 3 / 2023 - März 2023/

[762] Zibtsev S, Soshenskyi O., Melnykovych M., Blaser J., Waeber P. O., Patrick O, Garcia C. (2023a). Ukrainische Wälder im Fokus von Klimakrise Krieg und Brandkatastrophen. Schweizerische Zeitschrift fur Forstwesen. 174 (2): 115–117. DOI: https://doi.org/10.3188/szf.2023.0115

[763] Zibtsev S.V., Soshenskyi O.M., Goldammer J.G., Myroniuk V.V., Borsuk O.A., Humeniuk V.V., Meshkova V.L., Vasyluk O.V., Buksha I.F. (2023b). Forest Management on Territories Contaminated with Unexploded Ordnance. Short report of the project WWF-Ukraine "Supporting responsible forestry for sustainable development in Central and Eastern Europe". WWF-Ukraine. 24 p. DOI: http://dx.doi.org/10.13140/RG.2.2.22495.12966

Soshenskyi, V. Humeniuk, and V. Bohomolov published a monographic study devoted to integrated landscape fire management in Luhansk region[764]. Additionally, O. Borsuk, V. Myroniuk, and S. Kireiev investigated the protection of natural landscapes in the Exclusion Zone from fires and identified prospective ways of reducing associated risks[765]. V. Kashparov, S. Lundin, A. Kadygrib, V. Protsak, S. Levchuk, V. Yoschenko, V. Kashpur, and N. Talerko analyzed forest fires in territories contaminated as a result of the Chornobyl accident, particularly focusing on radioactive aerosol suspension and the risks of firefighter irradiation[766].

However, it should be noted that there is a lack of studies directly addressing the purely legal foundations of this issue. For this reason, the source base has been supplemented by works of authors covering related aspects. In particular, V. Kashparov's research on the analysis of experimental biogenic fluxes of 137Cs in forest ecosystems[767], as well as the works of O. Gulac – her dissertation on administrative and legal support for fire safety in forests[768] and a series of scientific articles co-authored on the

[764] Zibtsev S., Soshensky O., Humeniuk V., Bogomolov V. (2023c). Plan of integrated management of landscape fires in Luhansk region: monograph / Kyiv: Editorial and publishing department of NULES of Ukraine. 257. Retrieved from: sites/default/files/u184/zibtsev_et_al._monograf_2023.pdf

[765] Borsuk O., Myroniuk V., Kireev S., Zibtsev S., Soshenskyi O. (2023). Protection of natural landscapes of the Exclusion Zone from fires and promising ways to reduce risks. Chornobyl Scientific and Practical Journal. May. 50-61. Retrieved from: http://zapovidnyk.org.ua/hub/hub-4-2023-05.pdf.

[766] Kashparov, V.A., Lundin, S.M, Kadygrib, A.M., Protsak, V.P., Levtchuk, S.E., Yoschenko, V.I., Kashpur, V.A., and Talerko, N.M. (2000). Forest fires in the territory contaminated as a result of the Chernobyl accident: radioactive aerosol resuspension and exposure of fire-fighters. Journal of Environmental Radioiactivity. 51, 281-298.

[767] Kashparov V.A. (2014). Experimental biogenic fluxes 137Cs in forest ecosystems. The scientific and research Report. NUBiP Ukraine, Kyiv, 81p.

[768] Gulak O.V. (2020). Theoretical and methodological bases of administrative and legal support of fire safety in the forests of Ukraine: Dissertation ... Doctor of Laws: 12.00.07 "Administrative Law and Process; Financial Law; Information Law". K.: NULES of Ukraine, Kyiv. 586.

analysis of state environmental policy and legal regulation of fire safety in Ukrainian forests[769],[770],[771].

The purpose of the article is to examine the international legal aspects of forest protection from wildfires on radiation-hazardous lands under martial law in Ukraine.

The strategic goal of forest management in the Exclusion Zone is the preservation of its ecosystems, which serve as the primary reservoir for the accumulation and retention of radionuclides, as well as the prevention of their uncontrolled movement. At the same time, this goal does not differ from the ordinary practices of forest management implemented by state forestry enterprises in other regions of Ukraine, nor from the activities of other agencies in protected areas across the country.

Its particular features are as follows: activities are aimed at maximizing the barrier function to prevent radionuclide leakage; there is no objective to establish productive commercial plantations or to obtain commercial products/timber, and therefore no main forest utilization.

The conditions characteristic of this territory, compared with other protected areas in Ukraine, lie in the presence of forests contaminated with radionuclides, which are highly vulnerable to fires and diseases, and of which 30% have already been damaged by wildfires[772].

---

[769] Gulac O.; Marchenko O.; Kapitanenko N.; Kuris Y.; Oleksenko R. (2022a). State environmental policy on the issue of legal regulation of fire safety in the forests of Ukraine. Cuestiones Políticas. 40 (74). 195-206. DOI: https://doi.org/10.46398/questionpol.4074.10

[770] Gulac O., Oleksenko R., Kaluha V., Kravchenko O., Yukhymenko N. (2022b). Overcoming the environmental crisis in the forest sector of Ukraine in the context of the European green course. Vol. 13 No. 38. Revista de la Universidad del Zulia. Retrieved from: https://produccioncientificaluz.org/index.php/rluz/article/view/38698

[771] Gulac O.; Oleksenko R.; Sobol Y.; Milova T., Troshkina K. (2022c). Reform of public administration in the forestry sector of Ukraine. Cuestiones Políticas. Vol. 40 (75). Diciembre. DOI: https://doi.org/10.46398/cuestpol.4075.20.

[772] Strategy for the Development of the Territories of the Exclusion Zone and the Zone of Unconditional (Mandatory) Resettlement Affected by Radioactive Contamination as a Result of the Chornobyl Disaster for 2021-2030. (2020).

Results and Discussion

The State of Fire Safety, Risks, and Threats of Forest Fires in Radioactively Contaminated Areas

The forests of the Chornobyl Exclusion Zone play a crucial role as a natural barrier, containing the spread of radioactive contamination. The reliability of this barrier directly impacts the safety level of the population and adjacent territories.

Radiation monitoring in the exclusion zone confirms that almost all ecosystem components remain contaminated. At the same time, recent studies show a stabilization in the accumulation of cesium-137 (^{137}Cs) and strontium-90 (^{90}Sr) in forest ecosystems[773]. However, the processes of redistribution and migration of radionuclides continue, leading to the formation of secondary contamination sources capable of spreading beyond the zone[774]. Overall, the Chornobyl accident contaminated over 3.3 million hectares of forests[775].

Interestingly, during the 2020 wildfires, gamma radiation levels in fire-affected areas showed no significant fluctuations. Although concentrations of ^{137}Cs, ^{90}Sr, and transuranic elements in the surface air layer did not exceed permissible limits for the

Retrieved from: https://dazv.gov.ua/attachments/c80519b0-7495-46ac-887a-00d819ed9f7a_11.12-stratehiia.pdf

[773] Holiaka, D., Levchuk, S., Kashparov, V., Yoschenko, V., Hurtevent, P., Coppin, F., Beasley, J.C., 2025. 90Sr and 137Cs distribution in Chornobyl forests: 30 years after the nuclear accident. J. Environ. Radioact. 282. https://doi.org/10.1016/j.jenvrad.2025.107616

[774] National Report on the State of Man-Made and Natural Safety in Ukraine, 2016

[775] Malimon S.S. (2009). Fundamentals of ecology: a textbook. Vinnytsia: Nova Knyha, 240.

population, they significantly exceeded background values—by 1.4 to 44 times depending on the measurement location[776],[777].

Forest fires in the exclusion zone pose several critical threats. In particular, besides the potential spread of radionuclides beyond the zone and direct danger to nuclear infrastructure facilities, they sharply deteriorate the radiological situation at fire sites. This occurs due to a sharp increase in the concentration of radioactive substances in the air, creating additional risks for firefighters working in the fire zone[778],[779].

The main danger for rescuers is the inhalation of radioactive particles. During combustion, not only does the evaporation of radionuclides occur, but also the formation of ultrafine aerosol particles—products of combustion and condensation of radioactive substances. This leads to a significant increase in radiation concentration in the breathable air layer[780],[781]. Particular attention

---

[776] Zibtsev S., Soshensky O., Borsuk O., Myroniuk V., Kireev S. (2023). Protection of natural landscapes of the Exclusion Zone from fires and promising ways to reduce risks. Chornobyl Scientific and Practical Journal. May. P. 50-61. Retrieved from: http://zapovidnyk.org.ua/hub/hub-4-2023-05.pdf

[777] Kashparov, V., Kirieiev, S., Yoschenko, V., Levchuk, S., Holiaka, D., Zhurba, M., Bogdan, L., Vyshnevskyi, D., Oughton, D.H., 2024. Assessment of exposures to firefighters from wildfires in heavily contaminated areas of the Chornobyl Exclusion Zone. J. Environ. Radioact. 274. https://doi.org/10.1016/j.jenvrad.2024.107410

[778] Zibtsev S., Soshensky O., Borsuk O., Myroniuk V., Kireev S. (2023). Protection of natural landscapes of the Exclusion Zone from fires and promising ways to reduce risks. Chornobyl Scientific and Practical Journal. May. P. 50-61. Retrieved from: http://zapovidnyk.org.ua/hub/hub-4-2023-05.pdf

[779] Kashparov, V., Kirieiev, S., Yoschenko, V., Levchuk, S., Holiaka, D., Zhurba, M., Bogdan, L., Vyshnevskyi, D., Oughton, D.H. (2024). Assessment of exposures to firefighters from wildfires in heavily contaminated areas of the Chornobyl Exclusion Zone. J. Environ. Radioact. 274. https://doi.org/10.1016/j.jenvrad.2024.107410

[780] Kashparov, V.A., Lundin, S.M, Kadygrib, A.M., Protsak, V.P., Levtchuk, S.E., Yoschenko, V.I., Kashpur, V.A., and Talerko, N.M. (2000). Forest fires in the territory contaminated as a result of the Chernobyl accident: radioactive aerosol resuspension and exposure of fire-fighters. Journal of Environmental Radioiactivity. 51, 281-298.

[781] [781] Yoschenko, V.I., Kashparov, V.A., Protsak, V.P., Lundin, S.M., Levchuk, S.E., Kadygrib, A.M., Zvarich, S.I., Khomutinin, Yu.V., Maloshtan, I.M., Lanshin, V.P., Kovtun, M.V., and Tschiersch, J. (2006). Resuspension and redistribution of radionuclides during grassland and forest fires in the Chernobyl Exclusion Zone: Part I. Fire experiments. Journal of Environmental Radioactivity. 86 (2), 143-163.

should be paid to pine forests, as their litter can concentrate up to 40% of the total radiation (^{137}Cs and ^{90}Sr), while in wood—only up to 10%[782]. The high content of radiocesium combined with the low shielding properties of coniferous litter creates elevated levels of external exposure in pine forests compared to other terrain types[783].

Considering these risks, Ukrainian legislation establishes clear limits on the time firefighters can spend on the fire line, based on permissible radiation exposure doses according to national radiation safety standards[784].

An absolutely cynical and brazen act of aggression by the Russian Federation occurred during the three years of full-scale war on the territory of Ukraine, violating the environmental rights to a safe environment not only of Ukrainians but also posing potential significant risks for the population of other countries, particularly European ones. Thus, on the night of February 14, 2025, the Russian army attacked the shelter over the destroyed fourth power unit of the Chornobyl NPP with a strike drone. The attack and resulting fire damaged the integrity of the outer shell of the New Safe Confinement and equipment in the crane maintenance garage. According to expert assessments, the radiation situation at the site remained unchanged. The shelter at the Chornobyl NPP is designed to prevent the spread of nuclear dust located beneath it. However, it is not capable of protecting against missile or drone attacks. "Accordingly, breaching and creating a shockwave inside will unequivocally lead to a significant increase in radiation levels within a certain territory. The extent of this territory depends on the force of the impact and

[782] Holiaka, D., Levchuk, S., Kashparov, V., Yoschenko, V., Hurtevent, P., Coppin, F., Beasley, J.C., 2025. 90Sr and 137Cs distribution in Chornobyl forests: 30 years after the nuclear accident. J. Environ. Radioact. 282. https://doi.org/10.1016/j.jenvrad.2025.107616

[783] Kashparov V.A. (2014). Experimental biogenic fluxes 137Cs in forest ecosystems. The scientific and research Report. NUBiP Ukraine, Kyiv, 81p.

[784] Resolution of the Cabinet of Ministers of Ukraine «On Approval of the Procedure for Organizing the Protection and Protection of Forests» No 612. (2022, May). Retrieved from: https://zakon.rada.gov.ua/laws/show/612-2022-%D0%BF#Text

explosion"[785]. The fire resulting from this impact was only fully extinguished by March 7, 2025.

Problematic Aspects of the Legal Regulation of Forest Fire Protection in Ukraine's Radioactively Contaminated Areas

The Exclusion Zone and the Zone of Unconditional (Mandatory) Resettlement constitute the territory most affected by radioactive contamination following the Chornobyl disaster. These areas operate under a special management regime: lands are withdrawn from economic use and separated from adjacent territories[786]. Forests cover approximately 140.6 thousand hectares of this zone[787].

Forest management within the Exclusion Zone is regulated primarily by the Law of Ukraine "On the Legal Regime of the Territory Contaminated by Radioactive Contamination as a Result of the Chornobyl Catastrophe." This law defines three zones: the Exclusion Zone, the Zone of Unconditional Resettlement, and the Zone of Guaranteed Voluntary Resettlement[788] (Law of Ukraine, 1991).

Fire safety in Ukrainian forests, including the Exclusion Zone, is governed by numerous regulatory acts at various levels. Key *State-level* acts include: 1) CMU Resolution No. 314 (2023) on voluntary fire protection; 2) CMU Resolution No. 612 (2022) on forest protection and defense; 3) CMU Resolution No. 976 (2009) on the

[785] There was a hit in the shelter above the 4th power unit, a fire broke out: the main thing about the Russian strike on the Chernobyl NPP. (2025, February). Retrieved from: https://24tv.ua/udar-po-chaes-14022025-shho-vidomo-pro-situatsiyu-chornobili_n2752869

[786] Order of the Cabinet of Ministers of Ukraine «On Approval of the Concept of Implementation of the State Policy in the Field of Development of Activities in Certain Radioactive Contamination Zones» No 535. (2012, Jule). Retrieved from: https://zakon.rada.gov.ua/laws/show/535-2012-%D1%80.

[787] Loginova O. (2015). Business zone: Chornobyl timber for export (investigation). Retrieved from: www.radiosvoboda.org/content/article/27212140.html.

[788] Law of Ukraine «On the Legal Regime of the Territory Affected by Radioactive Contamination as a Result of the Chornobyl Disaster» No 791a. (1991, February). Retrieved from: http://zakon.rada.gov.ua/laws/show/791%D0%B0-12#o109.

forest guard service; 4) CMU Resolution No. 1127 (2000) on the protection of the nature reserve fund. *Departmental-level* acts include: 1) Order of the Ministry of Environment No. 382 (2020) on departmental fire protection; 2) Order of the State Forest Resources Agency No. 192 (2021) on the "Fires" automated system; 3) Order of the State Forestry Committee No. 526 (2005) on forest fire stations; 4) Order of the State Forestry Committee No. 278 (2004) on fire safety rules in forests. An example of an *Interdepartmental-level* act is: Joint Order of the Ministry of Environment and the Ministry of Internal Affairs No. 01/01 (2018) on fire suppression in the reserve.

It should be noted that Ukraine employs a conservative approach to forest fire safety, focused on fire prevention, contrasting with the modern global approach of "fire management." Furthermore, most requirements of outdated regulatory documents, such as the "Fire Safety Rules in Ukrainian Forests" and the "Regulations on Forest Fire Stations," are not implemented in the Exclusion Zone due to objective and subjective reasons[789].

The adoption of CMU Resolution No. 612 on May 20, 2022, and subsequent amendments to CMU Resolution No. 976 of September 16, 2009, significantly altered the state's approach to fire safety in Ukrainian forests. A particularly important aspect was the formal recognition of the responsibility of *other forest users and forest owners* (who own approximately 27% of forests), not just the State Forest Resources Agency (73% of forests). However, these changes failed to consider the complex nature of the system tasked with implementing this function.

The main problems in regulatory framework within this area of study, in our opinion, are as follows:

[789] Zibtsev S., Soshensky O., Borsuk O., Myroniuk V., Kireev S. (2023). Protection of natural landscapes of the Exclusion Zone from fires and promising ways to reduce risks. Chornobyl Scientific and Practical Journal. May. P. 50-61. Retrieved from: http://zapovidnyk.org.ua/hub/hub-4-2023-05.pdf

1) *Outdated Regulations:* Documents from 2004-2005 (Regulations on Forest Fire Stations and Fire Safety Rules) remain in effect but do not address contemporary challenges;

2) *Legal Contradictions:* Significant discrepancies exist between the new Resolution No. 612 and older departmental acts, despite all regulating the same sphere;

3) *Imperfect Name and Legal Basis:* CMU Resolution No. 612 has a somewhat misleading title, as it pertains predominantly to fire prevention measures. It was also developed based solely on the Forest Code, without proper consideration of the Civil Protection Code;

4) *Lack of a Comprehensive Approach:* The specified regulation does not account for the necessity of interaction with the civil protection system, territorial communities, military administrations, and other entities, particularly in preventive activities.

Overall, although CMU Resolution No. 612 of May 20, 2022, contains references to some already invalid regulatory acts (particularly in clauses 61 and 62), its innovative and progressive character is undeniable. It aligns with modern approaches, technological innovations, and international standards for developing strategic regulatory documents with a clearly defined terminological framework[790].

However, the structure of the "Procedure for Organizing Forest Protection and Defense," despite its declared broad range of tasks (including protection against illegal logging, pests, and diseases), in fact contains only fire prevention provisions. It specifically regulates: 1) Types of forest fires; 2) Requirements for protecting forests from fires; 3) Organization of forest fire protection; 4) Management of firefighting forces; 5) Establishment of fire rescue

[790] Resolution of the Cabinet of Ministers of Ukraine «On Approval of the Procedure for Organizing the Protection and Protection of Forests» No 612. (2022, May). Retrieved from: https://zakon.rada.gov.ua/laws/show/612-2022-%D0%BF#Text

units; 6) Operation of forest fire stations; 7) Accounting of forest fires; 8) Information provision about fires; 9) Formation of fire units. Consequently, all this necessitates an update of the Fire Safety Rules in Ukrainian Forests, both to ensure compliance with current legislation and to elevate the regulation level of this important sphere to an interdepartmental level.

The optimal solution would be the joint adoption of a new regulatory act by the Ministry of Environmental Protection and Natural Resources (responsible for forestry) and the Ministry of Internal Affairs (responsible for fire safety). This would allow for harmonization of the new rules with Resolution No. 612 and ensure a comprehensive approach to forest protection.

Features of the Legal Regulation of Forest Fire Protection in Ukraine's Radiation-Contaminated Territories Under Martial Law

The forest fire prevention system is based on three key elements: annual planning of preventive measures, maintaining constant readiness of fire and rescue units considering current danger levels and weather conditions, and rapid detection and suppression of ignitions.

Responsibility for compliance with fire safety requirements is distributed among key entities: the State Forest Resources Agency, local state and military administrations, local self-government bodies, as well as permanent forest users and forest owners. The direct implementation of preventive measures and firefighting is assigned to the latter two categories. The State Forest Resources Agency is responsible for monitoring and publishing data on fire danger levels through the automated "Fires" system, regulated by the relevant order of the State Forest Resources Agency of 2021.

In protected areas, particularly in the Chornobyl Radiation and Ecological Biosphere Reserve, the authority for fire prevention belongs to the State Protection Service of the Nature Reserve Fund of Ukraine, whose activities are regulated by CMU Resolution No. 1127 of July 14, 2000. However, experts increasingly emphasize the

need to create a specialized departmental fire protection service under the State Agency for Exclusion Zone Management, considering the unique conditions of the radioactively contaminated territory.

According to current Fire Safety Rules, for territories with radiation contamination of 1-154 Ci/km² (37-555 kBq/m²), the fire danger level is automatically increased by one class, regardless of species composition and age of plantations[791]. According to official data, 66% of the exclusion zone territory has the highest Class I danger, with 38% of these areas having contamination exceeding 555 kBq/m². Combustible material reserves in pine plantations range from 110 t/ha (22 years) to 220-280 t/ha (44-64 years). Published data indicates accumulation of approximately 1.4 million m³ of deadwood and litter in the zone. Spatial analysis shows that the fire watchtower system covers only 26.8% of the territory, and emergency response time exceeds 30 minutes on 40.9% of the area, creating critical risks[792].

Research conducted by S. Zibtsev, Head of the Regional Eastern European Fire Monitoring Center, demonstrates a significant difference in the effectiveness of fire prevention measures between Ukraine and neighboring countries. Specifically, fire density in Belarus and Poland is considerably lower under similar weather danger conditions, indicating insufficient interagency coordination in Ukraine[793]. A notable example of effective fire management organization in Ukraine was the period of August 1-20, 2010, when under identical weather conditions, over 200,000 hectares of

[791] Order of the State Committee of Forestry of Ukraine «On approval of the Rules of Fire Safety in the Forests of Ukraine» No 278. (2004, December). Retrieved from: https://zakon.rada.gov.ua/laws/show/z0328-05#Text

[792] Zibtsev S.V., Borsuk A.A., Bogomolov V.V. (2021). Problems of protecting forests from fires contaminated with radionuclides in the Chornobyl Exclusion Zone. Retrieved from: http://www.ekoinform.com.ua/index.php?option=com_content&view=article&id=151%3A2015-05-27-15-13-40&catid=7%3A2009-07-06-09-51-6&Itemid=41&lang.

[793] Zibtsev S. (2015). Regional Eastern European Fire Monitoring Center (REEFMC) informs about smoke in Kyiv. Retrieved from: http://nubip.edu.ua/node/16230.

forests burned in the European part of Russia, compared to only 3,000 hectares in Ukraine.

Specifically, CMU Resolution No. 612 details the specifics of fire prevention measures in the exclusion zone. In particular, clause 13 paragraph 27 stipulates: 1) implementation of special measures to prevent the occurrence and spread of fires beyond contaminated territories; 2) ensuring firefighters' compliance with radiation safety standards; 3) mandatory use of personal protective equipment, including respirators.

An important step was the development of the Strategy for the Development of the Exclusion Zone Territories for 2021-2030, which contains a special subsection 5.6.2 that provides for the creation of a comprehensive fire management system including: 1) fire prevention; 2) early response; 3) radiation-safe firefighting[794].

Simultaneously, under conditions of limited funding, the priority direction becomes the implementation of modern information technologies that enable, in particular: 1) precise calibration of monitoring systems; 2) efficient data collection and analysis; and 3) making optimal management decisions[795].

Ways to Improve Fire Management in the Exclusion Zone

To enhance fire management in the exclusion zone, reduce risks of catastrophic fires, and prevent radionuclide dispersal, the Strategy envisages the following key measures: 1) collection and analysis of forestry information; 2) updating the network of firebreaks, roads, and water bodies; 3) preparation of cartographic materials (fire hazard, management, and ecosystem sensitivity maps); 4) development of detailed fire management plans; 5)

[794] Strategy for the Development of the Territories of the Exclusion Zone and the Zone of Unconditional (Mandatory) Resettlement Affected by Radioactive Contamination as a Result of the Chornobyl Disaster for 2021-2030. (2020). Retrieved from: https://dazv.gov.ua/attachments/c80519b0-7495-46ac-887a-00d819ed9f7a_11.12-stratehiia.pdf

[795] Hulak Olena, Holiaka Dmytrii (2024). Legal principles of forest fire protection on radiation hazardous lands of Ukraine in modern conditions. May 2024, 15(2):9-27 Law. Human. Environment. DOI: 10.31548/law/2.2024.09

creation of modern information systems for decision support[796]. Specifically, its section 5.4 "Barrier Function" pays special attention to forestry and fire prevention measures, as forest fires are recognized as the primary threat for radioactive contamination spread. Among the priority measures outlined in the Strategy are the following: establishing a departmental fire protection service; construction of forest fire stations; implementation of early fire detection systems; artificial reforestation with resistant species; maintenance of protection zones; clearing of burned areas; and implementation of comprehensive fire restrictions.

Despite numerous forest fires, special legislation regarding the specifics of ensuring fire safety and extinguishing fires in radionuclide-contaminated territories was not developed or adopted for a long time. However, in 2018, through the initiative of the Regional Eastern European Forest Fire Monitoring Center and with the participation of the Ministry of Internal Affairs, the State Agency on Exclusion Zone Management, and the US Forest Service, a joint order "Instruction on the Organization of Fire Suppression in Natural Ecosystems of the Chornobyl Biosphere Reserve" was developed and approved[797].

Radiation safety issues in the exclusion zone are regulated by several special normative acts. Key documents include: the instruction of the Ministry of Emergency Situations on the

[796] Strategy for the Development of the Territories of the Exclusion Zone and the Zone of Unconditional (Mandatory) Resettlement Affected by Radioactive Contamination as a Result of the Chornobyl Disaster for 2021-2030. (2020). Retrieved from: https://dazv.gov.ua/attachments/c80519b0-7495-46ac-887a-00d819ed9f7a_11.12-stratehiia.pdf

[797] Order of the Ministry of Ecology and Natural Resources of Ukraine/Ministry of Internal Affairs of Ukraine No. 01/01 "Instruction on the organization of fire extinguishing by units of the state protection service of the nature reserve fund, the operational and rescue service of civil protection and permanent forest users in the natural ecosystems of the Chornobyl Radiation and Environmental Biosphere Reserve". (2018, January). Retrieved from: https://nubip.edu.ua/sites/default/files/u184/proekt_nakaz_pro_vzaiemodiyu_gasinnya_lisovih_pozhezh_2016-ld_-_kopiya_1.pdf_

organization of individual dosimetric control[798]; radiation safety rules for work in the exclusion zone, a joint order of the Ministry of Health and the State Emergency Service[799]. Internal documents of the State Agency on Exclusion Zone Management also play an important role, particularly emergency response plans and mobilization plans for firefighting forces[800].

The protection of exclusion zone territories has a special status according to Ukrainian legislation. The Law of Ukraine "On the Legal Regime of the Territory Contaminated by Radioactive Contamination" establishes a strict environmental protection regime in these zones[801]. According to Article 14 of this Law, public order protection is provided by National Police units, while fire and technogenic safety are ensured by a specially authorized central executive body. The State Agency of Ukraine on Exclusion Zone Management, subordinate to the Ministry of Environmental Protection, plays a key role in implementing state policy in this area[802].

After prolonged efforts by the scientific and expert community, the Chornobyl Radiation-Ecological Biosphere Reserve was established in 2016, covering 226,000 hectares (2/3 of the

[798] Order of the Ministry of Emergency Situations «Instruction on the Organization of Individual Dosimetric Monitoring in the Management Bodies and Subdivisions of the Ministry of Emergencies» (2007). Retrieved from: http://consultant.parus.ua/?doc= 03W4RF6A6D.
[799] Order of the Ministry of Health of Ukraine and the SES of Ukraine «Radiation Safety Rules for Work in the Exclusion Zone and the Zone of Unconditional (Mandatory) Resettlement» (2008). Retrieved from: http://zakon2.rada.gov.ua/laws/ show/ru/z0754-08.
[800] Usenya V.V., Zibtsev S.V., Soshensky O.M., Koren V.A. (2018). Analysis of the Legislation of the Republic of Belarus and Ukraine Regulating the Protection of Forests from Fires in the Exclusion Zone. Retrieved from: https://nubip.edu.ua/sites/default/files/u184/12641-28912-1-pb.pdf.
[801] Law of Ukraine «On the Legal Regime of the Territory Affected by Radioactive Contamination as a Result of the Chornobyl Disaster» No 791a. (1991, February). Retrieved from: http://zakon.rada.gov.ua/laws/show/791%D0%B0-12#0109.
[802] Resolution of the Cabinet of Ministers of Ukraine «On approval of the Regulation on the State Agency of Forest Resources of Ukraine» No 521. (2014, October). Retrieved from: https://zakon.rada.gov.ua/laws/show/521-2014-%D0%BF.

exclusion zone territory)[803]. The protection of forests on nature reserve fund lands is regulated by the Law of Ukraine "On the Nature Reserve Fund of Ukraine"[804]. Article 6 of this law, defining the specifics of protecting such territories, stipulates: "...tasks, the special environmental protection regime of nature reserve fund territories... are defined in their regulations, which are approved in accordance with the Law of Ukraine 'On the Legal Regime of the Territory Contaminated by Radioactive Contamination as a Result of the Chornobyl Catastrophe'"[805].

Presidential Decree No. 381 of November 21, 2017, "On Additional Measures for Forestry Development," provides for enhanced protection of nature reserve fund territories, particularly through improved logistical support for state protection services[806]. Earlier, on July 14, 2000, CMU Resolution No. 1127 "On the State Protection Service of the Nature Reserve Fund of Ukraine" was adopted, developed in accordance with Article 60 of the Law of Ukraine "On the Nature Reserve Fund of Ukraine"[807],[808]. It should be noted that this resolution contains outdated terminology and references. Specifically, paragraph 2 of the second clause states that service employees are provided with uniforms "of the established

[803] The Chornobyl Radiation and Ecological Biosphere Reserve is a unique natural monument with a unique natural environment (2021). Retrieved from: http://dazv.gov.ua/novini-ta-media/vsi-novyny/2263-chornobilskij-radiatsijno-ekologichnij-biosfernij-zapovidnik-unikalna-pam-yatka-prirodi-z-nepovtornim-prirodnim-seredovishchem.
[804] Law of Ukraine «On the Nature Reserve Fund of Ukraine» No 2456. (1992, June). Retrieved from: https://zakon.rada.gov.ua/laws/show/2456-12.
[805] Law of Ukraine «On the Nature Reserve Fund of Ukraine» No 2456. (1992, June). Retrieved from: https://zakon.rada.gov.ua/laws/show/2456-12.
[806] Decree of the President of Ukraine «On Additional Measures for the Development of Forestry, Rational Nature Management and Conservation of Natural Reserve Fund Objects» No 381. (2017, November). Retrieved from: https://zakon.rada.gov.ua/laws/show/381/2017.
[807] Resolution of the Cabinet of Ministers of Ukraine «On the Service of State Protection of the Nature Reserve Fund of Ukraine» No 1127 (2000, Jule). Retrieved from: http://zakon.rada.gov.ua/laws/show/1127-2000-%D0%BF.
[808] Law of Ukraine «On the Nature Reserve Fund of Ukraine» No 2456. (1992, June). Retrieved from: https://zakon.rada.gov.ua/laws/show/2456-12.

pattern... of the State Forestry Committee" – a central authority that had been liquidated significantly earlier[809].

An important step was the adoption of CMU Resolution No. 283 of April 5, 2012, "On Amendments to the Regulations on the State Protection Service," which expanded the list of structural units and staff positions (Resolution of the Cabinet of Ministers of Ukraine, 2012). The relevant list includes positions specifically related to fire safety, particularly: head of fire (environmental) station, station master, firefighter (respirator operator), and fire observer[810]. Thus, ensuring fire safety in forests is normatively defined as an important component of the functions of the State Protection Service of the Nature Reserve Fund of Ukraine.

Conclusions

As of today, the level of fire safety in the forests of the Exclusion Zone in Ukraine is critically dangerous. The occupation of these territories since the first days of the full-scale war has led to additional contamination with explosive objects, creating new serious risks. The existing fire protection system is absolutely ineffective under these conditions. It is incapable of ensuring safety across tens of thousands of hectares of forest due to the lack, first and foremost, of clear regulatory frameworks, tested technologies, modern equipment, and trained specialists.

It should be noted that the financial capacity of forestry enterprises is severely limited due to martial law and the absence of state funding. Commercial activity in these territories is also significantly restricted because of radioactive contamination. In fact, the lack of resources for the full implementation of anti-epidemic measures and the growing risks caused by climate change — which leads to the accumulation of combustible materials and

[809] Resolution of the Cabinet of Ministers of Ukraine «On the Service of State Protection of the Nature Reserve Fund of Ukraine» No 1127 (2000, Jule). Retrieved from: http://zakon.rada.gov.ua/laws/show/1127-2000-%D0%BF.

[810] Resolution of the Cabinet of Ministers of Ukraine «On the Service of State Protection of the Nature Reserve Fund of Ukraine» No 1127 (2000, Jule). Retrieved from: http://zakon.rada.gov.ua/laws/show/1127-2000-%D0%BF.

mine hazards — require the immediate adoption of balanced strategic decisions, and accordingly, regulatory changes. It is essential to take into account international experience, technological developments, and scientific research results, which should be reflected in comprehensive cross-sectoral regulatory legal acts. Examples of such initiatives include the Development Strategy for the Exclusion Zone Territories for 2021–2030 and the joint order of the Ministry of Ecology and the Ministry of Internal Affairs No. 01/01 dated January 10, 2018.

However, the most important aspect is not the development but the practical implementation of these norms in compliance with the principle of radiation safety — minimizing the number of exposed individuals and their received doses, taking into account economic and social capabilities. Undoubtedly, coordinated interaction between specialized services and units plays a decisive role in ensuring effective fire safety in this area. Therefore, we consider it necessary to implement the following steps:

- update the current Mobilization Plan for extinguishing wildfires in the Exclusion Zone, taking into account the new fire hazard assessment system;
- establish a specialized departmental fire protection unit under the State Agency for Exclusion Zone Management, tailored to the specifics of this territory;
- improve the system of preventive fire protection measures;
- enhance the qualifications of forest firefighters based on modern approaches to fire prevention and suppression in ecosystems;
- optimize the interaction of various services and agencies during firefighting based on clear legal regulations;

- engage voluntary fire brigades, local communities, and civic activists in educational activities and in the implementation of preventive measures in forest areas.

Today, effective fire safety in forests — as a component of national security — is possible only through the integrated application of political, ecological-economic, legal, and engineering-technical measures. Since this study concerns the regulation of the activities of an entire system of actors, including civil protection bodies, forestry enterprises, local administrations, and civic initiatives, the key aspect is the development of a clear algorithm of interaction between them. This is particularly important given the impossibility of full funding for all necessary measures by the state[811],[812].

List of Bibliography

1. Borsuk O., Myroniuk V., Kireev S., Zibtsev S., Soshenskyi O. (2023). Protection of natural landscapes of the Exclusion Zone from fires and promising ways to reduce risks. Chornobyl Scientific and Practical Journal. May. 50-61. Retrieved from: http://zapovidnyk.org.ua/hub/hub-4-2023-05.pdf.

2. Decree of the President of Ukraine «On Additional Measures for the Development of Forestry, Rational Nature Management and Conservation of Natural Reserve Fund Objects» No 381. (2017, November). Retrieved from: https://zakon.rada.gov.ua/laws/show/381/2017.

3. Goldammer J. G., Zibtsev S., Soshenskyi O. (2023). Wildfires: Collateral damages of war and nuclear heritage in

[811] Gulak O.V. (2020). Theoretical and methodological bases of administrative and legal support of fire safety in the forests of Ukraine: Dissertation ... Doctor of Laws: 12.00.07 "Administrative Law and Process; Financial Law; Information Law". K.: NULES of Ukraine, Kyiv. 586.

[812] Hulak Olena, Holiaka Dmytrii (2024). Legal principles of forest fire protection on radiation hazardous lands of Ukraine in modern conditions. May 2024, 15(2):9-27 Law. Human. Environment. DOI: 10.31548/law/2.2024.09

Ukraine. Bonn International News, March 2023. Retrieved from: Ausgabe 3 / 2023 - März 2023/

4. Gulac O., Oleksenko R., Kaluha V., Kravchenko O., Yukhymenko N. (2022). Overcoming the environmental crisis in the forest sector of Ukraine in the context of the European green course. Vol. 13 No. 38. Revista de la Universidad del Zulia. Retrieved from: https://produccioncientificaluz.org/index.php/rluz/article/view/38698

5. Gulac O.; Oleksenko R.; Sobol Y.; Milova T., Troshkina K. (2022). Reform of public administration in the forestry sector of Ukraine. Cuestiones Políticas. Vol. 40 (75). Diciembre. DOI: https://doi.org/10.46398/cuestpol.4075.20.

6. Gulac O.; Marchenko O.; Kapitanenko N.; Kuris Y.; Oleksenko R. (2022). State environmental policy on the issue of legal regulation of fire safety in the forests of Ukraine. Cuestiones Políticas. 40 (74). 195-206. DOI: https://doi.org/10.46398/questionpol.4074.10

7. Gulak O.V. (2020). Theoretical and methodological bases of administrative and legal support of fire safety in the forests of Ukraine: Dissertation ... Doctor of Laws: 12.00.07 "Administrative Law and Process; Financial Law; Information Law". K.: NULES of Ukraine, Kyiv. 586.

8. Halushchenko O. (2023). Director of the Chornobyl Radiation and Ecological Biosphere Reserve. Chornobyl Scientific and Practical Journal. 4. May, 2023.

9. Holiaka, D., Levchuk, S., Kashparov, V., Yoschenko, V., Hurtevent, P., Coppin, F., Beasley, J.C., 2025. 90Sr and 137Cs distribution in Chornobyl forests: 30 years after the nuclear accident. J. Environ. Radioact. 282. https://doi.org/10.1016/j.jenvrad.2025.107616

10. Hulak Olena, Holiaka Dmytrii (2024). Legal principles of forest fire protection on radiation hazardous lands of Ukraine in

modern conditions. May 2024, 15(2):9-27 Law. Human. Environment. DOI: 10.31548/law/2.2024.09

11. Kashparov V.A. (2014). Experimental biogenic fluxes 137Cs in forest ecosystems. The scientific and research Report. NUBiP Ukraine, Kyiv, 81p.

12. Kashparov, V., Kirieiev, S., Yoschenko, V., Levchuk, S., Holiaka, D., Zhurba, M., Bogdan, L., Vyshnevskyi, D., Oughton, D.H., 2024. Assessment of exposures to firefighters from wildfires in heavily contaminated areas of the Chornobyl Exclusion Zone. J. Environ. Radioact. 274. https://doi.org/10.1016/j.jenvrad.2024.107410

13. Kashparov, V.A., Lundin, S.M, Kadygrib, A.M., Protsak, V.P., Levtchuk, S.E., Yoschenko, V.I., Kashpur, V.A., and Talerko, N.M. (2000). Forest fires in the territory contaminated as a result of the Chernobyl accident: radioactive aerosol resuspension and exposure of fire-fighters. Journal of Environmental Radioiactivity. 51, 281-298.

14. Law of Ukraine «On Amendments to Certain Legislative Acts of Ukraine Regarding the Activities of the Ministry of Internal Affairs of Ukraine, the Ministry of Emergency Situations of Ukraine, the Ministry of Regional Development, Construction, Housing and Communal Services of Ukraine, and Other Central Executive Authorities, the Activities of Which Are Directed and Coordinated through the Respective Ministers» № 5459. (2012, October). Retrieved from: http://zakon.rada.gov.ua/laws/show/5459-17.

15. Law of Ukraine «On the Legal Regime of the Territory Affected by Radioactive Contamination as a Result of the Chornobyl Disaster» No 791a. (1991, February). Retrieved from: http://zakon.rada.gov.ua/laws/show/791%D0%B0-12#0109.

16. Law of Ukraine «On the Nature Reserve Fund of Ukraine» No 2456. (1992, June). Retrieved from: https://zakon.rada.gov.ua/laws/show/2456-12.

17. Loginova O. (2015). Business zone: Chornobyl timber for export (investigation). Retrieved from: www.radiosvoboda.org/content/article/27212140.html.

18. Malimon S.S. (2009). Fundamentals of ecology: a textbook. Vinnytsia: Nova Knyha, 240.

19. Nuclear and Radiation Safety in the Exclusion Zone. (2017). National Report on the State of Technogenic and Natural Safety in Ukraine in 2016. Retrieved from: http://www.dsns.gov.ua/ua/Analitichniy-oglyad-stanu-tehnogennoyi-ta-prirodnoyi-bezpeki-v--Ukrayini-za-2016-rik.html.

20. Order of the State Committee of Forestry of Ukraine «On approval of the Rules of Fire Safety in the Forests of Ukraine» No 278. (2004, December). Retrieved from: https://zakon.rada.gov.ua/laws/show/z0328-05#Text

21. Order of the Cabinet of Ministers of Ukraine «On Approval of the Concept of Implementation of the State Policy in the Field of Development of Activities in Certain Radioactive Contamination Zones» No 535. (2012, Jule). Retrieved from: https://zakon.rada.gov.ua/laws/show/535-2012-%D1%80.

22. Order of the Ministry of Ecology and Natural Resources of Ukraine/Ministry of Internal Affairs of Ukraine No. 01/01 "Instruction on the organization of fire extinguishing by units of the state protection service of the nature reserve fund, the operational and rescue service of civil protection and permanent forest users in the natural ecosystems of the Chornobyl Radiation and Environmental Biosphere Reserve". (2018, January). Retrieved from:
https://nubip.edu.ua/sites/default/files/u184/proekt_nakaz_pro_vzaiemodiyu_gasinnya_lisovih_pozhezh_2016-ld_-_kopiya_1.pdf

23. Order of the Ministry of Emergency Situations «Instruction on the Organization of Individual Dosimetric Monitoring in the Management Bodies and Subdivisions of the Ministry of

Emergencies» (2007). Retrieved from: http://consultant.parus.ua/?doc= 03W4RF6A6D.

24. Order of the Ministry of Health of Ukraine and the SES of Ukraine «Radiation Safety Rules for Work in the Exclusion Zone and the Zone of Unconditional (Mandatory) Resettlement» (2008). Retrieved from: http://zakon2.rada.gov.ua/laws/ show/ru/z0754-08.

25. Regional Eastern European Fire Monitoring Center. (2020). Development of a fire management plan and decision support system for prevention, early response and radiologically safe extinguishing of forest fires in the Exclusion Zone. Ukraine. Technical report. Retrieved from https:// Retrieved from https://nubip.edu. ua/sites/default/files/u184/chrebz_fire_management_plan_fin_7_08.11.21.pdf

26. Resolution of the Cabinet of Ministers of Ukraine «On Approval of the Procedure for Organizing the Protection and Protection of Forests» No 612. (2022, May). Retrieved from: https://zakon.rada.gov.ua/laws/show/612-2022-%D0%BF#Text

27. Resolution of the Cabinet of Ministers of Ukraine «On approval of the Regulation on the State Agency of Forest Resources of Ukraine» No 521. (2014, October). Retrieved from: https://zakon.rada.gov.ua/laws/show/521-2014-%D0%BF.

28. Resolution of the Cabinet of Ministers of Ukraine «On the Service of State Protection of the Nature Reserve Fund of Ukraine» No 1127 (2000, Jule). Retrieved from: http://zakon.rada.gov.ua/laws/show/1127-2000-%D0%BF.

29. Soshensky O. (2023). Forest firefighters of the Severnaya Pushcha State Enterprise in the Chernobyl Exclusion Zone have passed. Forest firefighter training course. Retrieved from: https://nubip.edu.ua/node/124627

30. Strategy for the Development of the Territories of the Exclusion Zone and the Zone of Unconditional (Mandatory)

Resettlement Affected by Radioactive Contamination as a Result of the Chornobyl Disaster for 2021-2030. (2020). Retrieved from: https://dazv.gov.ua/attachments/c80519b0-7495-46ac-887a-00d819ed9f7a_11.12-stratehiia.pdf

31. The Chornobyl Radiation and Ecological Biosphere Reserve is a unique natural monument with a unique natural environment (2021). Retrieved from: http://dazv.gov.ua/novini-ta-media/vsi-novyny/2263-chornobilskij-radiatsijno-ekologichnij-biosfernij-zapovidnik-unikalna-pam-yatka-prirodi-z-nepovtornim-prirodnim-seredovishchem.

32. There was a hit in the shelter above the 4th power unit, a fire broke out: the main thing about the Russian strike on the Chernobyl NPP. (2025, February). Retrieved from: https://24tv.ua/udar-po-chaes-14022025-shho-vidomo-pro-situatsiyu-chornobili_n2752869

33. Usenya V.V., Zibtsev S.V., Soshensky O.M., Koren V.A. (2018). Analysis of the Legislation of the Republic of Belarus and Ukraine Regulating the Protection of Forests from Fires in the Exclusion Zone. Retrieved from: https://nubip.edu.ua/sites/default/files/u184/12641-28912-1-pb.pdf.

34. Yoschenko, V., Nanba, K., Ohkubo, T., Kato, H. (2022). Behavior of Fukushima-Derived Radiocesium in Forest Ecosystems. In: Nanba, K., Konoplev, A., Wada, T. (eds) Behavior of Radionuclides in the Environment III. Springer, Singapore. https://doi.org/10.1007/978-981-16-6799-2_19

35. Yoschenko, V.I., Kashparov, V.A., Levchuk, S.E., Glukhovskiy, A.S., Khomutinin, Yu.V., Protsak, V.P., Lundin, S.M., and Tschiersch, J. (2006). Resuspension and redistribution of radionuclides during grassland and forest fires in the Chernobyl Exclusion Zone: Part II. Modeling the transport process. Journal of Environmental Radioactivity. 87 (3), 260-278.

36. Yoschenko, V.I., Kashparov, V.A., Protsak, V.P., Lundin, S.M., Levchuk, S.E., Kadygrib, A.M., Zvarich, S.I., Khomutinin,

Yu.V., Maloshtan, I.M., Lanshin, V.P., Kovtun, M.V., and Tschiersch, J. (2006a). Resuspension and redistribution of radionuclides during grassland and forest fires in the Chernobyl Exclusion Zone: Part I. Fire experiments. Journal of Environmental Radioactivity. 86 (2), 143-163.

37. Zibtsev S. (2015). Regional Eastern European Fire Monitoring Center (REEFMC) informs about smoke in Kyiv. Retrieved from: http://nubip.edu.ua/node/16230.

38. Zibtsev S., Soshensky O., Borsuk O., Myroniuk V., Kireev S. (2023). Protection of natural landscapes of the Exclusion Zone from fires and promising ways to reduce risks. Chornobyl Scientific and Practical Journal. May. P. 50-61. Retrieved from: http://zapovidnyk.org.ua/hub/hub-4-2023-05.pdf

39. Zibtsev S., Soshensky O., Humeniuk V., Bogomolov V. (2023). Plan of integrated management of landscape fires in Luhansk region: monograph / Kyiv: Editorial and publishing department of NULES of Ukraine. 257. Retrieved from: sites/default/files/u184/zibtsev_et_al._monograf_2023.pdf

40. Zibtsev S.V., Borsuk A.A., Bogomolov V.V. (2021). Problems of protecting forests from fires contaminated with radionuclides in the Chornobyl Exclusion Zone. Retrieved from: http://www.ekoinform.com.ua/index.php?option=com_content&view=article&id=151%3A2015-05-27-15-13-40&catid=7%3A2009-07-06-09-51-6&Itemid=41&lang.

41. Zibtsev S.V., Soshenskyi O.M., Goldammer J.G., Myroniuk V.V., Borsuk O.A., Humeniuk V.V., Meshkova V.L., Vasyluk O.V., Buksha I.F. (2023). Forest Management on Territories Contaminated with Unexploded Ordnance. Short report of the project WWF-Ukraine “Supporting responsible forestry for sustainable development in Central and Eastern Europe”. WWF-Ukraine. 24 p. DOI: http://dx.doi.org/10.13140/RG.2.2.22495.12966

42. Zibtsev SV, Soshensky OM, Humeniuk VV, Koren VA (2019). Long-term dynamics of forest fires in Ukraine. Ukrainian

journal of forest and wood science. Vol. 10. No. 3. P. 27-40. Retrieved from: https://nubip.edu.ua/sites/default/files/u184/13113-29360-1-sm1.pdf

43. Zibtsev S, Soshenskyi O., Melnykovych M., Blaser J., Waeber P. O., Patrick O, Garcia C. (2023). Ukrainische Wälder im Fokus von Klimakrise Krieg und Brandkatastrophen. Schweizerische Zeitschrift fur Forstwesen. 174 (2): 115–117. DOI: https://doi.org/10.3188/szf.2023.0115

6.2. Legal Regulation of Humanitarian Demining as a Tool for Ensuring Environmental Safety: The Case of Ukraine in the Context of International Law

Anisimova G. V., Doctor of Law, Professor

Department of Environmental Law, Yaroslav Mudryi National Law University

Donets O. V., Ph.D., Associate Professor

Department of Environmental Law, Yaroslav Mudryi National Law University

olya.donets@gmail.com

1. Armed conflicts and their impact on the natural environment

Wars and armed conflicts have accompanied humanity throughout its history, but in the XX century, their devastating impact has acquired an unprecedented scale, which is due not only to hostilities, but also to long-term consequences for society, economy and environment. During the XX century, more than 200 wars and armed conflicts were recorded, including two world wars, numerous civil wars, revolutions and other forms of armed confrontation. In the XXI century, the problem of armed conflicts remains more acute than ever: as of 2023, there were 55 active conflicts in 38 countries in the world, and in 2025, there were already 59, which is the highest figure since the end of World War II.[813] According to the Global Peace Index (GPI), published by the Institute for Economics and Peace (IEP), in 2024, the average level of global peacefulness decreased by 0.56%,[814] while in 2025 – by

[813] HUFFPOST, Redacción. 'La paz global está en continuo declive': los 59 conflictos del mundo que amenazan con crecer y agravarse. *ElHuffPost* [online]. 18 June 2025 [viewed 19 August 2025]. Available from: https://www.huffingtonpost.es/global/la-paz-global-esta-continuo-declive-59-conflictos-mundo-amenazan-crecer-agravarse.html [in Spanish]

[814] INSTITUTE FOR ECONOMICS & PEACE. Global Peace Index 2024: Measuring Peace in a Complex World, Sydney. *VisionofHumanity* [online]. June 2024

another 0.36%, which was the thirteenth consecutive year of its fall.[815] In total, since 2008, the level of global peace has diminished by 5.4 %.[816] To highlight, the deterioration of the specified index is exceptionally due to the growth of conflicts and disputes, including those over natural resources, political instability, economic declines in numerous regions of the world, and the presence of two of the largest armed confrontations in Europe in terms of the number of victims since World War II: the Bosnian War (1992-1995) and the war between Russia and Ukraine, which began in 2014 and escalated into a full-scale invasion in 2022. It is significant that in 2024, Russia ranked the 161st out of 163 countries in the Global Peacefulness Ranking, whereas Ukraine did 154th; though in 2025, Russia became the least peaceful country in the world for the first time (to precise, the 163rd).

Russian aggression against Ukraine is variously called both in the media and scientific publications. Meanwhile such definitions as "war," "military conflict" and "armed conflict" are used, which, in turn, prompts determining the essence of the mentioned notions and their correlation.

In encyclopedic dictionaries, *military conflict* is recognized as a form of resolving acute contradictions between states, peoples, social groups or other political subjects with the bilateral use of military force.[817] In turn, *war* as a socio-political phenomenon is also one of the forms of unleashing socio-political, economic, ideological, national, territorial, religious and other contradictions between states, peoples, nations, social backgrounds and groups by

[viewed 19 August 2025]. Available from: https://www.economicsandpeace.org/wp-content/uploads/2024/06/GPI-2024-web.pdf

[815] INSTITUTE FOR ECONOMICS & PEACE. Global Peace Index 2025: Measuring Peace in a Complex World. *VisionofHumanity* [online]. June 2025 [viewed 19 August 2025]. Available from: https://www.visionofhumanity.org/wp-content/uploads/2025/06/Global-Peace-Index-2025-web.pdf

[816] MARKU, Elisa. Global Peace Index 2025: War is on the Rise Everywhere. *Impakter* [online]. 25 June 2025 [viewed 19 August 2025]. Available from: https://impakter.com/global-peace-index-2025-war-is-on-the-rise-everywhere

[817] BUT, Yurii. Military Conflict. *Encyclopaedia of Modern Ukraine,* Vol. 5 [online]. 12 December 2006 [viewed 19 August 2025]. Available from: https://esu.com.ua/article-27383 [in Ukrainian]

means of armed violence. War is actually considered as politics continuation by violent means and is related to altering relations between political subjects.[818] In the doctrine of law, the following signs of war are distinguished: 1) the act of declaring war; 2) the rupture of diplomatic, consular, trade, economic, cultural and other relations between the parties; 3) the termination of any peacetime treaties, except for those regulating hostilities or specifically concluded in case of war; 4) the establishment of a special legal regime for partial restriction of human rights.[819] According to some scholars, *military conflict* in a broad sense coincides with the concept of "war,"[820] though in a narrow one, the former is one of the forms of armed clashes, applying regular and irregular armed formations that do not turn into war.[821] A completely different approach is supported by Valerii Dyachenko, Myhailo Tsiurupa, and Petro Shumskyi, emphasizing that the term of "military conflict" is much broader than the concept of "war," since it covers "... all types of organized forms of armed clashes of social forces both within the state and at the interstate level, or between coalitions of states, characterized by a sufficient level of controlled violence, transition from peaceful to military ways of life, hence, inevitably violating rights and freedoms of the population."[822] In her turn, Yana Pylypenko, analysing the issue of distinguishing the

[818] PYLYAVETS, Rostyslav. War. *Encyclopaedia of Modern Ukraine,* Vol. 4 [online]. 12 December 2005 [viewed 19 August 2025]. Available from: https://esu.com.ua/article-34448 [in Ukrainian]
[819] KUZMIN, Eduard. The Concept of Armed Conflict: Initial Reflections. *Scientific Bulletin of the International Humanitarian University,* 2014. Vol. 12(2), pp. 187-190. [online]. [viewed 19 August 2025]. Available from: https://dspace.onua.edu.ua/server/api/core/bitstreams/e83b42de-4d27-49b9-8bc0-d5a2359a6de6/content [in Ukrainian]
[820] TOLUBKO, Volodymyr – BUT, Yurii – KOSEVTSOV, Vyacheslav. *Basic Patterns of Modern Local Wars and Armed Conflicts: Textbook*. Kyiv: NAOU, 2002. 68 p. P. 6, 7, 17. [in Ukrainian]
[821] SIRYI, Serhii. The Essence of the Concepts of "Local War" and "Military Conflict" and their Typology. *Political Management,* 2006. Vol. 4, pp. 124-134. [online]. [viewed 19 August 2025]. Available from: https://nasplib.isofts.kiev.ua/server/api/core/bitstreams/19ec2e08-6400-4ff8-a4de-66b484c4f040/content [in Ukrainian]
[822] DYACHENKO, Valerii – TSIURUPA, Myhailo – SHUMSKYI, Petro. *International Humanitarian Law: Philosophical and Legal Doctrine of Armed Conflict Regulation: Ch. I. History of Formation*. Kyiv: Sfera, 1999. 128 p. P. 30 [in Ukrainian].

studied concepts, comes to the conclusion that the concept of "military conflict" is general and generic as to the definitions of "war" and "armed conflict." The scientist elucidates that in terms of its socio-political and strategic content, any war is a military conflict, but not every conflict is a war; moreover, any war is an armed conflict, but not every armed conflict can escalate into a war.[823]

The consequences of any conflict (armed or military one) or war are generally calculated in terms of human, economic and social costs. To exemplify, in accordance with researchers' estimations, more than 37 million (mln) people have been killed in active hostilities around the world since 1800;[824] in addition, the stated figure would have been considerably higher if civilian casualties, caused not only by direct military violence, but also by collateral consequences such as famine, epidemics, destruction of health systems and infrastructure as well as in smaller-scale conflicts that are not formally classified as wars, had been taken into account.[825] Currently, there is a great number of ways to measure both quantitative indicators of armed conflicts and mortality rate of the latter, a detailed analysis of which was conducted in 2023 by Bastian Herre.[826] Among the leading sources identifying armed conflicts and carrying out casualty counts, it is worth mentioning

[823] PYLYPENKO, Yana. Demarcation of the Concepts of "Military Conflict," "Armed conflict" and "War." *Bulletin of NTUU "KPI." Political science. Sociology. Law,* 2017. Vol. 1/2(33-34), pp. 143-146. P. 145. [online]. [viewed 19 August 2025]. Available from: https://visnyk-psp.kpi.ua/article/view/152571/151656 [in Ukrainian]

[824] HERRE, Bastian – RODEZ-GUIRAO, Lucas – ROSER, Max. War and Peace. *Our World in Data.* [online]. 20 March 2024 [viewed 19 August 2025]. Available from: https://ourworldindata.org/war-and-peace

[825] The approximate number of the killed only in the XX century constitutes around 110 mln people. *See:* WIMMER, Andreas. War. *Annual Review of Sociology*, 2014. Vol. 40, pp. 173-197. [online]. July 2015 [viewed 19 August 2025]. Available from: https://ssrn.com/abstract=2475580 http://dx.doi.org/10.1146/annurev-soc-071913-043416

[826] HERRE, Bastian. How Major Sources Collect Data on Conflicts and Conflict Deaths, and When to Use Which one. *Our World in Data.* [online]. 13 October 2023 [viewed 19 August 2025]. Available from: https://ourworldindata.org/conflict-data-how-do-researchers-measure-armed-conflicts-and-their-deaths

the Uppsala Conflict Data Programme (UCDP),[827] Jason Lyall's Mars Project (2022),[828] the Oslo Peace Research Institute (PRIO)[829] etc.

However, there are differences between the above sources, particularly in the criteria for involving events in the category of armed conflicts. Generally, most sources merely include conflicts which cause at least 500 or 1 thousand (K) annual or total deaths.[830] It should also be noted that since the beginning of Russia's full-scale invasion of Ukraine, as of July 31, 2025, 15,258 civilians, including 640 children, were killed as a result of the invasion. Another 34,052 people, 2,075 children included, were injured (according to the Office of the Prosecutor General of Ukraine).[831] Furthermore, more than 100 civilians, including one child, died in Russian captivity (data announced by the UN Deputy Secretary General Rosemari di Carlo at a meeting of the UN Security Council on 10 January 2024).[832] According to other estimates, in 2022 alone, Russia's invasion of Ukraine caused more than 81K

[827] DAVIES, Shawn – PETTERSON, Therese – ÖBERG, Magnus. Organized Violence 1989-2022 and the Return of Conflicts between States? *Journal of Peace Research,* 2023. Vol. 60(4), pp. 691-708.
[828] LYALL, Jason. *Divided Armies: Inequality and Battlefield Performance in Modern War*. UK: Princeton University Press. 528 p.
[829] LACINA, Bethany – GLENDITSCH, Nils. Monitoring Trends in Global Combat: A New Dataset of Battle Deaths. *European Journal of Population,* 2005. Vol. 21, pp. 145-166. [online]. [viewed 19 August 2025]. Available from: https://link.springer.com/article/10.1007/s10680-005-6851-6
[830] HERRE, Bastian. How Major Sources Collect Data on Conflicts and Conflict Deaths, and When to Use Which one. *Our World in Data.* [online]. 13 October 2023 [viewed 19 August 2025]. Available from: https://ourworldindata.org/conflict-data-how-do-researchers-measure-armed-conflicts-and-their-deaths
[831] Since the Beginning of a Full-Scale War, 15,258 Civilians Have Been Killed in Ukraine, 640 of Them – Children. *Ukrinform – Current News of Ukraine and the World* [online]. 5 August 2025 [viewed 19 August 2025]. Available from: https://www.ukrinform.ua/rubric-society/4022477-vid-pocatku-povnomasstabnoi-vijni-v-ukraini-zaginuli-15-258-civilnih-z-nih-640-diti.html [in Ukrainian]
[832] Rosemary DiCarlo (DPPA) on the Maintenance of Peace and Security of Ukraine – Security Council, 9526th Meeting. *UN Web TV* [online]. 10 January 2024 [viewed 19 August 2025]. Available from: https://webtv.un.org/en/asset/k14/k14wn7w0dp

deaths.[833] However, real and final figures among both civilians and military will become known only after the end of hostilities, comprehensive data collection and analysis.

The concept of armed conflict encompasses any confrontation with the use of weapons between two or more parties, which can be both international and internal.[834] According to the definition of the International Criminal Tribunal for the former Yugoslavia, "armed conflict arises when armed force between states or prolonged armed violence between government bodies and organized armed groups or between such groups within a state occurs."[835] The specified term was first used by the Permanent Court of International Justice in the case of SS. Wimbledon when referred to "rights arising from neutrality in armed conflict."[836] To highlight, in 1949, the Geneva Conventions (GCs) for the Protection of War Victims further defined that the scope of the given Documents is applied to "all cases of declared war or any other armed conflict,"[837] which, in turn, indicates that parties can engage in armed conflicts without even declaring war on each other.[838] The

[833] OBERMEIER, Anna Marie – RUSTAD, Siri. Conflict Trends: A Global Overview, 1946-2022. *ReliefWeb* [online]. 7 June 2023 [viewed 19 August 2025]. Available from: https://reliefweb.int/report/world/conflict-trends-global-overview-1946-2022

[834] AL-DUAIJI, Nada. Environmental Law of Armed Conflict (S.J.D. dissertation, Pace University School of Law). 2002. [online]. [viewed 19 August 2025]. Available from: http://digitalcommons.pace.edu/lawdissertations/1/ and https://core.ac.uk/download/pdf/46712853.pdf

[835] The Prosecutor v. Dusko Tadic, Case No. IT-94-1-AR72, Oct. 2, 1995, 35 I.L.M. 32, para. 70 [hereinafter Prosecutor v. Tadic]. Tadić (IT-94-1) [online]. [no date] [viewed 19 August 2025]. Available from: https://www.icty.org/en/case/tadic

[836] S.S. Wimbledon (U.K. v. Japan), 1923 P.C.I.J. (ser. A) No. 1 Publications of the Permanent Court of International Justice, Series A No. 1; Collection of Judgments and Orders, A.W. Sijthoffs Publishing Company, Leyden. [online]. 17 August 1923 [viewed 19 August 2025]. Available from: https://www.worldcourts.com/pcij/eng/decisions/1923.08.17_wimbledon.htm

[837] Article 2 – Application of the Convention. Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field. Geneva. *IHL Databases* [online]. 12 August 1949 [viewed 19 August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/gci-1949/article-2?activeTab=

[838] AL-DUAIJI, Nada. Environmental Law of Armed Conflict (S.J.D. dissertation, Pace University School of Law). 2002. [online]. [viewed 19 August 2025]. Available from: http://digitalcommons.pace.edu/lawdissertations/1/ and https://core.ac.uk/download/pdf/46712853.pdf

aforementioned norm is a crucial element of the GCs, since it not only establishes the circumstances and conditions under which the Conventions are applied,[839] but also eliminates the gap in previous documents of international humanitarian law. Indeed, neither the Hague Conventions of 1899 and 1907,[840] nor the GCs of 1864,[841] 1906[842] and 1929[843] indicate under what conditions their application will be initiated. For instance, the Geneva Convention on the Wounded and Sick of 1929 operates with such categories as "extreme event of war" (Preamble), "state of war" (Articles (Art.) 37, 95), and "time of war" (Art. 82). Due to the lack of any apparent indication, it was generally comprehensible that these instruments were merely used in times of declared war with warring parties acknowledging the existence of a state of war between them. It should be noted that the Institution of Declaring War has long remained a key element of the classical understanding of war at the international level, which, after adopting the Hague Convention on the Outbreak of Hostilities,[844] has acquired a contractual character. In particular, Art. 1 of the above Convention establishes that "hostilities between states shall not commence without a prior and unambiguous warning, which may take the form of either a reasoned declaration of war or an ultimatum with a conditional declaration of war."

---

[839] With the exception of common Art. 3, which regulates armed conflicts of a non-international nature.

[840] SCOTT, James Brown. *The Hague Conventions and Declarations of 1899 and 1907, Accompanied by Tables of Signatures, Ratifications and Adhesions of the Various Powers, and Texts of Reservations*. NY: OUP. 1915. 348 p. Available from: https://archive.org/details/hagueconventions00inteuoft

[841] Convention for the Amelioration of the Condition of the Wounded in Armies in the Field. Geneva. *IHL Databases* [online]. 22 August 1864 [viewed 19 August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/gc-1864

[842] Convention for the Amelioration of the Condition of the Wounded and Sick in Armies in the Field. Geneva. *IHL Databases* [online] 6 July 1906 [viewed 19 August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/gc-1906

[843] Convention Relative to the Treatment of Prisoners of War. Geneva. *IHL Databases* [online] 27 July 1929 [viewed 19 August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/gc-pow-1929

[844] Convention (III) on the Outbreak of Hostilities. The Hague. *IHL Databases* [online] 18 October 1907 [viewed 19 August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/hague-conv-iii-1907

Of a peculiar importance is the thing that modern interpretation of the term of "war" is frequently used in a broader context than before.[845] Concepts such as information war, ideological war, war on terrorism, modifying its traditional legal meaning, have appeared. In this regard, at the 15th International Conference of the Red Cross in Tokyo in 1934, a resolution was adopted wishing the Conventions of 1929 to be applied by analogy in the event of armed conflict between states, even when war has not been declared.[846] At the same time, specifically in light of the Spanish Civil War, it became evident that armed conflicts did not necessarily take place only between states and that the 1929 Conventions were not applied to "civil wars."[847] In order to eliminate these gaps, in 1949, Art. 2 expanded the scope of the Geneva Conventions, introducing the concept of "armed conflict," thereby making their application less dependent on the formalism, given to the concept of "declared war."[848]

---

[845] KUZMIN, Eduard. The Concept of Armed Conflict: Initial Reflections. *Scientific Bulletin of the International Humanitarian University,* 2014. Vol. 12(2), pp. 187-190 [online]. [viewed 21 August 2025]. Available from: https://dspace.onua.edu.ua/server/api/core/bitstreams/e83b42de-4d27-49b9-8bc0-d5a2359a6de6/content [in Ukrainian]

[846] Revue Internationale de la Croix-Rouge et Bulletin International des Sociétés de la Croix-Rouge, 1934. Vol. 16(191), p. 167 [online]. [viewed 21 August 2025]. Available from: https://www.cambridge.org/core/journals/international-review-of-the-red-cross/article/abs/revue-internationale-de-la-croixrouge-et-bulletin-international-des-societes-de-la-croixrouge/09A25BBB5C711A3009FA15349E0BE954 [in French]; ICRC. *Report on the Work of the Preliminary Conference of National Red Cross Societies for the Study of the Conventions and of Various Problems to the Red Cross (Geneva).* P. 14-15 [online]. 26 July – 3 August 1946 [viewed 21 August 2025]. Available from: https://library.icrc.org/library/search/notice?noticeNr=6876; ICRC. *Report on the Work of the Conference of Government Experts for the Study of the Conventions for the Protection of War Victims (Geneva).* P. 8, 102 and 272 [online]. 14-26 April 1947 [viewed 21 August 2025]. Available from: https://www.loc.gov/item/2011525480/

[847] International Committee of Red Cross (ICRC). *Report on the Interpretation, Revision and Extension of the Geneva Convention of July 27, 1929*. Report prepared for the 16th International Conference of the Red Cross, Geneva, 1938. P. 7-8. *See: Drafting history of the 1949 Geneva Conventions* [online]. 12 August 2017 [viewed 21 August 2025]. Available from: https://blogs.icrc.org/cross-files/drafting-history-1949-geneva-conventions/

[848] Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armies in the Field. Geneva. *IHL Databases* [online] 12 August 1949 [viewed 21

It should be stated that presently, international humanitarian law (IHL) distinguishes two types of armed conflicts, namely: international (confrontation between two or more states) and non-international ones (that between government forces and non-governmental armed groups or only between such groups). The treaty law of IHL also discerns between non-international armed conflicts under common Art. 3 of the 1949 Geneva Conventions[849] and non-international ones, which are subject to the definition, given in Art. 1 of Additional Protocol II.[850] From a legal point of view, other types of armed conflicts do not exist. According to David Schindler, "the existence of armed conflict within the meaning of Art. 2 common to the GCs. Any kind of using weapons between two states shall bring the Conventions into force."[851] A similar position is expressed by Hans-Peter Gasser, emphasizing that "any use of armed force by one state against the territory of the other initiates applying the GCs between the two.[852] In March 2008, the International Committee of the Red Cross (ICRC), summarizing the legal opinion on the definition of "armed conflict" in accordance with IHL, noted that "international armed conflicts always exist

August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/gci-1949/article-2/commentary/2016?activeTab=#1

[849] Article 3 – Conflicts not of an International Character. Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field. Geneva. *IHL Databases* [online] 12 August 1949 [viewed 22 August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/gci-1949/article-3

[850] Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II). *IHL Databases* [online] 8 June 1977 [viewed 22 August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/apii-1977?activeTab=

[851] SCHINDLER, David. The different Types of Armed Conflicts According to the Geneva Conventions and Protocols. *Political Science,* 1979. Vol. 163(2), p. 131 [online] [viewed 22 August 2025]. Available from: https://www.semanticscholar.org/paper/The-Different-Types-of-Armed-Conflicts-According-to-Schindler/16eb689f5519b973997f2a8cd2dc25526fe334e9#:~:text=In%20some%20non-international%20armed%20conflicts%20(NIACs)%20a%20foreign%20state%20is

[852] GASSER, Hans-Peter. International Humanitarian Law: An Introduction. In: Hans HAUG (ed.). *Humanity for All: The International Red Cross and Red Crescent Movement.* Berne: Paul Haupt Publishers, 1993, p. 510-511 [online] [viewed 22 August 2025]. Available from: https://icrcndresourcecentre.org/wp-content/uploads/2016/03/EnglishTotal.pdf#:~:text=International%20humanitarian%20law%20is%20part%20of%20universal%20international%20law%20whose

when two or more states resort to armed force between them."[853] In addition, in 2023, the International Red Cross of Ukraine noted that the legal term of "armed conflict" is in fact what is called a war, therefore, "the full-scale invasion of the Russian Federation into Ukraine in February 2022 is a new stage of the international armed conflict, which has been going on since February 2014, when the Autonomous Republic of Crimea and the city of Sevastopol were occupied."[854]

Meanwhile, despite what Russian aggression against Ukraine is called – a war or an international armed conflict – it has drastically changed lives of the Ukrainian population, destroying not only infrastructure, cultural and natural heritage, but also the natural resource potential of our state. Russian aggression has caused irreparable damage to the environment, which, in turn, has become a *"silent victim"* of Russian aggression: landscapes devastateion, soil and water pollution, biodiversity destruction, toxic waste and explosive remnants of war accumulation form a hidden though long-lasting legacy of any armed conflict. The enumerated damage not only undermines the environmental security of the affected regions, but also creates additional barriers to their socio-economic recovery, hence, necessitating the integration of the environmental dimension into all stages of the post-war settlement.

Of a peculiar attention is the fact that from 10 to 30 % of all environmental degradation in the world directly results from various hostilities,[855] due to which the functioning of all natural life support systems is disrupted, thus, affecting both the state of

[853] ICRC. How is the Term "Armed Conflict" Defined in International Humanitarian Law? *International Committee of the Red Cross Opinion Paper* [online] March 2008 [viewed 22 August 2025]. Available from: https://www.icrc.org/sites/default/files/external/doc/en/assets/files/other/opinion-paper-armed-conflict.pdf

[854] INTERNATIONAL RED CROSS OF UKRAINE. War and Armed Conflict – the Same Things? *Redcross* [online] 23 February 2023 [viewed 22 August 2025]. Available from: https://redcross.org.ua/news/2023/02/45317/

[855] ADAS, Michael. The Ecology of War: Environmental Impacts of Weaponry and Warfare. By Susan D. Lanier-Graham. New York: Walker and Company, 1993. *Forest & Conservation History,* 1995. Vol. 39(4), p. 193 [online]. [viewed 22 August 2025]. Available from: https://academic.oup.com/foreconshist/article-abstract/39/4/193/543433 and https://doi.org/10.2307/3983963

natural resources and the possibility and pace of their reproduction along with restoration, etc. Nadi Al-Duaij, author of one of the world's most famous monographs on "The Environmental Law of Armed Conflict," elucidates that "war includes conflicts not only between combatants, but also between man and nature."[856] A striking example of using the environment as a weapon in armed conflict is the Second Gulf War (1990-1991), when Iraqi President Saddam Hussein ordered his troops to invade Kuwait, citing disputes over OPEC oil quotas and allegations of illegal Iraqi oil extraction from the Rumaila field. During this war, Iraqi forces deliberately released a crude oil product into the Persian Gulf, further setting fire to Kuwait's oil fields. The event was eventually called an "eco-war" and Iraq's actions were described as "environmental terrorism."[857]

The international armed conflict between Russia and Ukraine, or as called in the media "Russian-Ukrainian war", also has frequent examples of "environmental terrorism" on the part of Russia, the central place among which is occupied by the Kakhovka hydroelectric power plant (KHPP) dam explosion in Ukraine, later becoming one of the large-scale environmental calamities in Europe in the XXI century and called an "ecological bomb of mass destruction" by President of Ukraine Volodymyr Zelenskyy.[858]

Since seizing the KHPP by the Russian armed forces on February 24, 2022 and until blasting its dam on June 6, 2023, the occupied territories, in accordance with the Hague Regulations of

[856] AL-DUAIJI, Nada. Environmental Law of Armed Conflict (S.J.D. dissertation, Pace University School of Law). 2002 [online]. [viewed 22 August 2025]. Available from: http://digitalcommons.pace.edu/lawdissertations/1/ and https://core.ac.uk/download/pdf/46712853.pdf
[857] LACAYO, Richard. Environment: A War Against the Earth. *Time* [online]. 4 February 1991 [viewed 22 August 2025]. Available from: https://time.com/archive/6716997/environment-a-war-against-the-earth/
[858] The Catastrophe at the Kakhovka HPP Created by Russian Terrorists Will not Stop Ukraine and Ukrainians – Address by President Volodymyr Zelenskyi. *The official website of the President of Ukraine* [online]. 6 June 2023 [viewed 22 August 2025]. Available from: https://www.president.gov.ua/news/stvorena-rosijskimi-teroristami-katastrofa-na-kahovskij-ges-83449 [in Ukrainian]

1907 (Art. 42)[859] and the Geneva Conventions of 1949 (Art. 2),[860] were under the regime of occupation, and Russia, as an occupying state, was subject to obligations under IHL. It should be highlighted that Russia denies its involvement in the KHPP dam explosion. At the same time, according to the analytical report prepared by the NGOs "Foundation for Support of Basic Research" and "Ukraine. Five a.m.," as well as the Resource and Analytical Centre "Society and Environment,"[861] conventional ammunition could not cause the destruction of the envisaged dam. In addition, the circumstances of the explosion and independent expert studies indicate the fact that the dam of the KHPP was blown up from the inside. Of a particular significance is the fact that the Russian government had adopted Resolution no. 873, abolishing some federal laws on safety at hydraulic structures in the temporarily occupied territories of Ukraine, a week before blasting the dam, namely on 30 May 2023.[862] The given circumstance indirectly testifies to the preparation for the explosion, eventually bringing to a catastrophic negative impact on the state of the environment of the Azov-Black Sea region. It is worth adding that independent OSINT researchers have equated environmental and economic consequences of the KHHP explosion and destruction with those

[859] Article 42 – Regulations. Convention (IV) Respecting the Laws and Customs of War on Land and its Annex: Regulations Concerning the Laws and Customs of War on Land. The Hague. *IHL Databases* [online]. 18 October 1907 [viewed 24 August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/hague-conv-iv-1907/regulations-art-42

[860] Article 2 – Application of the Convention – Conflicts not of an International Character. Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field. Geneva. *IHL Databases* [online]. 12 August 1949 [viewed 24 August 2025]. Available from: https://ihl-databases.icrc.org/en/ihl-treaties/gci-1949/article-2

[861] *Previous Environmental and Legal Analysis of the Destruction of the Kakhovka HPP and its Consequences: Analytical Report*. Kyiv: Coalition "Ukraine. Five am;" NGO "Fundamental Research Fund;" Society and Environment Resource Centre, 2023. 16 p. P. 4-5 [online]. [viewed 24 August 2025]. Available from: https://yur-gazeta.com/content/UserFiles/Docs_new/de3b65fbd486fc8d9178d019f6832987.pdf [in Ukrainian]

[862] BALACHUK, Iryna. Russia Decided Accidents at Hazardous Facilities Would not be Investigated Shortly Before Blowing up Kakhovka HPP. *Ukrainska Pravda* [online]. 6 June 2023 [viewed 24 August 2025]. Available from: https://www.pravda.com.ua/eng/news/2023/06/6/7405523/

using tactical nuclear weapons of 5-10 kilotons (only without radiation contamination).[863]

As a consequence of destroying the considered dam, Ukraine lost 18 billion (bn) cubic meters of water (which, in turn, would be enough to water the entire population of the Earth for two days).[864] The Dnieper River was polluted with more than 150 tons of engine oil and a large amount of organic waste, some of which ended up in the Black Sea. The destruction of the dam has also led to a decrease in the volume of water entering the North Crimean Canal (the main source of fresh water for the Crimean Peninsula). According to satellite images, these channels are already drying up.[865] With the loss of the dam, more than 1 million (mln) hectares (ha) of agricultural land in Kherson, Zaporizhzhya and Dnipropetrovsk regions may become unsuitable due to lack of water supply (agricultural land that is no longer irrigated and cultivated will become more vulnerable to soil erosion and desertification).[866] In fact, irrigation systems of agricultural lands, on which about 2 mln tons of grain were grown per year, were without water, which is 70% of Ukraine's grain exports to Africa in 2022.[867] More than 75K

[863] BELOUSOVA, Kateryna. Researchers Equated the Consequences of Blowing up the Kakhovka HPP with Tactical Nuclear Weapons. *EcoPolitic* [online]. 6 June 2023 [viewed 24 August 2025]. Available from: https://ecopolitic.com.ua/ua/news/doslidniki-pririvnyali-naslidki-pidrivu-kahovskoi-ges-do-taktichnoi-yadernoi-zbroi/ [in Ukrainian]
[864] MEPNR. How the War is Affecting the Environment in Ukraine and Europe: Ministry of Environmental Protection and Natural Resources and Partners Present First Infographic Study. *Governmental Portal* [online]. 20 July 2023 [viewed 24 August 2025]. Available from: https://www.kmu.gov.ua/en/news/yak-viina-vplyvaie-na-dovkillia-ukrainy-ta-ievropy-mindovkillia-z-partneramy-prezentuvalo-pershe-infohrafichne-doslidzhennia [in Ukrainian]
[865] NASA EARTH OBSERVATORY. Canals in Ukraine are Drying up. *EarthObservatory,* 2023. [online]. [viewed 24 August 2025]. Available from:https://earthobservatory.nasa.gov/images/151622/canals-in-ukraine-are-drying-up
[866] SERGATSKOVA, Katerina. Aftermath of the Kakhovka Dam Collapse. *Wilson Center;* 2023. [online]. 20 June 2023 [viewed 24 August 2025]. Available from: https://www.wilsoncenter.org/blog-post/aftermath-kakhovka-dam-collapse
[867] Total Environmental Damage to Ukraine Today Amounts to EUR 55.6 Billion: Denys Shmyhal. *The official website of the President of Ukraine* [online]. 20 October 2023 [viewed 24 August 2025]. Available from: https://www.kmu.gov.ua/news/zahalni-zbytky-dovkilliu-ukrainy-sohodni-skladaiut-556-mlrd-ievro-denys-shmyhal [in Ukrainian]

ha of land were also flooded. As of June 12, 2023, more than 64K ha of forests in Kherson and Mykolaiv regions were damaged as a result of flooding, and a total of 333K ha of protected areas were perpetrated. The above-provided affected 59 protected areas, involving 10 areas of the Emerald Network and 5 wetlands included in the Ramsar Convention, as well as the Askania-Nova Biosphere Reserve under the UNESCO auspices. Blasting the Kakhovka dam has caused large-scale environmental consequences, going far beyond the affected regions of Ukraine (the explosion itself and subsequent outcomes have already occasioned dramatical detriment to the coherence and ecological connectivity of the Pan-European Ecological Network (PEEN), of which the Kakhovka reservoir was a part).[868]

Thus, blowing up the Kakhovka dam was the largest act of ecocide in the last 70 years. According to the Ministry of Environment, the total damage from this terrorist attack alone exceeds 146 bn UAH (3.8 bn euro (€).[869] By blasting the KHHP dam, Russia infringed a number of obligations stipulated by such international treaties as: the 1977 Convention on the Prohibition of the Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention) (Art. 1, 4);[870] the 1992 Convention on the Protection and Use of Transboundary

[868] *Previous Environmental and Legal Analysis of the Destruction of the Kakhovka HPP and its Consequences: Analytical Report*. Kyiv: Coalition "Ukraine. Five am;" NGO "Fundamental Research Fund;" Society and Environment Resource Centre, 2023. 16 p. P. 7 [online]. [viewed 24 August 2025]. Available from: https://yur-gazeta.com/content/UserFiles/Docs_new/de3b65fbd486fc8d9178d019f6832987.pdf [in Ukrainian]

[869] Total Environmental Damage to Ukraine Today Amounts to EUR 55.6 Billion: Denys Shmyhal. *The official website of the President of Ukraine* [online]. 20 October 2023 [viewed 24 August 2025]. Available from: https://www.kmu.gov.ua/news/zahalni-zbytky-dovkilliu-ukrainy-sohodni-skladaiut-556-mlrd-ievro-denys-shmyhal [in Ukrainian]

[870] Convention on the Protection and Use of Transboundary Watercourses and International Lakes. *United Nations Economic Commission for Europe* [online]. December 2013 [viewed 24 August 2025]. Available from: https://unece.org/environment-policy/publications/convention-protection-and-use-transboundary-watercourses-and

Watercourses and International Lakes (Art. 2, 3);[871] the 1982 United Nations Convention on the Law of the Sea (UNCLOS);[872] the Convention for the Protection of the Black Sea against Pollution of 1992 and its Protocol on the Conservation of Biodiversity and Landscapes of the Black Sea of 2007;[873] the Protocol on Water and Health of 1999 to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Art. 1, 4);[874] the 1971 Convention on Wetlands of International Importance, especially as a Habitat for Waterfowl (the Ramsar Convention);[875] the Convention for the Protection of Biological Diversity of 1992 (Art. 8, 10, 14);[876] the 1992 United Nations Framework Convention on Climate Change (Art. 4);[877] and the 1994 Convention on Nuclear Safety.[878] In addition, Russia's actions may be qualified as a violation of customary principles of international environmental law, to exemplify, the principle of preventing

[871] Convention on the Protection and Use of Transboundary Watercourses and International Lakes. *United Nations Economic Commission for Europe* [online]. December 2013 [viewed 24 August 2025]. Available from: https://unece.org/environment-policy/publications/convention-protection-and-use-transboundary-watercourses-and

[872] Convention on the Law of the Sea. *United Nations* [online]. 16 November 1994 [viewed 24 August 2025]. Available from: https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf

[873] Convention on the Protection of the Black Sea Against Pollution. *The Black-Sea Commission* [online]. 21 April 1992 [viewed 24 August 2025]. Available from: http://www.blacksea-commission.org/Official%20Documents/The%20Convention/Full%20Text/

[874] Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, London 17 June 1999. *World Health Organisation* [online]. 1 October 1999 [viewed 24 August 2025]. Available from: https://www.who.int/europe/publications/i/item/WHO-EURO-1999-5525-45290-64816

[875] Convention on Wetlands of International Importance especially as Waterfowl Habitat. *Ramsar* [online]. 13 July 1994 [viewed 24 August 2025]. Available from: https://www.ramsar.org/sites/default/files/documents/library/current_convention_text_e.pdf

[876] Convention on Biological Diversity. *CBD* [online]. 22 May 1992 [viewed 24 August 2025]. Available from: https://www.cbd.int/convention/text

[877] United Nations Framework Convention on Climate Change. *UNFCCC* [online]. 9 May 1992 [viewed 24 August 2025]. Available from: https://unfccc.int/resource/docs/convkp/conveng.pdf

[878] Convention on Nuclear Safety. *International Atomic Energy Agency* [online]. 5 July 1994 [viewed 24 August 2025]. Available from: https://www.iaea.org/sites/default/files/infcirc449.pdf

transboundary environmental damage,[879] enshrined in the 1992 Rio Declaration.

To note, the conducted study will focus on one of the most critical environmental consequences of ongoing war – large-scale mining of territories, agricultural land and forests included. Unlike other outcomes of armed conflicts, which also cause drastical damage to the environment, mining itself has a complex and long-term nature, combining an immediate threat to human life and health with deep and persistent disturbances of natural ecosystems.

2. Mine Action and Environmental Protection: International and National Dimension

In the legal doctrine, contamination of territories with remnants of armed conflicts such as mines, cluster munitions, and other explosive residues of war is defined as one of the factors that causes long-term damage to the environment even after the end of active hostilities.[880] According to the estimates of the United Nations Environment Program (UNEP) and the Explosive Weapons in Populated Areas (EWIPA) initiative, Ukraine today belongs to the list of states that have suffered the most extensive environmental losses as a result of armed conflicts along with Afghanistan, Iraq, and Syria. In compliance with international reports, the level of pollution with explosive remnants of war in Ukraine is qualified as "massive but unknown."[881] In the de-occupied territories alone, at least 13.9K ha remain mined. However, due to the ongoing hostilities and occupation of more than 10.7% of the country's area,

---

[879] *Previous Environmental and Legal Analysis of the Destruction of the Kakhovka HPP and its Consequences: Analytical Report*. Kyiv: Coalition "Ukraine. Five am;" NGO "Fundamental Research Fund;" Society and Environment Resource Centre, 2023. 16 p. P. 8 [online]. [viewed 24 August 2025]. Available from: https://yur-gazeta.com/content/UserFiles/Docs_new/de3b65fbd486fc8d9178d019f6832987.pdf [in Ukrainian]

[880] Post-Conflict Mine Action. *National University of Life and Environmental Sciences of Ukraine* [online]. 7 April 2022 [viewed 26 August 2025]. Available from: https://nubip.edu.ua/node/107513 [in Ukrainian]

[881] Environmental Legacy of Explosive Weapons in Populated Areas. *United Nations Environment Programme* [online]. 5 November 2021 [viewed 26 August 2025]. Available from: https://www.unep.org/es/node/30417

it is presently impossible to provide a complete and reliable assessment of the scale of the specified issue.[882]

The recorded cases of mining territories cover 11 out of the 27 regions of Ukraine, including Chernihiv, Dnipropetrovsk, Donetsk, Kharkiv, Kherson, Kyiv, Luhansk, Mykolaiv, Odesa, Sumy, and Zaporizhzhya.[883] The lion's share of the stated is of a unique natural importance: these are protected areas, wetlands, forests, and agricultural lands with fertile chernozem soils. Their mine contamination not only renders it impossible to safely conduct economic activities or restore biodiversity, but also leads to the devastation of large areas, creating a long-term "ecological vacuum" in regions with the natural landscape changed into minefields by war. In fact, Ukrainian lands have turned into a bloody firing ground for deploying and disposing Russian weapons – from multiple launch rocket systems and long-range howitzers to cruise missiles and phosphorus bombs prohibited by the Third Protocol to the Geneva Conventions, which, in turn, led to penetrating a wide range of hazardous compounds into the soil, such as ammonia, lead and its inorganic compounds, sulfur, copper, arsenic, nickel oxide, benz(a)pyrene and others. Analysing satellite images of a hundred-hectare area sown with winter crops in the Izyum district of the Kharkiv region illustrates the scale of destruction as a result of shelling. The methodology developed by the NGO "Environment-People-Law" allowed experts of the Ukrainian Nature Conservation Group (UNCG) to identify a significant soil contamination along with its massive uprooting and a considerable deposition of iron, sulfur, and copper compounds.

---

[882] The Area of Ukrainian Territories Potentially Contaminated by Mines and Explosive Hazards Decreased by 17K km² in 2024. *Ministry of Defence of Ukraine* [online]. 5 November 2021 [viewed 26 August 2025]. Available from: https://mod.gov.ua/news/ploshha-teritorij-ukrayini-potenczijno-zabrudnenih-minami-ta-vibuhonebezpechnimi-predmetami-zmenshilas-na-17-000-km-u-2024-roczi [in Ukrainian]

[883] International Campaign to Ban Landmines, Landmine Monitor 2023. *ReliefWeb Portal* [online]. 14 November 2023 [viewed 26 August 2025]. Available from: https://reliefweb.int/report/world/landmine-monitor-2023-enar#:~:text=Geneva%2C%2014%20November%202023%20%E2%80%93%20New%20use%20of,today%20upon%20releasing%20its%20Landmine%20Monitor%202023%20report

Thus, the UNCG experts counted "480 craters from 82-mm shells, 547 craters from 120-mm shells, and 1025 craters from 152-mm ones. Only on this square kilometre (km²) of the field, 50 tons of iron, 1 ton of sulfur compounds and 2.35 tons of copper got into the soil. In addition, at least 90K tons of soil were turned out by explosions."[884]

In this context, humanitarian demining in Ukraine plays a crucial role in safely restoring natural ecosystems, returning agricultural land to economic turnover and promoting economic activity. The results of recent years indicate progress in fulfilling large-scale programs: in 2024, 3,152.52 km² were examined, of which more than 2,500 km² of territories have already been cleared of explosive objects. An important step was carrying into force the Action Plan for the Implementation of Measures for Humanitarian Demining of the De-Occupied Territories of Ukraine, within the framework of which a non-technical survey was conducted in 165 communities of the seven regions – almost three times more than planned. As a result, 2,291 sites of potentially or actually contaminated land with a total area of 302.9 km² were identified, confirming the scale of the problem and focusing on the need for further coordinated efforts in the field of cleaning up areas and restoring ecosystems.

Mine activity is an integral part of global security aimed at eliminating threats posed by mines along with explosive residues of armed conflicts that cause detrimental damage to the lives of civilian population, infrastructure development, and environmental status of the affected areas. Considering long-term perils which mine hazards pose to people, environment, social stability, and economic development of countries, the UN General Assembly in its Resolution 60/97[885] called on international,

[884] What Should be the Fate of Ukrainian Territories Damaged by Explosions. *Ukrainian Nature Conservation Group* [online]. 10 June 2022 [viewed 26 August 2025]. Available from: https://uncg.org.ua/iakoiu-maie-buty-dolia-poshkodzhenykh-vybukhamy-ukrainskykh-terytorij/ [in Ukrainian]

[885] Resolution Adopted by the General Assembly. [on the Report of the Special Political and Decolonization Committee (Fourth Committee) (A/60/473)] [online]. 8 December 2005 [viewed 26 August 2025]. Available from:

regional and national programmes to integrate mine action, humanitarian demining included, into rehabilitation and recovery initiatives, the approach of which has been reflected in modern international practice, where demining is interpreted not only as a means of eliminating military threats, but also as a key component of restoring territories and ecosystems, as well as ensuring their safe use and sustainable development.

It would be expedient to add that in the field of post-conflict settlement, the concept of *Jus Post Bellum,*[886] which refers to ensuring a just transition from a state of war to peace and covers legal instruments directed at restoring the affected regions, including environmental rehabilitation, is gradually becoming significant. The doctrine of law emphasizes the versatility of the aforementioned approach: the former is simultaneously focused on overcoming consequences of war and creating conditions for sustainable peace.[887] In addition, the concept of *Jus Post Bellum* is

---

https://documents.un.org/doc/undoc/gen/n05/493/42/pdf/n0549342.pdf?OpenElement

[886] BRUCH, Carl. Considerations in Framing the Environmental Dimensions of the Jus Post Bellum. In Stahn, CARSTEN – IVERSON, Jens – EASTERDAY, Jeniffer (Eds.), *Environmental Protection and Transitions from Conflict to Peace: Clarifying Norms, Principles, and Practices*. Oxford University Press, 2017, 512 p., pp. 29-39 [online]. October 2017 [viewed 27 August 2025]. Available from: https://doi.org/10.1093/oso/9780198784630.003.0002; HULME, Karen. Using a Framework of Human Rights and Transitional Justice for Post-Conflict Environmental Protection and Remediation. In Stahn, CARSTEN – IVERSON, Jens – EASTERDAY, Jeniffer (Eds.), *Environmental Protection and Transitions from Conflict to Peace: Clarifying Norms, Principles, and Practices*. Oxford University Press, 2017, 512 p., pp. 119-142 [online]. October 2017 [viewed 27 August 2025]. Available from: https://doi.org/10.1093/oso/9780198784630.003.0006; STEFANIK, Kirsten. The Environment and Armed Conflict. In Stahn, CARSTEN – IVERSON, Jens – EASTERDAY, Jeniffer (Eds.), *Environmental Protection and Transitions from Conflict to Peace: Clarifying Norms, Principles, and Practices*. Oxford University Press, 2017, 512 p., pp. 93-118 [online]. October 2017 [viewed 27 August 2025]. Available from: http://dx.doi.org/10.1093/oso/9780198784630.003.0005; CARSTEN – IVERSON, Jens (Eds.) *Just Peace After Conflict: Jus Post Bellum and the Justice of Peace*. Oxford University Press, 2020, 382 p. [online]. 5 November 2020 [viewed 27 August 2025]. Available from: https://doi.org/10.1093/oso/9780198823285.001.0001 and others.

[887] CARSTEN, Stahn – IVERSON, Jens – EASTERDAY, Jeniffer (Eds.). *Jus Post Bellum: Mapping the Normative Foundations*. Oxford University Press, 2014, 600 p. [online]. 6 April 2014 [viewed 27 August 2025]. Available from: https://doi.org/10.1093/acprof:oso/9780199685899.001.0001

increasingly considered through the prism of environmental recovery, confirmed in international law. In particular, Protocol V on Explosive Residues of War to the 1980 Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or Have Indiscriminate Effects enshrined the responsibilities of "high Contractual Parties and Those to the armed conflict in relation to all explosive remnants of war in the territory under its control" (Art. 3).[888] A quarter of a century later, the above approach was expanded in the UN General Assembly 77/104,[889] which adopted the PERAC principles – a document containing 27 points pointed at protecting the environment in the context of armed conflict, peculiarly in the post-conflict period (Principles (Pr.) 22-27). The latter provide for integrating environmental rehabilitation into peacebuilding processes, exchanging data on environmental consequences of hostilities, conducting environmental assessments and planning measures to restore the regarded. Of importance is the need to remove or neutralize toxic and other hazardous remnants of war, which can harm the natural environment; moreover, such actions should be carried out in accordance with the current rules of international law (Pr. 26).

In addition, the governing ICRC principles, approved in 2020,[890] determine the minimum customary rules for using land mines and explosive residues of war, targeted at reducing their detrimental impact on the civilian population and environment. In particular, Norm 24.A stipulates that parties to a conflict should be exceptionally cautious when using land mines, limiting their non-

[888] Protocol on Explosive Remnants of War to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (Protocol V) [online]. 28 November 2003 [viewed 27 August 2025]. Available from: https://treaties.unoda.org/t/ccw_p5

[889] Resolution Adopted by the General Assembly [on the Report of the Sixth Committee (A/77/415, para. 12)] [online]. 7 December 2022 [viewed 27 August 2025]. Available from:https://digitallibrary.un.org/record/3998322?v=pdf

[890] ICRC. Guidelines on Protection of Natural Environment in Armed Conflict. *ICRC* [online]. 14 March 2022 [viewed 27 August 2025]. Available from: https://www.icrc.org/en/document/guidelines-protection-natural-environment-armed-conflict-rules-and-recommendations-relating

selective effects and minimizing harm to the environment. This requirement is specifically relevant for those who have not joined the 1997 Convention on the Prohibition of Anti-Personnel Mines or to the Protocol with amendments II to the 1996 Convention on the Prohibition or Restriction of the Use of Certain Types of Normal Weapons. Furthermore, the party of a conflict that uses mines should, if possible, register their placement, and after the end of active hostilities, or in any other way to make them safe for the civilian population or contribute to demining. These norms are applied to all armed conflicts – both international and non-international. For instance, a case in Kosovo can be cited in which NATO provided detailed information on mapping and technical assistance to clean up the environment. However, such information exchange occurs rarely.[891]

At the same time, the States Parties to the 1997 Anti-Personnel Mines Ban Convention have assumed even more severe obligations: to completely reject using such mines, eliminate their stockpiles and clear territories contaminated with anti-personnel mines under their jurisdiction or control. It should be highlighted that any use of land mines is additionally regulated by the general customary rules of IHL – the principles of distinction, proportionality and the need for precautions.

It will be pertinent to add that the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and on Their Destruction (APMBC) and the Convention on Cluster Munitions (CCM) require the requests for extending deadlines so as to clear areas polluted with anti-personnel mines and cluster munitions to specifically contain information on the environmental consequences of such an extension. Both Conventions also require the States Parties to provide reports on

[891] HULME, Karen. Using a Framework of Human Rights and Transitional Justice for Post-Conflict Environmental Protection and Remediation. In Stahn, CARSTEN – IVERSON, Jens – EASTERDAY, Jeniffer (Eds.), *Environmental Protection and Transitions from Conflict to Peace: Clarifying Norms, Principles, and Practices.* Oxford University Press, 2017, 512 p., pp. 119-142 [online]. October 2017 [viewed 27 August 2025]. Available from: https://doi.org/10.1093/oso/9780198784630.003.0006

measures taken, which include references to applicable safety and environmental standards to be complied with.

In this context, the *Do Not Harm* approach, widely applied in international humanitarian practice, specifically in the field of mine action, is of a peculiar importance. Its essence is to minimize any detrimental effects on the environment during demining operations and while post-war reconstruction of territories. The given approach is extremely relevant both in the field of land management and in the aspect of environmental safety. International mine standards (IMAS)[892] avowedly consider the *Do Not Harm* principle, obliging national authorities as well as demining operators to adhere to environmental requirements. In particular, IMAS 10.70 establishes that all demining operations shall be carried out in conformance with measures aimed at lessening damage to the environment, whereas handling contaminated territories shall be as safe as possible, taking into account nature conservation standards. One of the key methods of environmentally safe demining is the "land release" system, provided by IMAS 07.11 and based on a gradual examination of territories, in which complete clearing is used only in cases of confirmed pollution. The stated Document also stipulates that after completing clearing operations, the territory shall remain suitable for its further intended use. Thus, the regarded standard directly enshrines the principle of *Do Not Harm*.

It will also be appropriate to note supplementary measures directed at diminishing a harmful impact of demining work on the environment, which include the following: 1) conducting a comprehensive environmental assessment while planning operations for clearing the territory; 2) determining future intended use of the territory before initiating its mechanical clearing; 3) coordinating demining schedules so as to rapidly use cleared territories in order to restore vegetation and prevent erosion; 4) planting local plant species immediately after clearing

[892] Discover the IMAS. *International Mine Action Standards* [online]. [viewed 28 August 2025]. Available from: https://www.mineactionstandards.org/standards/

the territories; 5) projecting demining works in such a way as to elude carrying out the specified during strong winds or rain; 6) leaving plant strips 3-4 meters wide to prevent erosion processes; 7) using mechanized equipment merely at the stage of preparing the land without destroying the upper fertile soil layer, and further clearing shall be done manually or with the help of alternative technologies; 8) restoring treated soil layers in the correct order so that the fertile top layer remains on the surface. IMAS also contains recommendations for evading chemical contamination. Demining organizations should be careful while selecting refueling places to prevent fuel and lubricants from entering water sources. Furthermore, it is worth emphasizing that Ukraine adopted IMAS in 2017; in addition, the regulatory framework is supplemented by International Ammunition Technical Guidelines (IATG)[893] and International Standardization Organization (ISO) standards,[894] which, in turn, complement environmental requirements in the envisaged area.

Thus, the experience of international humanitarian programs convincingly demonstrates the importance of applying an environmental approach to explosive ordnance disposal, which, in turn, includes controlling over areas of blasting, using special absorbent materials to diminish the spread of toxic substances as well as restoring natural ecosystems after works completion. On the other hand, scientific research elucidates the thing that environmental issues are still not of significance in international humanitarian treaties or at meetings devoted to mine action,[895]

[893] International Ammunition Technical Guidelines. *United Nations Office for Disarmament Affairs* [online] 21 June 2011 [viewed 28 August 2025]. Available from: https://disarmament.unoda.org/convarms/Ammunition/IATG/
[894] IMAS have been developed in accordance with the recommendations and processes contained in the ISO Quality Management Systems (ISO 9001:2008) and the ISO Risk Management System (ISO Guide 51). – *See:* 01.10. Guide for the Application and Development of International Mine Action Standards (IMAS). *International Mine Action Standards* [online] 16 May 2025 [viewed 28 August 2025]. Available from: https://www.mineactionstandards.org/standards/01-10/
[895] HOFMANN, Ursign – RAPILLARD, Pascal. Do No Harm in Mine Action: Why the Environment Matters. *The Journal of ERW and Mine Action* [online] April 2015 [viewed 28 August 2025]. Available from:

which, hence, shows imbalance between security, humanitarian and environmental aspects of demining, requiring peculiar attention from the international community. To state, outcomes of using and disposing mine-explosive devices are yet often long-term, then affecting biodiversity, soil, water resources and public health. Therefore, integration of environmental dimensions into mine action is not only eligible but also a prerequisite of achieving sustainable peace and security.

In the Ukrainian context, mine action is regarded not only as a security priority of the state, but also as an integral part of national policy on restoration and environmental rehabilitation of territories. Furthermore, the Strategic Plan of Work of the Ministry of Environmental and Natural Resources of Ukraine for 2024-2028 determines the direct relationship between humanitarian demining as one of mine action components and environmental recovery objectives. Among planned measures are to reach Strategic Goal 1: "Post-war restoration of Ukraine due to European course" and Strategic Goal 15: "Development of territories in the exclusion zone and unconditional (compulsory) resettlement," including clearing protected areas and lands contaminated as a result of hostilities from explosive objects. At the same time, the Document itself emphasizes that the final definition of territories boundaries for rehabilitation or renaturalization, approval of plans for their restoration and implementation of priority measures are likely only after complete demining.

The above provisions are also reflected in the state policy of Ukraine in the field of mine action, based on the priority of national interests and targeted not only at ensuring population's safety and its life, but also at eliminating threats related to explosive ordnance and minimizing their impact on the environment and economic activities (Art. 4 of the Law of Ukraine "On Mine Action in Ukraine"

https://www.gichd.org/fileadmin/user_upload/Do_No_Harm_in_Mine_Action__Why_the_Environment_Matters_-_Copy.pdf

of 2018).[896] The system of mine action is determined by a number of basic principles, among which is of particular importance "the priority of protecting rights and legitimate interests of a person, environment and state resources as well as providing national security when implementing mine action," which means that any demining measures should be taken in accordance with environmental standards, whereas further restoration of polluted territories should be carried out on the basis of an ecosystem approach, guaranteeing sustainable use of natural resources and preventing ecosystems re-degradation. In this regard, integration of mine-rehabilitation is considered not only as a strategic priority, but also as a crucial factor in sustainable state development.

The specified approaches are detailed in the National Mine Action Strategy by 2033 and the Operational Plan of its Implementation for 2024-2026, approved by the Cabinet of Ministers of Ukraine.[897] The Document provides for clearing about 80% of de-occupied territories over the next decade, which is key to granting population safety and inciting economic and environmental systems restoration. At the Strategy level, the main directions of forming the "priority system of tasks in the field of mine action" are either ascertained, where completing primary non-technical examination of territories, potentially contaminated with explosive objects as well as their identification, designation and enclosure, is presented. The planned humanitarian mine action measures should be carried out in conformity with the system of priorities that take into account industrial and agricultural significance of territories as well as certain environmental indicators. On the other hand, the Document does not reveal what is covered by the concept of "environmental

[896] Law of Ukraine No. 2642-VIII "On Mine Action in Ukraine." *Vidomosti Verkhovnoi Rady* [online] 6 December 2019 [viewed 28 August 2025]. Available from: https://zakon.rada.gov.ua/laws/show/2642-19#Text [in Ukrainian]
[897] Order of the Cabinet of Ministers of Ukraine No. 616-r "On Approval of the National Mine Action Strategy for the Period up to 2033 and Approval of the Operational Action Plan for its Implementation in 2024-2026" [online] 28 June 2024 [viewed 28 August 2025]. Available from: https://ips.ligazakon.net/document/KR240616?an=1 [in Ukrainian]

indicators," hence, creating the risk of legal uncertainty. Additionally, technical standards for demining procedures are assigned to DSTU 8820:2023 "Mine action. Management processes. Basic provisions."[898]

It should be highlighted that the National Strategy of Mine Action by 2033 provides for the use of environmentally-friendly mine methods only in certain categories of territories – primarily within nature reserve fund lands, emerald network areas, wetlands of international importance and other similar zones. At the same time, such a selective approach has a number of obvious drawbacks since limiting the scope of environmentally-oriented technologies use contradicts IMAS requirements, which, in turn, may lead to harmful consequences for ecosystems state and land fertility that are not formally attributed to the protected ones, but of natural or economic significance. It should be taken into account that works on eliminating effects of mine contamination by their nature is characterized by a high degree of invasiveness (interference) into the ecosystem: the former are often accompanied by destroying vegetation, damaging the topsoil, its compacting under technology and other man-made impacts, which cumulatively has a dramatical negative influence on ecosystems. Therefore, conducting comprehensive assessments of mine pollution impact on the environment is of an urgent need. Such estimates should determine the nature and extent of environmental consequences, while their results should be the basis for further developing land restoration procedures, their returning to productive use and preparing recommendations for considering environmental aspects when planning and implementing mine action.

To state, Ukraine does not have a proper regulatory framework that would regulate carrying out such environmental assessments

[898] "DSTU 8820:2023 Mine Action. Management Processes. Basic Provisions" approved by the Decree of the State Enterprise "Ukrainian Research and Training Centre of Problems of Standardization, Certification and Quality" no. 27 on the "Adoption of National Standards" [online] 13 March 2003 [viewed 28 August 2025]. Available from: https://zakon.rada.gov.ua/rada/show/en/v0027774-23?lang=en#Text [in Ukrainian]

within mine action. The current strategic documents and operating plans do not contain provisions for introducing relevant environmental standards, even in the long run, hence, creating a crucial gap between Ukrainian practice and international experience, in particular EU countries approaches, where considerable attention is paid to minimizing environmental hazards and consequences. Thus, integrating environmental dimensions into the national mine action system is a key condition for sustainable restoration of affected territories. Recognition and regulatory consolidation of environmental standards in the regarded area will not only decrease a detrimental impact on the environment, but also ensure the rational use of natural resources, which is one of the fundamentals of post-war recovery of Ukraine.

Summarizing the conducted study, it can be concluded that humanitarian demining in Ukraine is not restricted to the issues of population safety, but is an essential factor in environmental restoration and sustainable development of affected areas. It organically combines security, socio-economic and environmental dimensions, which makes it an integral part of the modern post-war settlement system. International practices showcase that integrating the environmental approach, especially, implementing the principles of *Jus Post Bellum,* PERAC, *Do No Harm* as well as IMAS standards, opens the opportunity for forming a new paradigm – "greening of mine activity." Moreover, analysing the strategic documents of Ukraine indicates an imbalance: despite the awareness of environmental aspect importance, the latter has not yet been sufficiently reflected in legal regulation. The selectivity of using environmentally-friendly methods as well as lacking clear procedures for the environmental assessment of explosive ordnance impact on the environment distinguishes the Ukrainian model from international practice, in particular the experience of EU countries.

International experience proves that post-conflict demining requires taking into consideration not only security and socio-economic factors, but also environmental effects. The example of Bosnia and Herzegovina demonstrates the complexity of the stated

process: after the 1992-1995 war, the mine scale exceeded 16K mine fields; whereas restoring territories was accompanied by deep socio-economic losses – destruction of up to 56 % of the housing stock in addition to loss of more than 60 % of farms and 70 % of agricultural equipment. The creation of a centralized NATO / SFOR database and BHMAC activities in coordination with international organizations allowed gradually reducing the area of mined lands twice – up to 956 km² as of 2020, while the environmental aspects remained secondary: although cases of forests and soils degradation were recorded, they were rarely considered as the subject of national policy. The legislative framework did not provide for the formal inclusion of environmental assessment procedures, and specialized environmental assessments were mostly carried out by international organizations, such as NPA, supported by international technical assistance.[899] The cited experience emphasizes that without integrating environmental dimensions into a mine action strategy, risks of long-term exhaustion and degradation of natural resources remain high.

A more progressive approach was illustrated by Croatia, which, having cleared more than 1,8K km² of territories and planned to complete demining by 2026, integrated the environmental component into national programs. Exceptionally demonstrative is the *NaturaVita* project,[900] one of the largest environmental ones in the country, implemented in the Danube and Drava basin. Within its borders, more than 25 km² of the Natura-2000 network forests were cleared of mines and ammunition, more than 1K hectares of forest and wetlands were restored, peculiarly due to replacing invasive species with autochthonous ones. Infrastructure for fire protection (to precise, 33 km of roads, 107 ha of cuttings, and 4

[899] Post-War Experience of Restoring the Environment of Bosnia and Herzegovina: Outcomes for Ukraine. *Environment-People-Law* [online] April 2022 [viewed 28 August 2025]. Available from: https://epl.org.ua/wp-content/uploads/2022/04/Dosvid-Bosniyi-i-Gertsegovyny_fin.pdf [in Ukrainian]
[900] NATURAVITA PROJECT. Nature Protection and Mine Clearance in Croatia. *European Commission – Life Programme.* [online] 23 June 2015 [viewed 28 August 2025]. Available from: https://natura2000.hr/en/naturavita-project/ and https://naturavita-project.eu/en/naturavita-project-starts/

bridges) was built, systematic water resources monitoring was organized, maps of ground and surface water levels were created, as well as educational programs for local communities on mine hazards and biodiversity were introduced. The given experience shows that mine action can become a catalyst not only for socio-economic, but also for environmental rehabilitation, opening access to environmental work in territories, remained blocked for decades due to mine danger.

Comparing the approaches of Bosnia and Herzegovina and Croatia demonstrates various strategies for environmental dimension integration into mine action. In the first case, the main objective was to recover its population and basic infrastructure, while environmental issues remained on the periphery. In the second one, demining was combined with environmental rehabilitation, which allowed integrating EU environmental standards into renewable projects. For Ukraine, which is on the path of European integration and faces the unprecedented scale of mine hazard, it is recommended to consider the Croatian model that combines humanitarian and environmental components.

Taking the above into account, it should be stated that integration of the environmental approach into mine action should become a strategic priority of national policy. In particular, it is expedient to do the following:

1. To develop national methods of environmental assessment of mine contamination effects and unify them with international standards.

2. To ensure a systematic implementation of PERAC principles and IMAS standards in the activities of national operators and authorities.

3. To extend environmentally-oriented methods of demining to all categories of land, not only to protected areas.

4. To apply the experience of those states that have already gone through large-scale demining (Croatia, Bosnia and Herzegovina,

Cambodia, etc.) to adapt effective mechanisms for natural areas restoration.

Thus, combining international principles with national priorities will create a comprehensive system in which humanitarian demining is considered not only as a tool for eliminating military threats, but also as a crucial factor in environmental recovery and sustainable development. In view of the scale of challenges, Ukraine has a chance to become one of the leaders in implementing the “duplicate activity” model, which will provide for strengthening national security, integrating into the European legal space and forming prerequisites for long-term peace and environmental stability.

6.3. International Legal Regulation of the Protection of Nuclear Power Plants during Armed Conflict[901]

doc. Mgr. Liudmyla Golovko, PhD.

Faculty of law, Comenius University, Bratislava

liudmyla.golovko@uniba.sk

Introduction

Nuclear power plants are civilian objects and are protected under international humanitarian law. The protection of such facilities is extremely important, as their destruction could cause enormous harm to human life and the environment, since the threat of radiation leakage is significant. However, the question arises as to whether international legal regulation of the protection of this type of object is sufficient.

Here are a few examples. On February 24, 2022, the Chernobyl NPP was among the first facilities captured by Russian Federation. Russian troops seized important radiation facilities and held workers hostage. The occupation lasted 35 days. The Greenpeace team documented, together with Ukrainian scientists in the Exclusion Zone, that Russia's military actions have caused serious damage to important laboratories, databases and radiation monitoring systems – a unique scientific infrastructure developed in collaboration with the global scientific community, including the necessary laboratory equipment to study the effects of radiation on people and the environment. And this poses a threat to the safety of this and future generations [902]. Impunity for such actions encourages the aggressor to repeat them.

[901] This article was written with the support of the VEGA project n. 1/0713/23 - *International legal protection of environmental rights - quo vadis?*

[902] Ukrainian Crisis Media Center. (2022). Based on the results of the study of radiation levels in the Chernobyl zone, Greenpeace appealed to the IAEA. URL: https://uacrisis.org/uk/za-rezultatamy-doslidzhennya-rivnya-radiatsiyi-u-chornobylskij-zoni-greenpeace-zvernuvsya-do-magate

It is worrying that when assessing the level of radiation that arose in the exclusion zone because of Russia's aggression, the results of the IAEA and Greenpeace studies differed significantly. At a Russian camp near the Yaniv railway station, the Greenpeace team measured dose rates ranging from 0.18 μSv/h (microsieverts per hour) to 2.5 μSv/h at a height of 10 cm. The highest level was more than three times the IAEA estimated. At a crossroads 1.5 km from the former Russian checkpoint near Rudy Les, the dose rate was 7.7 μSv/h – much higher than the IAEA measured [903]. Greenpeace experts expressed concerns that the IAEA's ability to protect nuclear safety in Ukraine has been compromised due to its connections with Rosatom, Russia's state nuclear agency. Their criticism focuses on Mikhail Chudakov, who was IAEA Deputy Director at the time and had previously worked at Rosatom for many years [904]. This situation raises important questions about the adequacy of international standards for assessing radiation safety and environmental damage. It also underscores the need for transparent mechanisms to address potential conflicts of interests. These challenges must be resolved at the international level.

On March 4, 2022, during a full-scale Russian invasion, the Zaporizhia Nuclear Power Plant (ZNPP), which is the biggest in Europe and the third biggest in the world, was captured by Russian troops. During the shelling of the ZNPP, the occupying forces damaged a number of facilities on its territory. According to preliminary estimates, the damage amounts 18.3 billion Ukrainian hryvnas (UAH) [905]. According to a report by the IAEA of January 19, 2024, the Russian forces have once again mined the territory of the occupied Zaporizhzhia NPP. "Mines previously discovered by the IAEA in November 2023 around the perimeter of the Zaporizhzhia Nuclear Power Plant – specifically in the buffer zone between the inner and outer fences – have now been reinstalled"

[903] Ibid
[904] Ibid
[905] Word and Deed. Analytical Portal. (2022). Damage from the actions of the occupiers was assessed at the Zaporizhzhia NPP. URL: https://www.slovoidilo.ua/2022/04/11/novyna/suspilstvo/zaporizkij-aes-oczinyly-zbytky-dij-okupantiv

[906] the report said. On July 4, 2025, Russian occupying forces disconnected the power line linking the ZNPP to the Ukrainian power grid. This line is essential for maintaining the plant's critical safety systems, including radiation protection. Since the start of Russia's full-scale invasion, the ZNPP has experienced a total blackout nine times [907], the most recent occurring in November 2025. The actions of the Russian occupying forces have led to significant degradation of equipment at the ZNPP. Almost all qualified personnel have left, the plant suffers from a lack of external power supply, and cooling water is unavailable due to the destruction of the Kakhovka dam [908]. As a result, for more than three years the ZNPP has posed a nuclear threat not only to Ukraine and Europe, but to the entire world.

In February 2025, Russian forces launched a drone attack on the Chernobyl Nuclear Power Plant. Greenpeace commissioned former British military experts from McKenzie Intelligence Services to analyze the incident. Their investigation concluded that the drone used was a Russian Geran-2 drone (type Shahed), exclusively operated by Russian troops, and was almost certainly pre-programmed to strike the Chernobyl NPP on the night of February 14, 2025. A Russian drone attack caused serious damage to the Shelter facility at the Chernobyl NPP, destroying 50 % of the northern roof structure. A drone pierced the roof of the New Safe Confinement structure, triggering fires and inflicting significant structural damage [909]. The Prosecutor General's Office of Ukraine has opened a criminal investigation into the Russian drone attack

[906] The IAEA announced the repeated replacement of the Zaporizhzhia NPP. (2024). URL: https://zn.ua/ukr/UKRAINE/u-mahate-povidomili-pro-povtorne-zaminuvannja-zaporizkoji-aes.html
[907] Economic truth. (2025). There was a blackout at the Zaporizhzhia NPP due to a Russian strike. URL: https://epravda.com.ua/energetika/rf-znestrumila-zaporizku-aes-udarom-po-stanciji-808857/
[908] Radio Svoboda. (2024). Two years of occupation of the ZNPP: the biggest risks ahead? https://www.radiosvoboda.org/a/novyny-pryazovya-zaporizka-atomna-stantsiya-dva-roky-okupatsiyi-bilshykh-ryzykiv-poperedu/32848666.html
[909] Greenpeace mission to Chernobyl: 50% of the northern roof structure of the Shelter facility was seriously damaged after a Russian drone attack. (2025). URL: https://www.greenpeace.org/ukraine/novyny/3497/misiya_greenpeace_u_chornobyli/

on the Chernobyl NPP, qualifying this act as a war crime. Considering the fact that the exclusion zone now contains ten times more nuclear fuel than there during the 1986 disaster [910], such an attack could have catastrophic consequences. These actions must be prosecuted and punished under international law.

In September 2025 the 69th General Conference of the International Atomic Energy Agency adopted the resolution "Nuclear Safety, Nuclear Security and Safeguards in Ukraine". The resolution contains a direct call for the immediate withdrawal of all unauthorized military and other personnel from the Zaporizhzhia NPP. It reaffirms that the Zaporizhzhia NPP and all nuclear facilities in Ukraine must operate under the full sovereign control of the competent Ukrainian authorities. Additionally, the resolution recalled Russian strikes on the Chornobyl Exclusion Zone and the damage to the New Safe Confinement, emphasizing the risks these actions pose to international nuclear safety [911]. At the same time, it should be noted that although the resolution sends a strong diplomatic signal, Russia is unlikely to comply. The non-binding nature of the IAEA resolutions remains a significant limitation to their effectiveness.

1. Protection of nuclear power plants by norms of international humanitarian law

Having given real examples of threats that become clear in real time, we will proceed to the analysis of international legal norms aimed at protection of nuclear power plants during military operations.

[910] Chernobyl – 37 years of the tragedy that changed the world. What is important to remember. (2025). URL: https://www.meteo.gov.ua/f/news/%D0%A7%D0%BE%D1%80%D0%BD%D0%BE%D0%B1%D0%B8%D0%BB%D1%8C%2037%20%D1%80%D0%BE%D0%BA%D1%96%D0%B2.pdf

[911] IAEA General Conference Adopted a Resolution Demanding the Immediate De-occupation of Zaporizhzhia NPP. (2025). URL: https://www.mev.gov.ua/en/news/iaea-general-conference-adopted-resolution-demanding-immediate-de-occupation-zaporizhzhia-npp

As we have already noted, nuclear power plants are civilian objects, which are protected under international humanitarian law. According to Article 48 of the Additional Protocol I to the Geneva Conventions, in order to ensure respect for and protection of the civilian population and civilian objects, the parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives [912]. Similar provision we can find in article 52 (2) of the Additional Protocol I, according to which attacks shall be limited strictly to military objectives. In so far as objects are concerned, military objectives are limited to those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage [913]. In case of doubt whether an object which is normally dedicated to civilian purposes, such as a place of worship, a house or other dwelling or a school, is being used to make an effective contribution to military action, it shall be presumed not to be so used (article 52 (3) of the Additional Protocol I).

Article 52 of the Additional Protocol I creates a presumption that objects enumerated in it serve their normal civilian purposes, but it takes into account the possibility that they will be subjected to military use. Should the normal-civilian presumption be rebutted, even schools and places of worship may become military objectives [914].

The principle of distinction between civilian objects and military objectives is considered as customary international humanitarian

[912] Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol 1).
[913] Ibid.
[914] DINSTEIN, Y. (2022). Objects Endowed with Special Protection. In: The Conduct of Hostilities under the Law of International Armed Conflict. Cambridge University Press; 236-265.

law [915]. Article 57 of the Additional Protocol I to the Geneva Conventions requires that all feasible precautionary measures be taken during attacks to protect civilians and civilian objects.

Article 56 of the Additional Protocol I is aimed at the protection of works and installations containing dangerous forces. Nuclear power plants of course also belong to them. According to the article, attacks on such objects are forbidden even if these objects are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population. This article sets an absolute standard, and states do not have to assess the application of the principle of proportionality, which is the strong side of this article. But at the same time the provision of the first paragraph is significantly weakened by the second paragraph of this article, which states the following:

The special protection against attack provided by paragraph 1 shall cease:

(a) for a dam or a dyke only if it is used for other than its normal function and in regular, significant and direct support of military operations and if such attack is the only feasible way to terminate such support;

(b) for a nuclear electrical generating station only if it provides electric power in regular, significant and direct support of military operations and if such attack is the only feasible way to terminate such support;

(c) for other military objectives located at or in the vicinity of these works or installations only if they are used in regular, significant and direct support of military operations and if such attack is the only feasible way to terminate such support [916].

[915] IHL Databases. International Humanitarian Law Databases. Rule 7. The Principle of Distinction between Civilian Objects and Military Objectives. URL: https://ihl-databases.icrc.org/en/customary-ihl/v1/rule7

[916] Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol 1).

Moreover, scholars prove that states do not want to repeal this restrictive provision [917]. At the same time, they recognize the importance of protection of critical infrastructure and upholding international humanitarian norms.

Gábor Kecskés proposes as a solution to use bilateral agreement between belligerent states and even gives an example of the treaty between India and Pakistan of 1988 [918]. However, the parties often do not want to conclude such agreements.

According to some scientists, several states, which are not parties to the Additional Protocol I, claim that its article 56 does not reflect customary international law [919]. This attitude of states also limits the application of this provision. Some scholars (e.g. Dominik Steiger) believe that this article could belong to the norms of customary law [920]. That is, there is no unambiguous answer to this question.

Additional Protocol II to the Geneva Conventions, which is applicable during non-international armed conflict, also obliges to protect objects essential to the survival of the civilian population. We find this obligation in article 14 of the Protocol [921]. Given that

---

[917] LUDOVICA, Castelli, OLAMIDE Samuel. (2023). Justifying attacks on nuclear facilities. URL: https://www.tandfonline.com/doi/full/10.1080/10736700.2024.2301883#d1e123

[918] KECSKÉS, Gábor. (2024). The protection of nuclear installations in time of armed conflict – old rules, new challenges. Hungarian Journal of Legal Studies. Volume 64. Issue 4. P. 508-519.

[919] SCHMITT, Michael N. (2022). Attacking dams – part II: the 1977 additional protocols. URL: https://lieber.westpoint.edu/attacking-dams-part-ii-1977-additional-protocols/; DUPUIS, Martin P., et al. (1987). The Sixth Annual American Red Cross-Washington College of Law Conference on International Humanitarian Law: A Workshop on Customary International Law and the 1977 Protocols Additional to the 1949 Geneva Conventions. *American University International Law Review*, no. 2, p. 415-538.; BOND, James E. et al. (1987). Determining Customary International Law Relative to the Conduct of Hostilities in Non-international Armed Conflicts, 2 AM. U. J. INT'L L. & POL'Y 471. URL: https://digitalcommons.law.seattleu.edu/faculty/683. P. 427

[920] STEIGER, Dominik. (2011). Oxford Public International Law. Civilian Objects. URL: https://opil.ouplaw.com/display/10.1093/law:epil/9780199231690/law-9780199231690-e267

[921] Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), 8 June 1977. URL: https://ihl-databases.icrc.org/en/ihl-treaties/apii-1977

most armed conflicts are not international in nature, the presence of this provision is important.

Another important unresolved issue that scientists point out is the lack of a norm in international law that would answer the question of who is responsible for the damage caused by damage to a nuclear power plant. For example, as Tibisay Morgandi and Batuhan Betin claim, the 1963 Vienna Convention on Civil Liability for Nuclear Damage does not provide a clear answer to this question from the point of view of when the responsibility of one party ceases and the responsibility of the other begins [922]. This issue also needs to be resolved.

2. International legal regulation of the peaceful use of nuclear energy and its potential application during armed conflict

Among the international legal acts of the United Nations in the field of nuclear security regulation, the Convention on the Physical Protection of Nuclear Material holds a prominent place [923]. Convention aims to strengthen the security of nuclear materials during international transportation. It determines obligations of states regarding the physical protection of nuclear material during international transportation; requires criminalization of certain offences involving nuclear material; and regulates the questions of international cooperation, for example, in the case of theft or robbery and any other unlawful fraudulent obtaining of nuclear material or threat of such action.

The terrorist attacks on New York's Twin Towers of September 11, 2001, accelerated the process of revising this convention. It significantly strengthened the original document in several important ways. Amendment of 2005 extends the scope of the

[922] MORGANDI, Tibisay, BETIN, Batuhan. (2022). Legal Implications of the Military Operations at the Chernobyl and Zaporizhzhia Nuclear Power Plants. URL: https://www.ejiltalk.org/legal-implications-of-the-military-operations-at-the-chernobyl-and-zaporizhzhya-nuclear-power-plants/

[923] Convention on the Physical Protection of Nuclear Material. (1979). URL: https://treaties.un.org/doc/db/terrorism/conv6-english.pdf

original treaty to cover physical protection of nuclear facilities and nuclear material used for peaceful purposes in domestic use, storage and transport. It also further criminalizes offences related to illicit trafficking and sabotage of nuclear material or nuclear facilities and provides for strengthened international cooperation in light of the expanded scope, such as assistance and information sharing in the event of sabotage [924].

The Convention on Nuclear Safety [925], adopted in 1994, expressed the understanding of states concerning the necessity of ensuring the highest possible level of safety at nuclear facilities. It aims to protect people and the environment from potential risks associated with the use of nuclear energy. The Convention on Nuclear Safety is primarily designed to promote the safety of civil nuclear power plants during normal operations and emergencies by establishing obligations of states to maintain high levels of nuclear safety through national measures and international cooperation. But again, it says nothing about its application during armed conflict. The Convention on Nuclear Safety does not contain provisions aimed at protecting nuclear installations during hostilities or in the event of armed attack. Thus, this area remains unregulated by international law.

Convention on the Physical Protection of Nuclear Material and its Amendment of 2005 are important legal instruments aimed at ensuring nuclear safety, but they are not used during armed conflict. Article 4 (b) of the Amendment clearly states that the activities of armed forces during an armed conflict, as those terms are understood under international humanitarian law, which are governed by that law, are not governed by this convention, and the activities undertaken by the military forces of a state in the exercise of their official duties, in as much as they are governed by other

[924] IAEA. (2025). Convention on the Physical Protection of Nuclear Material (CPPNM) and its Amendment. URL: https://www.iaea.org/publications/documents/conventions/convention-physical-protection-nuclear-material-and-its-amendment
[925] The Convention on Nuclear Safety. (1994). URL: https://www.iaea.org/publications/documents/infcircs/convention-nuclear-safety

rules of international law, are not governed by it [926]. The failure to apply this convention and its amendment during a military conflict leaves this issue unregulated during it and decreases the security of nuclear materials.

The issue of international legal regulation of the protection of nuclear power plants both during peacetime and military conflicts remains a critically relevant concern. As of mid-2024, 408 reactors with 367 GW were operating in the world and cover more than a quarter of low-carbon electricity generation [927].

The International Convention for the Suppression of Acts of Nuclear Terrorism was developed under the auspices of the United Nations and adopted in April 2005 and entered into force in July 2007 [928]. According to Article 4 of the Convention, it also does not apply during hostilities.

The Treaty on the Prohibition of Nuclear Weapons, which was adopted in 2017 and entered into force on January 22, 2021, bans the development, use, threatening to use, possession, testing, and transfer of nuclear weapons under international law [929]. It is the first legally binding international treaty which purpose is to completely ban nuclear weapons with the final goal to eliminate them. However, the initiative to adopt the treaty was put forward by non-nuclear states and it has not been supported by any of the states that are believed to possess nuclear weapons.

---

[926] Amendment to the Convention on the Physical Protection of Nuclear Material. (2005). URL: https://www.iaea.org/sites/default/files/publications/documents/infcircs/1979/infcirc274r1m1c.pdf

[927] IEA. (2025). Nuclear Power Proves its Vital Role as an Adaptable, Reliable Supplier of Electricity during COVID-19. URL: https://www.iaea.org/newscenter/news/nuclear-power-proves-its-vital-role-as-an-adaptable-reliable-supplier-of-electricity-during-covid-19

[928] International Convention for the Suppression of Acts of Nuclear Terrorism. (2005). URL: https://treaties.un.org/doc/source/RecentTexts/English_18_15.pdf

[929] The Treaty on the Prohibition of Nuclear Weapons. (2017). URL: https://d3n8a8pro7vhmx.cloudfront.net/tectodevms/pages/2417/attachments/original/1571248124/TPNW-English1.pdf?1571248124

3. The role and activities of the IAEA

For over 50 years the IAEA has published more than 200 safety standards which reflect an international consensus on what constitutes a high level of safety for protection of people and the environment [930]. The disadvantage of these safety standards is that they are not binding on states and are used in different ways in different countries. At the same time, it should be emphasized that while the IAEA safety standards are not legally binding on states, they are expected to apply them, especially during times of conflict. Military actions increase the risk of damage and, as a result, irreparable harm. Therefore, it is in the interest of all countries to adhere to the standards developed by the IAEA.

In terms of protecting the right to nuclear safety, the most important part of the IAEA Statute is the IAEA's nuclear safety guarantees enshrined in Article 12. Firstly, the Agency has the right to examine nuclear reactors and certify them, provided that they are not related to military purposes. The Agency has the right to require the compliance of the measures of the participating states with health and environmental safety standards, to require the submission of reports and presentations, and to determine the methods that should be applied so that the use of nuclear energy does not contribute to its use for military purposes and complies with health standards [931]. At the same time, it should be noted that since February 1, 2024, Russian invaders have only allowed IAEA's employees who have Russian citizenship and have signed contracts with a Russian company to work at the Zaporizhzhia NPP [932].

[930] Office for Nuclear Regulation. (2025). International Safety Standards (IAEA). URL: https://www.onr.org.uk/our-work/how-we-regulate/international-safety-standards-iaea/

[931] IVANYTSKYI, A. (2022). Protection of the right to nuclear safety through the prism of the IAEA's activities. Dnipro Scientific Journal of Public Administration, Psychology, Law. Issue 5, p. 65-71. P. 68.

[932] The IAEA has provided Ukraine with €8.5 million worth of nuclear power plant equipment since the start of the war. (2024). URL: https://www.ukrinform.ua/rubric-economy/3835677-magate-vid-pocatku-vijni-nadalo-ukraini-obladnanna-dla-aes-na-85-miljona.html

The IAEA also has developed a Code of Conduct on the Safety and Security of Radioactive Sources [933]. It is a non-legally binding instrument that provides guidance to states on how to ensure the safe and secure management of radioactive sources during peacetime. In response to the IAEA General Conference resolution GC(47)/RES/7 (PDF 48 kb), 134 states have made a political commitment to implement the Code of Conduct and 107 states have notified the IAEA Director General of their intention to act in a manner consistent with the Supplementary Guidance [934]. However, the Code of Conduct does not explicitly address situations of armed conflict, which is of course a disadvantage.

In 2024, the IAEA applied safeguards for 190 states with safeguards agreements in force, according to the Safeguards Statement and Background for 2024, published recently. This involved performing more than 3000 in-field verification activities at over 1300 nuclear facilities and "locations outside facilities" around the world. Through safeguards, the IAEA verifies states' commitments to use nuclear material and technology only for peaceful purposes [935].

Ukraine also used the right to appeal to the IAEA in connection with Russia's armed aggression.

By the Resolution of August 15, 2022, the Parliament of Ukraine called on:

1) the parliaments and governments of the member states of the International Atomic Energy Agency to recognize the actions of the Russian Federation regarding the occupation of the ZNPP, its mining and shelling, which threaten the safe existence of Europe and the world, as an act of nuclear terrorism;

---

[933] Code of Conduct on the Safety and Security of Radioactive Sources. (2004). https://www-pub.iaea.org/MTCD/Publications/PDF/Code-2004_web.pdf
[934] ARPANSA. (2025). Code of Conduct on the Safety and Security of Radioactive Sources. URL: https://www.arpansa.gov.au/about-us/what-we-do/international-collaboration/safety-and-security-of-radioactive-sources
[935] IAEA. (2025). IAEA Applied Safeguards for 190 States – IAEA Report. URL: https://www.iaea.org/newscenter/news/iaea-applied-safeguards-for-190-states-iaea-report

2) The United Nations, the institutions of the European Union, the Organization for Security and Cooperation in Europe, and the International Atomic Energy Agency to apply sanctions against the entire Russian nuclear industry, in particular against the state corporation "Rosatom", enterprises and organizations that are part of the state corporation "Rosatom", and their subsidiaries located both in the territory of the Russian Federation and abroad, as well as against Russian individuals who are heads of the state corporation "Rosatom", enterprises and organizations that are part of it, and who are heads of their subsidiaries, who are responsible for the implementation of the criminal policy of the Russian Federation against Ukraine and who take a direct part in making decisions and committing acts of nuclear terrorism on the territory of Ukraine;

3) the parliaments and governments of the member states of the International Atomic Energy Agency to appeal to the IAEA General Conference to suspend the privileges and immunities of the Russian Federation as a member of this Agency, as well as to deprive the Russian Federation of the right to vote at meetings of the IAEA Board of Governors and the opportunity to participate in technical cooperation programs, scientific and technical exchange, and international research projects conducted under the auspices of the Agency;

4) The United Nations, the International Atomic Energy Agency, should immediately take the necessary measures to organize and send a joint UN and IAEA security mission to the ZNPP with the subsequent demilitarization of the ZNPP and the withdrawal of units of the armed forces of the Russian Federation and representatives of the State Atomic Energy Corporation "Rosatom" and JSC "Concern Rosenergoatom" from the ZNPP and the entire adjacent territory, including the city of Energodar, the restoration of damage to the ZNPP infrastructure and the transfer of the ZNPP under full control of Ukraine [936].

[936] Resolution of the Verkhovna Rada of Ukraine "On the Appeal of the Verkhovna Rada of Ukraine to the United Nations, the institutions of the European Union, the

On March 7, 2024 the IAEA Board of Governors approved a draft resolution on the urgent return of the Zaporizhzhia NPP under full control of Ukraine [937]. The document calls on Russia to urgently withdraw all unauthorized personnel, including military personnel, from the ZNPP and to immediately return the plant to the full control of the competent authorities of Ukraine in accordance with the license issued by the State Nuclear Regulatory Inspectorate of Ukraine. This is necessary to ensure its safe and reliable operation. The adopted document also expresses serious concern about the unstable state of nuclear safety and security at the ZNPP, in particular the lack of properly qualified personnel on site, gaps in the implementation of planned and preventive work, the lack of reliable supply chains, the vulnerable state of water supply, external power supply, and the placement of anti-personnel mines in the buffer zone between the inner and outer perimeters of the facility. A vote in favor of this resolution demonstrates commitment to the IAEA and the need to restore safety to Europe's largest nuclear power plant [938].

The IAEA continued to face some restrictions on obtaining timely and appropriate access to all areas of relevance to nuclear safety and security and in having open discussions with all relevant staff at the ZNPP. This limits the Agency's ability to make its assessment and report impartially and objectively on the nuclear safety and security situation at the site, and to fully assess whether

Organization for Security and Cooperation in Europe, the International Atomic Energy Agency, and the parliaments and governments of its member states on condemning the act of nuclear terrorism committed by the aggressor state - the Russian Federation at the Zaporizhzhia Nuclear Power Plant in the city of Energodar, Zaporizhzhia region, Ukraine" of 15.08.2022. URL: https://zakon.rada.gov.ua/laws/show/2502-20#Text

[937] Nuclear safety, security and safeguards in Ukraine. Resolution adopted on 7 March 2024 during the 1713th session. (2024). URL: https://www.iaea.org/sites/default/files/documents/gov2024-18.pdf

[938] Social news. (2024). IAEA adopts resolution on urgent return of Zaporizhzhia NPP to Ukrainian control. URL: https://suspilne.media/700974-magate-uhvalilo-rezoluciu-pro-terminove-povernenna-zaporizkoi-aes-pid-kontrol-ukraini/

necessary international standards are being observed at all times [939].

To assess the possible consequences of the disaster at the ZNPP, experts relied on the consequences of the 1986 Chernobyl accident. There were 2,200 fuel assemblies at the 4th reactor of the Chernobyl NPP. At the ZNPP in six reactors and in the spent nuclear fuel storage facility there are up to 18,000 fuel assemblies (9-10 times more). That is, the consequences of the accident at the ZNPP could be ten times more powerful than in 1986 at the Chernobyl NPP. In the event of a disaster, the area of the potential exclusion zone will be up to 30 thousand km² (as many as 10 Chernobyl exclusion zones), and the Zaporizhzhia region will actually be lost for habitation and economy. At the same time, the area of the potential contaminated territory will be up to 2 million km², and the degree of contamination of other territories of Ukraine and Europe, Russia and Belarus will depend on the wind [940]. A fire, explosion or damage by shells, bombs, or missiles can lead to a nuclear accident [941]. All this indicates the seriousness of the situation and the need to ensure the safe operation of the nuclear power plant.

It should also be noted that during the design of the vast majority of nuclear power plants, possible military operations were not taken into account [942]. For example, as for the practical problems of insuring security of nuclear reactors in the conditions of war, as experts of the Kyiv National University of Civil Engineering and Architecture inform, two types of reactors are in

[939] IEA. (2025). Board of Governors. Nuclear Safety, Security and Safeguards in Ukraine. Report by the Director General. URL: https://www.iaea.org/sites/default/files/documents/gov2025-11.pdf. Para 149. Page 42.
[940] Energoatom. (2023). Possible consequences of an accident at the Zaporizhzhia nuclear power plant. https://old.energoatom.com.ua/protection/pro-2010232.html
[941] Ibid.
[942] VASHCHENKO, Y. (2021). Access to Modern Energy Services Through the Prism of Children's Rights: An Overview from the Perspectives of the Convention on the Rights of the Child and the Policy and Law Approaches of Certain EU Member States and Ukraine. *International Comparative Jurisprudence*, Volume 7, Issue 1., 75-87. DOI: http://dx.doi.org/10.13165/j.icj.2021.06.006

operation in Ukraine — VVER 1000 and VVER 440. Their projects did not take into account military threats, in particular the impact of a bomb or a projectile [943]. Therefore, the idea of creating a 30-km zone around all nuclear power plants, free of military personnel and any military equipment, appears to be an effective solution for protection of nuclear power plants from accidental damage, which can have global negative consequences. During military operations, norms of humanitarian law are often not applied [944]. That is why we agree with the scientists who see the only way to implement the aforementioned proposals into life through the immediate preparation and deployment of UN missions, such as UN peacekeeping operations, on the territory of the nuclear power plants, which are located on the territory of armed conflict [945]. Such measures are necessary for preventing environmental disasters.

Conclusion

International humanitarian law contains provisions aimed at protection of nuclear power plants during armed conflict, but this legal regulation is insufficient. Article 56 of Additional Protocol I prohibits attacks against installations containing dangerous forces, but the existence of exceptions to this provision and contested customary status limit its effectiveness. International nuclear law, including the Convention on the Physical Protection of Nuclear Material and the Convention on Nuclear Safety, was designed for peacetime use and expressly excludes their application during armed conflict. The activities of the IAEA are crucial for setting safety standards, but their resolutions are not binding and we see examples when states do not implement them. This all points to

[943] PIADYSHEV, V. (2023). Prospects for ensuring the security of nuclear power plants in Ukraine against external invasion during the state of martial. Legal scientific electronic journal № 4 DOI https://doi.org/10.32782/2524-0374/2023-4/188 P. 776-780. P. 777

[944] Ibid. P. 779

[945] GOLOVKO, Liudmyla. International Legal Regulation of Protection of Environment during Armed Conflicts. In: PAĽUCHOVÁ, Petra (ed.). *Current Issues of International Environmental Law – Through the Lens of Public International Law and Private International Law*. Bratislava: Comenius University Bratislava, Faculty of Law, 2024, pp. 28-35. P. 32.

shortcomings that need to be addressed. International legal regulation in this area needs improvement.

List of Bibliography

1. Amendment to the Convention on the Physical Protection of Nuclear Material. (2005). URL: https://www.iaea.org/sites/default/files/publications/documents/infcircs/1979/infcirc274r1m1c.pdf

2. ARPANSA. (2025). Code of Conduct on the Safety and Security of Radioactive Sources. URL: https://www.arpansa.gov.au/about-us/what-we-do/international-collaboration/safety-and-security-of-radioactive-sources

3. BOND, James E. et al. (1987). Determining Customary International Law Relative to the Conduct of Hostilities in Non-international Armed Conflicts, 2 AM. U. J. INT'L L. & POL'Y 471 (1987). URL: https://digitalcommons.law.seattleu.edu/faculty/683

4. Chernobyl – 37 years of the tragedy that changed the world. What is important to remember. (2025). URL: https://www.meteo.gov.ua/f/news/%D0%A7%D0%BE%D1%80%D0%BD%D0%BE%D0%B1%D0%B8%D0%BB%D1%8C%2037%20%D1%80%D0%BE%D0%BA%D1%96%D0%B2.pdf

5. Code of Conduct on the Safety and Security of Radioactive Sources. (2004). https://www-pub.iaea.org/MTCD/Publications/PDF/Code-2004_web.pdf

6. Convention on the Physical Protection of Nuclear Material. (1979). URL: https://treaties.un.org/doc/db/terrorism/conv6-english.pdf

7. DINSTEIN, Y. (2022). Objects Endowed with Special Protection. In: The Conduct of Hostilities under the Law of International Armed Conflict. Cambridge University Press; 236-265.

8. DUPUIS, Martin P., et al. (1987). The Sixth Annual American Red Cross-Washington College of Law Conference on International Humanitarian Law: A Workshop on Customary International Law and the 1977 Protocols Additional to the 1949 Geneva Conventions. American University International Law Review 2, no. 2, p. 415-538.

9. Economic truth. There was a blackout at the Zaporizhzhia NPP due to a Russian strike. (2025). URL: https://epravda.com.ua/energetika/rf-znestrumila-zaporizku-aes-udarom-po-stanciji-808857/

10. Energoatom. (2023). Possible consequences of an accident at the Zaporizhzhia nuclear power plant. URL: https://old.energoatom.com.ua/protection/pro-2010232.html

11. GOLOVKO, Liudmyla. International Legal Regulation of Protection of Environment during Armed Conflicts. In: PAĽUCHOVÁ, Petra (ed.). *Current Issues of International Environmental Law – Through the Lens of Public International Law and Private International Law*. Bratislava: Comenius University Bratislava, Faculty of Law, 2024, pp. 28-35.

12. Greenpeace mission to Chernobyl: 50% of the northern roof structure of the Shelter facility was seriously damaged after a Russian drone attack. (2025). URL: https://www.greenpeace.org/ukraine/novyny/3497/misiya_greenpeace_u_chornobyli/

13. IAEA General Conference Adopted a Resolution Demanding the Immediate De-occupation of Zaporizhzhia NPP. (2025). URL: https://www.mev.gov.ua/en/news/iaea-general-conference-adopted-resolution-demanding-immediate-de-occupation-zaporizhzhia-npp

14. IAEA. (2025). Convention on the Physical Protection of Nuclear Material (CPPNM) and its Amendment. URL: https://www.iaea.org/publications/documents/conventions/convention-physical-protection-nuclear-material-and-its-amendment

15. IAEA. (2025). IAEA Applied Safeguards for 190 States – IAEA Report. URL: https://www.iaea.org/newscenter/news/iaea-applied-safeguards-for-190-states-iaea-report

16. IEA. (2025). Board of Governors. Nuclear Safety, Security and Safeguards in Ukraine. Report by the Director General. URL: https://www.iaea.org/sites/default/files/documents/gov2025-11.pdf. Para 149.

17. IEA. (2025). Nuclear Power Proves its Vital Role as an Adaptable, Reliable Supplier of Electricity during COVID-19. URL: https://www.iaea.org/newscenter/news/nuclear-power-proves-its-vital-role-as-an-adaptable-reliable-supplier-of-electricity-during-covid-19

18. IHL Databases. International Humanitarian Law Databases. Rule 7. The Principle of Distinction between Civilian Objects and Military Objectives. URL: https://ihl-databases.icrc.org/en/customary-ihl/v1/rule7

19. International Convention for the Suppression of Acts of Nuclear Terrorism. (2005). URL: https://treaties.un.org/doc/source/RecentTexts/English_18_15.pdf

20. IVANYTSKYI, A. (2022). Protection of the right to nuclear safety through the prism of the IAEA's activities. Dnipro Scientific Journal of Public Administration, Psychology, Law. Issue 5, 2022, p. 65-71.

21. KECSKÉS, Gábor. (2024). The protection of nuclear installations in time of armed conflict – old rules, new challenges. Hungarian Journal of Legal Studies. Volume 64. Issue 4. P. 508-519.

22. LUDOVICA, Castelli, OLAMIDE Samuel. (2023). Justifying attacks on nuclear facilities. URL: https://www.tandfonline.com/doi/full/10.1080/10736700.2024.2301883#d1e123

23. MORGANDI, Tibisay, BETIN, Batuhan. (2022). Legal Implications of the Military Operations at the Chernobyl and Zaporizhzhia Nuclear Power Plants. URL: https://www.ejiltalk.org/legal-implications-of-the-military-operations-at-the-chernobyl-and-zaporizhzhya-nuclear-power-plants/

24. Nuclear safety, security and safeguards in Ukraine. Resolution adopted on 7 March 2024 during the 1713th session. (2024). URL: https://www.iaea.org/sites/default/files/documents/gov2024-18.pdf

25. Office for Nuclear Regulation. International Safety Standards (IAEA). (2025). URL: https://www.onr.org.uk/our-work/how-we-regulate/international-safety-standards-iaea/

26. PIADYSHEV, V. (2023). Prospects for ensuring the security of nuclear power plants in Ukraine against external invasion during the state of martial. Legal scientific electronic journal № 4 DOI https://doi.org/10.32782/2524-0374/2023-4/188 P. 776-780.

27. Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol 1).

28. Radio Svoboda. (2024). Two years of occupation of the ZNPP: the biggest risks ahead? URL: https://www.radiosvoboda.org/a/novyny-pryazovya-zaporizka-atomna-stantsiya-dva-roky-okupatsiyi-bilshykh-ryzykiv-poperedu/32848666.html

29. Resolution of the Verkhovna Rada of Ukraine "On the Appeal of the Verkhovna Rada of Ukraine to the United Nations, the institutions of the European Union, the Organization for Security and Cooperation in Europe, the International Atomic Energy Agency, and the parliaments and governments of its member states on condemning the act of nuclear terrorism committed by the aggressor state - the Russian Federation at the

Zaporizhzhia Nuclear Power Plant in the city of Energodar, Zaporizhzhia region, Ukraine" of 15.08.2022. URL: https://zakon.rada.gov.ua/laws/show/2502-20#Text

30. SCHMITT, Michael N. (2022). Attacking dams – part II: the 1977 additional protocols. URL: https://lieber.westpoint.edu/attacking-dams-part-ii-1977-additional-protocols/

31. Social news. (2024). IAEA adopts resolution on urgent return of Zaporizhzhia NPP to Ukrainian control. URL: https://suspilne.media/700974-magate-uhvalilo-rezoluciu-pro-terminove-povernenna-zaporizkoi-aes-pid-kontrol-ukraini/

32. STEIGER, Dominik. (2011). Oxford Public International Law. Civilian Objects. URL: https://opil.ouplaw.com/display/10.1093/law:epil/9780199231690/law-9780199231690-e267

33. The Convention on Nuclear Safety. (1994). URL: https://www.iaea.org/publications/documents/infcircs/convention-nuclear-safety

34. The IAEA announced the repeated replacement of the Zaporizhzhia NPP. (2024). URL: https://zn.ua/ukr/UKRAINE/u-mahate-povidomili-pro-povtorne-zaminuvannja-zaporizkoji-aes.html

35. The IAEA has provided Ukraine with €8.5 million worth of nuclear power plant equipment since the start of the war. (2024). URL: https://www.ukrinform.ua/rubric-economy/3835677-magate-vid-pocatku-vijni-nadalo-ukraini-obladnanna-dla-aes-na-85-miljona.html

36. The Treaty on the Prohibition of Nuclear Weapons. (2017). URL: https://d3n8a8pro7vhmx.cloudfront.net/tectodevms/pages/2417/attachments/original/1571248124/TPNW-English1.pdf?1571248124

37. Ukrainian Crisis Media Center. (2022). Based on the results of the study of radiation levels in the Chernobyl zone, Greenpeace appealed to the IAEA. URL: https://uacrisis.org/uk/za-rezultatamy-doslidzhennya-rivnya-radiatsiyi-u-chornobylskij-zoni-greenpeace-zvernuvsya-do-magate

38. VASHCHENKO, Y. (2021). Access to Modern Energy Services Through the Prism of Children's Rights: An Overview from the Perspectives of the Convention on the Rights of the Child and the Policy and Law Approaches of Certain EU Member States and Ukraine. *International Comparative Jurisprudence*, Volume 7, Issue 1., 75-87. DOI: http://dx.doi.org/10.13165/j.icj.2021.06.006

39. Word and Deed. (2022). Analytical Portal. Damage from the actions of the occupiers was assessed at the Zaporizhzhia NPP. URL: https://www.slovoidilo.ua/2022/04/11/novyna/suspilstvo/zaporizkij-aes-oczinyly-zbytky-dij-okupantiv

VII. INTERNATIONAL CRIMINAL LAW AND ENVIRONMENTAL PROTECTION

7.1. Strengthening Environmental Protection through Criminal Law: A New Legislative Step at the EU and Council of Europe Level[946]

JUDr. Matúš Michalovič, Ph.D.

Assistant professor, Faculty of Law, Comenius University in Bratislava

matus.michalovic@flaw.uniba.sk

JUDr. Denisa Michalovič, Ph.D.

Deputy District Prosecutor, Galanta District Prosecutor's Office.

Introduction

The increasing severity and complexity of environmental harm has prompted a shift in international legal thinking, moving environmental protection from the periphery of regulatory policy into the core domain of criminal law. At the forefront of this development is the Council of Europe's Convention on the Protection of the Environment through Criminal Law[947] (hereinafter "ECLC"), which provides a comprehensive and binding framework for criminalising serious environmental offences across its member states. The Convention aims to facilitate convergence in the definition of environmental crimes, promote judicial cooperation, and ensure the effective prosecution and sanctioning of perpetrators, including legal persons. As an international treaty, the ECLC reflects a shared recognition that environmental degradation threatens fundamental societal values and requires a coordinated, transboundary legal response.

At the European Union level, this evolution is mirrored and further advanced by the adoption of Directive (EU) 2024/1203 of

[946] This work was supported by the Slovak Research and Development Agency under the Contract no. APVV-23-0645. This contribution was prepared as part of the VEGA project no. 1/0625/25 - Environmental Democracy and Environmental Justice in the Legal Order of the Slovak Republic in the 21st Century.
[947] COUNCIL OF EUROPE. Convention on the Protection of the Environment through Criminal Law. Strasbourg: Council of Europe, 2024. CETS No. 222.

the European Parliament and of the Council of 11 April 2024 on the protection of the environment through criminal law and replacing Directives 2008/99/EC and 2009/123/EC (hereinafter "Environmental Crime Directive"). The Directive repeals and replaces the earlier legal framework established by Directive 2008/99/EC[948]. It brings more robust provisions on how to define offences, harmonise the sanctions applicable, as well as fortify enforcement capabilities. It aims at reinforcing the deterrent effect of criminal law, closing the enforcement gap, and achieving harmonization between Member State approaches towards environmental crimes. By obliging states to transpose and enforce a common set of legal standards, the Directive plays a central role in shaping environmental criminal law within the EU.

This chapter provides a systematic comparison between the two instruments, both of which address fundamental elements of normative evolution in their respective sphere. The analysis addresses their legal architecture, substantive content, and enforcement on the national level. This part is structured into three main parts. The first explores key similarities and differences between the ECLC and the Environmental Crime Directive, highlighting their conceptual and operational overlaps and divergences. The second part identifies enforcement challenges and potential synergies, particularly in relation to institutional capacity, cooperation, and specialisation. The final section, Synthesis and Outlook, reflects on the implications of these instruments for future legal development, implementation, and strategic alignment. Through embedding EU law in a wider international context, this chapter also contributes to the clarification of how environmental criminal law is being incorporated as an essential element in environmental governance and legal accountability.

1. Council of Europe Convention

In recent years, the international community has witnessed an intensifying convergence of environmental degradation and

[948] Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law.

transnational criminality. Recognising the limitations of administrative and civil enforcement, several international actors have increasingly turned to criminal law as a tool for ensuring compliance with environmental norms. Among these initiatives, the ECLC represents a renewed and more comprehensive legal instrument aimed at strengthening environmental protection through harmonised criminal provisions.

The Convention, adopted in 2025, replaces the previous but never-ratified 1998 version (ETS No. 172) and responds to a new set of global challenges, including the "triple planetary crisis" of climate change, biodiversity loss and pollution[949]. It seeks to define a minimum set of environmental crimes, ensure effective sanctions, and facilitate cooperation among parties. Importantly, it affirms that environmental crime is not a marginal issue but a serious threat to peace, stability, public health, and the rule of law.

This chapter introduces the origins, objectives and legal architecture of the Convention, followed by an analysis of its definitions, substantive offences, and monitoring mechanisms. In doing so, it also situates the Convention within the broader framework of international environmental governance and reflects on its potential impact and implementation challenges.

1.1. Origins and Rationale

The ECLC emerges in response to a longstanding regulatory gap in international and European environmental law. While soft-law instruments and sector-specific treaties have addressed various aspects of environmental harm, criminal law has long remained underutilised despite its potential to provide deterrence, expressive condemnation, and procedural safeguards. The need for a binding and harmonised criminal-law framework had already been recognised in 1998 when the Council of Europe adopted the first Convention on the Protection of the Environment through Criminal

[949] Council of Europe. Convention on the Protection of the Environment through Criminal Law (CETS No. 198). Strasbourg: Council of Europe, 2025, para. 14.

Law (ETS No. 172). However, this earlier instrument never entered into force due to insufficient ratifications[950].

The new Convention, adopted at the 134th Session of the Committee of Ministers in Strasbourg in May 2025, reflects both legal and political evolution. It is explicitly grounded in the Reykjavik Declaration of the Fourth Summit of Heads of State and Government (2023), which declared environmental protection as one of the Council's strategic priorities in light of the triple planetary crisis[951]. The Convention also builds on earlier Council of Europe instruments related to criminal law cooperation (e.g. the 1959 Mutual Assistance Convention, the 1990 Money Laundering Convention, and the 1999 Corruption Convention), thereby integrating environmental concerns into the broader architecture of European criminal justice.

Its main purposes are threefold:

I. to contribute to the effective prevention and combating of environmental crime;

II. to promote and enhance national and international co-operation;

III. to establish common minimum rules for national criminal law systems[4]. By doing so, it affirms the necessity of criminalising specific types of conduct that cause or are likely to cause significant harm to ecosystems, biodiversity, and public health. The Convention thus aims not only at legal harmonisation, but also at signalling a renewed political commitment to environmental integrity, sustainability, and the rule of law.

1.2. Scope and Applicability

The ECLC establishes a harmonised framework for the criminalisation of serious environmental harm. As clarified in the

[950] Council of Europe. Convention on the Protection of the Environment through Criminal Law (ETS No. 172). Strasbourg: Council of Europe, 1998. See also: Explanatory Report (CETS No. 198), para. 7.
[951] Council of Europe. Convention on the Protection of the Environment through Criminal Law (CETS No. 198). Strasbourg: Council of Europe, 2025, para. 14.

Explanatory Report, its purpose is not to introduce an entirely new body of criminal offences, but to ensure that States Parties provide effective criminal responses to environmentally harmful conduct that meets the definitions laid down in the treaty. Where national criminal law already includes such offences, the Convention does not require duplication or redefinition. Instead, it focuses on the harmonisation of prevention, detection, investigation, prosecution, and sanctioning within a shared legal architecture[952].

Article 2(1) determines that the Convention applies to offences established under its own provisions. These are detailed in Chapter IV, specifically in Articles 12 to 30, and cover a range of conduct that must be criminalised under national law when committed unlawfully and intentionally. These offences include, inter alia:

- unlawful pollution of air, water or soil, and other forms of environmental degradation (Article 12),

- unlawful production, placing on the market or use of certain chemicals, products or substances (Articles 13–18),

- illegal collection, transport, recovery or disposal of waste (Article 19),

- unlawful operation of installations involving dangerous activities or substances (Articles 20–21),

- ship-source pollution and unlawful ship recycling (Articles 22–23), and

- unlawful water abstraction or exploitation of protected natural resources and sites (Articles 24-27),

- destruction or illegal exploitation of protected natural areas or resources (Articles 24–26),

[952] Council of Europe, *Explanatory Report to the Convention on the Protection of the Environment through Criminal Law (CETS No. 198)*, para. 25.

- unlawful killing, possession or trading in protected wild fauna and flora, and the introduction or release of invasive alien species (Articles 27–30).

The Convention requires that these offences be committed "unlawfully", a term defined as conduct that infringes national environmental regulations or conditions of permits. "The conduct shall be unlawful even if it is carried out under an authorisation by a competent authority of a Party when the authorisation was obtained fraudulently or by corruption, extortion or coercion."[953] The Convention also obliges criminalisation only for intentional conduct, but it encourages States to extend criminal liability to negligent acts that result in significant environmental harm. Aiding, abetting, and incitement are also to be criminalised under Article 32, while Article 34 mandates that legal persons be held liable for such conduct in accordance with domestic law.

The Convention's applicability is explicitly extended beyond peacetime. According to Article 2(2), its provisions continue to apply in situations of armed conflict, wartime, and occupation[3]. Although the Explanatory Report offers limited interpretation of this provision, it reflects an important alignment with evolving principles of international humanitarian law, which increasingly recognise environmental protection as a continuous legal obligation[954].

The Convention's territorial and personal jurisdiction is governed by Article 33, which requires each Party to establish jurisdiction over offences established in accordance with the Convention when committed:

- on its territory,
- on board a ship flying its flag,
- on board an aircraft registered under its laws,

[953] Article 3 letter a) of the ECLC.
[954] Council of Europe, *Explanatory Report to the Convention on the Protection of the Environment through Criminal Law (CETS No. 198)*, para. 26.

- by one of its nationals,[955]

- and, if provided for under domestic law, against one of its nationals[956].

Furthermore, States may establish jurisdiction in cases where the offence is punishable under the law of the place where it was committed and the alleged offender is present in the Party's territory, provided that the person cannot be extradited to another State, solely based on their nationality[957]. Article 33 thus sets out both obligatory and optional jurisdictional bases, allowing States some flexibility while promoting a comprehensive enforcement reach.

International cooperation obligations are further elaborated in Articles 40 and 41. Article 40 calls on Parties to cooperate to the widest extent possible in criminal matters, in accordance with applicable international instruments, bilateral agreements, and domestic law. This includes assisting in investigation, prosecution, and judicial proceedings related to the offences covered by the Convention. Furthermore, Article 41 obliges Parties to exchange information, including, where appropriate, with the European Union, to enhance their ability to prevent and combat environmental offences established under the Convention. While the provision does not specify the types of information to be shared, its objective implies the relevance of operational, legal, and technical data in fostering effective transnational enforcement.

1.3. Criminal Offences under the Convention

Chapter IV of the ECLC defines a series of criminal offences that Parties must incorporate into their national legislation. These provisions reflect a harmonised minimum standard for addressing

[955] Article 33 para. 1 of the ECLC.
[956] Article 33 para. 2 of the ECLC.
[957] Article 33 para. 3 of the ECLC.

serious environmental harm through criminal law, while allowing States Parties to retain or introduce stricter measures.

Unlawful pollution

States Parties must criminalise conduct which causes or is likely to cause serious pollution of air, water, or soil, or other serious damage to the quality of the environment, as required by Article 12. This includes both domestic and transboundary harm and targets violations that endanger ecological integrity or public health. In addition to chemical pollutants, the offence also covers the release of harmful forms of energy into the environment, such as excessive heat, thermal emissions, noise (including underwater noise), vibrations, electromagnetic radiation, electricity or light, where such releases result in, or pose a high risk of, significant environmental harm or serious injury to humans, animals or plants[958].

Hazardous substances and chemical products

Unlawful production, placing on the market, use, possession, import, export, or disposal of dangerous substances is addressed in Articles 13 to 18. These include:

- *chemical substances* (Article 14),
- *radioactive material or substances* (Article 15),
- *mercury* (Article 16),
- *ozone-depleting substances* (Article 17),
- *fluorinated greenhouse gases* (Article 18).

The offences reflect obligations under multilateral environmental agreements such as the Minamata Convention on Mercury (2013), Montreal Protocol on Substances that Deplete the Ozone Layer (1987), and Stockholm Convention on Persistent Organic Pollutants (2001).

[958] Council of Europe, *Explanatory Report to the Convention on the Protection of the Environment through Criminal Law (CETS No. 198)*, para. 89.

Waste management offences

Unlawful conduct related to waste is addressed in Article 19, which requires States Parties to criminalise the illegal collection, transport, recovery or disposal of waste, where such conduct constitutes a serious infringement of national or EU legislation. This provision aims to cover particularly serious crimes which violate regulations on waste management and are frequently connected with waste trafficking; it is so-called *organised environmental crime*. Crucially, the Convention replicates the EU and many national legal systems' regulatory approach in not treating all waste equally but distinguishing between *hazardous* and *non-hazardous waste*, since both present different levels of environmental impacts and health risks.

Industrial installations

The Convention criminalises, in Article 20, the operation of installations involving dangerous activities and, in Article 21, the operation of installations involving dangerous substances without the required permits, or in breach of specific permit conditions and environmental obligations. This includes violations of emission limits, monitoring duties, or safety regulations.

As such offences might be far-reaching, both provisions include a second paragraph allowing the Parties to specify which breaches of relevant laws are to be criminalised and notify that list to the Secretariat. This mechanism has dual aims: it is designed to ensure that criminal law remains the *ultima ratio*, applicable only in respect of particularly significant cases where domestic environmental obligations concerning dangerous activities or substances are violated; and also seeks to provide legal certainty and clarity as to the contours of criminal responsibility, thereby facilitating inter-State cooperation and mutual understanding.[959]

[959] Council of Europe, *Explanatory Report to the Convention on the Protection of the Environment through Criminal Law (CETS No. 198)*, para. 124 and 127.

Maritime pollution and ship recycling

These are the subject of Article 22, unlawful ship recycling activities capable of presenting risks to human health or the environment. This provision addresses the situation where a ship owner does not meet the mandatory requirements of the recycling of ships, primarily by sending ships to sub-standard environmental facilities. Article 23 criminalises the discharge of polluting materials by all ships, both merchant and warships, into the marine environment. The offence applies when such conduct results, or is likely to result, in degradation of water quality or harm to marine ecosystems.

Natural resources and protected areas

Articles 24-26 criminalise the unauthorised abstraction of water, degradation of protected areas by illegal means, or exploitation of plants and animals within protected zones. To those ends, these provisions seek to protect ecologically significant locations from activities that may destroy their biodiversity or ecosystem functions due to intentional action or unintended circumstances. The offences include both direct destruction and indirect interference with protected natural resources and sites, recognising their role in sustaining biodiversity and ecosystem services.

Wildlife offences and invasive species

Articles 27 to 30 of the Convention impose on States Parties an obligation to prohibit and combat, through legislation, any unlawful killing, destruction, possession, or trade in protected wild fauna and flora. These provisions are drafted extremely widely: they criminalise almost any interaction with endangered species (poaching, capture, trafficking), and contravene the conservation rules in operation wherever the species are located. Furthermore, the purposeful introduction or escape of invasive alien species, particularly in violation of relevant legal obligations, may lead to imprisonment as well, due to the drastic ecological and economic

problems that such non-indigenous species can cause by alternating natural biodiversity and ecosystems.

1.4. Implementation and Monitoring

The Convention does not establish a dedicated monitoring body, follow-up mechanism, or reporting obligation. Instead, it relies on the general responsibility of the Parties *to implement its provisions through national legal and institutional frameworks*. Although there is no separate article entitled "implementation", Article 1(2) clearly states that the Convention lays down "minimum standards to be implemented by the Parties". Moreover, the substantive articles throughout the Convention, particularly Articles 3 to 27, explicitly require Parties to establish the defined offences "under their domestic law".

The Convention does not prescribe a specific mode of transposition, leaving it to each Party to adopt the necessary legislative or other measures in accordance with its domestic legal system. This decentralised implementation model is characteristic of Council of Europe instruments in the criminal law field. However, unlike other international treaties (such as those in the area of human rights or corruption prevention) the Convention does not provide for institutional oversight, peer evaluation, or the involvement of the Committee of Ministers or any other standing body. The absence of such mechanisms means that the effectiveness of the Convention will depend entirely on the political will and administrative capacity of the Parties to fulfil their obligations in practice.

1.5. Ratification and entry into force

The Convention is open for signature by Council of Europe member States, non-member States that participated in its elaboration, and the EU. It is subject to ratification, acceptance or approval; the instruments are deposited with the Secretary General of the Council of Europe, who acts as the depositary.

The Convention enters into force on the first day of the month following the expiry of three months after the date on which *10*

signatories, including *at least 8 Council of Europe member States*, have expressed their consent to be bound[960] (Council of Europe, ECLC, Article 53(3)). The Explanatory Report confirms this threshold and explains that a sizeable initial group of States is required to begin effectively addressing environmental crime.[961] For each State referred to in Article 53(1) or the EU that subsequently consents to be bound, the Convention enters into force for that Party three months after the deposit of its instrument.

After entry into force, the Committee of Ministers may invite other non-member States to accede, with the unanimous consent of the Parties; for an acceding State, entry into force occurs three months after deposit of the instrument of accession[962].

2. EU Directive 2024/1203

The Environmental Crime Directive introduces a substantially expanded and more precise list of environmental criminal offences. Reform of the previous framework under Directive 2008/99/EC was deemed necessary due to widespread criticism that it lacked clarity, was not comprehensive enough and did not capture criminal activity that had become more sophisticated across Member States. In total, *20 offences* are defined explicitly in Article 3 of the new Directive, including: illicit traffic of waste trading in protected animal and plant species illegal water extraction significant air, soil or water pollution and serious infringements of chemicals legislation With respect to the 2008 Directive, which had limited the listing, only 9core crimes, in addition to expanding it, the 2024 version also aims at having a clear definition and concepts that cause uncertainty or were interpreted differently in national level applications. The inclusion of new offences such as illegal timber trade, illegal ship recycling, and serious breaches of legislation on fluorinated greenhouse gases reflects a deliberate

[960] Article 53 para. 3 of the ECLC.
[961] Council of Europe, *Explanatory Report to the Convention on the Protection of the Environment through Criminal Law (CETS No. 198)*, para. 301.
[962] Article 53 para. 1 and 2 of the ECLC.

response to new forms of environmental harm that have emerged in recent years.

A key advancement is the Environmental Crime Directive's emphasis on qualified offences. As noted by Faure, one of the most significant innovations of the new Directive is the explicit recognition of an autonomous environmental crime, alongside the creation of a qualified offence of ecocide, which marks a substantial shift in the EU's approach to criminalising environmental harm.[963] Article 4 introduces a new category that encompasses environmental offences committed with aggravating circumstances, such as causing long-term, large-scale, or irreversible damage. This development responds directly to empirical findings that environmental crimes often have cumulative and transboundary effects, yet existing sanctions failed to reflect the gravity of such acts. Also, "those qualified criminal offences can encompass conduct comparable to 'ecocide', which is already covered by the law of certain Member States and which is being discussed in international fora"[964].

2.1. Legislative Background and Rationale

The Environmental Crime Directive reflects a decisive shift in the EU's legal strategy to combat environmental crime through harmonised criminal law provisions. It replaces the outdated Directive 2008/99/EC and Directive 2009/123/EC, which were widely regarded as insufficient in scope, enforcement impact, and deterrence value.

The need for reform had been apparent for more than a decade. This need was most clearly articulated in the Commission's 2021 impact assessment, which identified six key problems:

- the outdated and overly complex scope of the previous Directive hindered effective enforcement;

[963] FAURE, Michael: The Creation of an Autonomous Environmental Crime through the New EU Environmental Crime Directive. Eucrim, 2024, 2, 75 p. DOI: https://doi.org/10.30709/eucrim-2024-011.
[964] Recital 21 of the Environmental Crime Directive.

- vague legal definitions created uncertainty for prosecutors and judges;

- sanctions were insufficiently dissuasive across many Member States;

- cross-border cooperation remained weak;

- statistical data were scarce or fragmented;

- the overall enforcement chain (from detection to prosecution) was ineffective.[965]

As noted in the European Commission's own justification, the previous framework lacked clarity, did not adequately address modern forms of environmental crime, such as organised illegal waste trafficking or large-scale pollution, and failed to produce comparable enforcement outcomes across the Union. Based on these gaps, the Commission proposed a new directive offering more precise legal definitions of the protective terms, basic rules for penalties and stringent duties for national enforcement. Both a response to legal and practical challenges, and reflective of mounting empirical evidence of how environmental crimes are rampant, severe in harm caused, and transnational. Numerous studies have noted this trend and found that environmental violations now compete with drug trafficking and human trafficking in terms of financial return[966].

From a broader legal-development perspective, this new Directive should be seen as part of a long-term trajectory in EU law where environmental protection is no longer limited to administrative or civil tools but increasingly complemented by criminal law. Thus, the Directive represents not just a technical

[965] European Commission (2021). Commission Staff Working Document – Impact Assessment accompanying the Proposal for a Directive on the protection of the environment through criminal law and replacing Directive 2008/99/EC, SWD(2021) 465 final.
[966] INTERPOL-UNEP: Environment, Peace and Security: A Convergence of Threats. 2016. Nairobi/Lyon: INTERPOL-UNEP, p. 7.

refresh but indeed an existential re-orientation of the Union's environmental enforcement mode.

2.2. Criminal Offences and Sanctions

The Environmental Crime Directive includes a far wider and much more detailed list of environmental offences which can be prosecuted using criminal law. Critics of the old legislative structure (Directive 2008/99/EC) complained that it was vague, insufficiently account-taking and therefore could not adequately meet harsher environmental crimes that continued to be committed by increasingly sophisticated criminals across the EU.

Under Article 3 of the new Directive, a total of *20 offences* are explicitly defined, including but not limited to the illegal shipment of waste, trading in endangered species, illegal abstraction of water, significant pollution of air, soil, or water, and serious breaches of chemicals regulation. Compared to the 2008 Directive, which listed only *9 core offences*, the 2024 version not only broadens the scope but also clarifies ambiguous terminology that had previously led to inconsistent application at the national level. The inclusion of new offences such as illegal timber trade, illegal ship recycling, and serious breaches of legislation on fluorinated greenhouse gases reflects a deliberate response to new forms of environmental harm that have emerged in recent years. The following table offers a side-by-side comparison of the offences covered by the two instruments.

	Directive 2008/99/EC (9 offences)	**Directive 2024/1203 (20 offences)**
1	Pollution of air, water or soil.[967]	Pollution of air, water or soil.[968]
2	Illegal treatment/disposal of waste.[969]	Illegal treatment/disposal of waste.[970]

[967] Article 3 letter a) of the Directive 2008/99/EC.
[968] Article 3 para. 2 letter a) of the Environmental Crime Directive.
[969] Article 3 letter b) of the Directive 2008/99/EC.
[970] Article 3 para. 2 letter f) of the Environmental Crime Directive.

3	Illegal shipment of waste.[971]	Illegal shipment of waste.[972]
4	Operation of dangerous installations.[973]	Dangerous activities in installations.[974]
5	Unlawful handling of radioactive or nuclear materials.[975]	Unlawful handling of radioactive or nuclear materials.[976]
6	Killing, destruction or possession of protected wild fauna or flora.[977]	Killing, possession or trade in protected wild fauna and flora.[978]
7	Illegal trade in endangered species.[979]	Illegal trade in endangered species.[980]
8	Deterioration of a habitat within a protected site.[981]	Deterioration of a habitat within a protected site.[982]
9	Handling of ozone-depleting substances.[983]	Unlawful handling or release of fluorinated greenhouse gases or equipment.[984]
10		Placing on the market of banned/restricted products.[985]
11		Manufacturing or placing on the market of restricted substances.[986]

[971] Article 3 letter c) of the Directive 2008/99/EC.
[972] Article 3 para. 2 letter g) of the Environmental Crime Directive.
[973] Article 3 letter d) of the Directive 2008/99/EC.
[974] Article 3 para. 2 letter j) of the Environmental Crime Directive.
[975] Article 3 letter e) of the Directive 2008/99/EC.
[976] Article 3 para. 2 letter l) of the Environmental Crime Directive.
[977] Article 3 letter f) of the Directive 2008/99/EC.
[978] Article 3 para. 2 letter n) of the Environmental Crime Directive.
[979] Article 3 letter g) of the Directive 2008/99/EC.
[980] Article 3 para. 2 letter o) of the Environmental Crime Directive.
[981] Article 3 letter h) of the Directive 2008/99/EC.
[982] Article 3 para. 2 letter q) of the Environmental Crime Directive.
[983] Article 3 letter hi of the Directive 2008/99/EC.
[984] Article 3 para. 2 letter t) of the Environmental Crime Directive.
[985] Article 3 para. 2 letter b) of the Environmental Crime Directive.
[986] Article 3 para. 2 letter c) of the Environmental Crime Directive.

12		Unlawful handling of mercury and mercury-added products.[987]
13		Execution of projects without development consent.[988]
14		Illegal ship recycling.[989]
15		Ship-source pollution.[990]
16		Offshore installation pollution.[991]
17		Fluorinated greenhouse gas pollution.[992]
18		Illegal water abstraction.[993]
19		Trade in forest-risk commodities (e.g., illegal logging).[994]
20		Introduction/keeping of invasive alien species (2 separate forms).[995]

In addition to clearly defining criminal offences, the Environmental Crime Directive establishes a set of binding rules concerning the imposition of sanctions. These sanctions must be effective, proportionate and dissuasive, in line with the general principle of EU criminal law. This represents a major development compared to the 2008 Directive, which lacked any binding thresholds for penalties and left the regulation of corporate liability largely to national discretion. The following sections examine the

[987] Article 3 para. 2 letter d) of the Environmental Crime Directive.
[988] Article 3 para. 2 letter e) of the Environmental Crime Directive.
[989] Article 3 para. 2 letter h) of the Environmental Crime Directive.
[990] Article 3 para. 2 letter i) of the Environmental Crime Directive.
[991] Article 3 para. 2 letter k) of the Environmental Crime Directive
[992] Article 3 para. 2 letter t) of the Environmental Crime Directive.
[993] Article 3 para. 2 letter m) of the Environmental Crime Directive.
[994] Article 3 para. 2 letter p) of the Environmental Crime Directive.
[995] Article 3 para. 2 letter r) of the Environmental Crime Directive.

sanctioning framework separately for natural persons and legal persons.

Sanctions for Natural Persons

The Environmental Crime Directive also sets out minimum standards for the criminal liability of natural persons. Member States shall take the necessary measures to ensure that conducts defined in Article 3 as criminal offences are punishable. A tiered system of imprisonment penalties, scaled according to the gravity of the offence and the extent of environmental harm, to ensure proportionality and enhance deterrence, has been established by this new legislation.[996] In more specific terms, Article 5(2) sets minimum upper limits for the very serious infringements, so-called binding lower levels for maximum sanctions.

This is a significant advance as the 2008 Directive set forth that Member States must lay down 'effective, proportionate and dissuasive sanctions, without however imposing them under imperative and minimum terms. Article 5(3) also lays down detailed rules and measures, including an obligation to remedy the environmental damage within a specified period if the damage caused is reversible or compensatory remedying of the damage if it is irreversible or if the offender cannot restore the environment.

Sanctions for Legal Persons

In addition to natural persons, the Directive establishes clear rules on the criminal liability of legal persons. Member States are under obligation to ensure that legal persons can be held accountable for criminal offences committed "for the benefit of those legal persons by any person who has a leading position within the legal person concerned, acting either individually or as part of an organ of that legal person, based on a power of representation of the legal person; an authority to take decisions on behalf of the legal

[996] ATANASOVA, Daniela – KRASTEVA, Nadezhda. Environmental Protection and the New Safeguards Provided in Directive (EU) 2024/1203 on the Protection of the Environment Through Criminal Law. *Environment. Technology*, 2024, Vol. 16(2), pp. 29.

person; or an authority to exercise control within the legal person."[997] It should be noted that the liability of legal persons does not exclude the possibility of initiating or conducting criminal proceedings against natural persons who have committed, incited, or aided the commission of the criminal offences.[998] To put it simply, both the company and the individuals involved in its decision-making or operational structure can be held criminally accountable at the same time.

The Directive establishes a robust system of pecuniary sanctions applicable to legal persons. These include both criminal and non-criminal fines, the amount of which must be effective, proportionate, and dissuasive in relation to the seriousness of the offence and the financial situation of the offender. In particular, Article 7(3) introduces minimum thresholds for fines, based on a two-tiered system:

For the *most serious environmental crimes*, Member States must provide for fines of at least:	**For *other environmental crimes*, the minimum thresholds are:**
- 5% of the legal person's total worldwide turnover (in the business year preceding the offence or the imposition of the fine), or	- 3% of the legal person's total worldwide turnover (in the business year preceding the offence or the imposition of the fine), or
- a minimum absolute amount of EUR 40 million.[999]	- EUR 24 million, again whichever is higher.

This harmonised framework seeks to ensure deterrence across the Union by introducing a predictable and economically impactful sanctioning mechanism, while allowing Member States flexibility in how the fines are administered within their national systems.

[997] Article 6 para. 1 of the Environmental Crime Directive.
[998] Article 6 para. 3 of the Environmental Crime Directive.
[999] Article 7 para. 3 letter a) of the Environmental Crime Directive.

In addition to pecuniary sanctions, the Directive foresees the possibility of imposing various non-financial penalties on legal persons. These measures are meant to strengthen corporate responsibility and prevent future offences. The recommended complementary sanctions include, *inter alia*:

- exclusion from public procurement procedures,
- disqualification from the practice of business activities,
- withdrawal of authorisations or licences,
- judicial winding-up orders.

These non-pecuniary measures provide competent authorities with alternative tools to respond to corporate environmental crime, particularly in cases where monetary sanctions alone would be insufficient to ensure deterrence and compliance.

2.3. Cooperation, Resources and Monitoring Mechanisms

Beyond the definition of offences and sanctions, the new Environmental Crime Directive introduces several supporting enforcement mechanisms designed to ensure the effective investigation and prosecution of environmental crimes, enhance inter-institutional cooperation, and improve administrative and judicial capacity across the EU. In order to facilitate the successful and rapid investigation of crimes, Member States are required to introduce efficient limitation periods, which should not be less than five years for the most serious offences and three years for other forms of crime. These periods are intended to allow for a full cycle of investigation, trial, and adjudication, even in complex cases.[1000] The Directive also outlines the jurisdictional obligations of Member States, which must establish jurisdiction over offences committed on their territory or by their nationals, while being free to extend

[1000] See Article 11 of the Environmental Crime Directive.

jurisdiction to extraterritorial offences affecting the Union's environment.[1001]

Investigative and prosecutorial authorities must be equipped with special investigative tools comparable to those used in combating organised crime. These tools must be effective and proportionate and made available in accordance with national legal systems and "where appropriate, those tools shall include special investigative tools, such as those used in combatting organised crime or in other serious crime cases"[1002]. The Directive stresses the importance of adequate human and technical resources for authorities tasked with the detection, prosecution, and adjudication of offences. Where appropriate, this includes increasing the level of specialisation of relevant institutions.[1003]

In addition, whistleblower protection is explicitly mandated. Persons who report, testify, or otherwise assist in proceedings related to environmental crime must be granted support and assistance measures during criminal proceedings under national law.[1004] Member States are further required to undertake awareness-raising campaigns and targeted information efforts. These efforts should engage both public and private stakeholders to reduce the risk of environmental criminal conduct and promote compliance with environmental standards.[1005] Finally, training obligations are imposed. Judges, prosecutors, law enforcement officers, and relevant staff of competent authorities must be provided with regular, specialised training to ensure consistent and professional enforcement of environmental criminal law (7).

A further important innovation of the Environmental Crime Directive is the requirement for Member States to adopt a *national strategy to combat environmental crime*. Article 21 mandates the development and publication of such a strategy by 21 May 2027, along with its prompt implementation. The national strategy must

[1001] See Article 12 of the Environmental Crime Directive.
[1002] Article 13 of the Environmental Crime Directive.
[1003] See Article 17 of the Environmental Crime Directive.
[1004] See Article 14 of the Environmental Crime Directive.
[1005] See Article 15 of the Environmental Crime Directive.

clearly define objectives and priorities for enforcement policy, allocate responsibilities among competent authorities, and include provisions on coordination, both internally and with EU institutions. Moreover, it must assess resource needs, outline support for the specialisation of enforcement staff, and be subjected to regular reviews every five years to reflect changing risk profiles and evolving environmental crime patterns.[1006]

2.4. Transposition and Enforcement Challenges

For the Environmental Crime Directive to leave a lasting legacy, its ambition must be matched by an equally resolute effort of the Member States to both transpose and enforce this directive coherently across regions. Another important issue to be aware of is the ability of national enforcement agencies. The Environmental Crime Directive has provided much-needed reinforcement to the obligations of Member States on investigating and prosecuting environmental crime, but it will be only as effective as the national efforts towards the provision of resources, expertise and prioritisation of environmental offences. This is even more complicated for Member States with less developed environmental legal frameworks, where the two-year transposition period may not be sufficient to build the required capacities.

It also leaves open the danger of continued under-enforcement. Although the increased transparency created by requiring Member States to report on data related to offences and sanctions with an environmental element is welcome news, still, reports remain rudimentary at the EU level, meaning that monitoring mechanisms for these regulations are lacking. More importantly, enforcement measures would require a large investment, such as the regular trainings for prosecutors and judges and environmental officers, in addition to having a specialized environmental crime unit. The harmonisation of penalties may also face resistance due to diverse national legal traditions and institutional capacities. These challenges underline the need for close cooperation among

[1006] See Article 21 of the Environmental Crime Directive.

Member States and the Commission to ensure that the Directive's objectives do not remain purely declaratory.

3. Comparative Analysis and Enforcement Implications

The uptake of the European Union Environmental Crime Directive and the new ECLC are two significant normative moments in environmental criminal law. The two instruments share the objective of strengthening criminal law as a tool in environmental protection, however, they do so under different institutional and legislative frameworks. This is in contrast to the ECLC, an international treaty open to European countries not bound by EU law that also reflects a broader approach containing Council of Europe principles on human rights and the rule of law.

This part offers a structured comparative analysis of both instruments, focusing on their substantive and procedural provisions, as well as their enforcement mechanisms. It focuses in detail on the aspects connected to the definition and scope of criminal offences, liability of legal persons, applicable sanctions and cross-border cooperation mechanisms. The comparison also provides insight into where the two frameworks converge, diverge and complement each other.

The aim is not only to clarify the legal architecture of each instrument, but also to assess its combined potential to strengthen environmental protection across Europe. In this respect, the chapter also explores the potential for synergies and conflicts in practice, especially for states which are/will be subject to the dual regime.

Key Similarities and Differences

Both the Environmental Crime Directive and the ECLC aim to strengthen the legal framework for the protection of the environment through criminal law. Despite sharing this overarching goal, the two instruments differ significantly in scope, binding force, and enforcement mechanisms.

One of the key similarities lies in their shared *focus on harmonising the definition of core environmental offences*. Both instruments enumerate a wide range of unlawful behaviours that should be criminalised by state parties. These include pollution of air, water and soil, unlawful disposal of hazardous waste, and illegal trade in endangered species or protected substances. In addition, both instruments extend criminal liability to legal persons, obliging the parties to establish systems for holding corporations accountable for environmental crime.

However, a significant divergence emerges in their *legal character* and the *level of harmonisation they impose*. While the Environmental Crime Directive is a binding EU legislative act that requires transposition into national law by Member States and is subject to interpretation by the Court of Justice of the EU, the ECLC remains an international convention open to ratification, thus relying on voluntary compliance by state parties and lacking supranational enforcement.

Another crucial difference is the precision and detail provided in the Environmental Crime Directive, especially regarding the classification of offences, levels of sanctions, and procedural obligations. The Environmental Crime Directive prescribes minimum thresholds for imprisonment and corporate fines, provides for investigative tools, judicial training, and even national strategies. In contrast, the ECLC offers a more generalised framework, encouraging parties to criminalise harmful conduct without imposing precise obligations on the level of penalties or implementation tools.

Furthermore, the Environmental Crime Directive includes a mechanism for institutional monitoring and periodic reporting, while the ECLC, despite establishing a Conference of Parties, leaves the supervision of implementation largely to the discretion of national systems.

Finally, from a material perspective, the Environmental Crime Directive includes several modern elements of environmental crime, such as *offences related to fluorinated greenhouse gases,*

deforestation linked to imported products, and breach of chemicals regulation (e.g., REACH), which are not explicitly covered by the ECLC. This reflects the Directive's alignment with current EU Green Deal priorities and evolving environmental threats.

4. Synthesis and Outlook

The recent developments at both the Council of Europe and the European Union level demonstrate a growing recognition of the need for more effective and harmonised criminal responses to environmental harm. The ECLC provides a foundational framework for defining environmental crimes, clarifying jurisdiction, and ensuring enforcement. While not yet in force, its provisions outline a vision for broad international cooperation and minimum standards in criminal environmental protection.

The ECLC lays the groundwork for international convergence but leaves significant discretion to States in defining offences and determining appropriate sanctions. However, it retains a flexible architecture that permits States to adapt definitions and sanctions within agreed minimum thresholds, thereby accommodating diverse legal traditions while still promoting convergence. In contrast, the Environmental Crime Directive introduces binding and more detailed obligations for EU Member States, including common definitions of offences, the requirement to criminalise aiding and abetting, and harmonised rules on sanctions for both natural and legal persons. A particularly significant innovation is the effort to establish clearer boundaries between administrative and criminal environmental liability, using both quantitative and qualitative thresholds of environmental harm. Although the notion of "substantial harm" remains open to interpretation, the Directive provides detailed criteria for assessing seriousness, including the extent, reversibility, duration of harm, and comparison with baseline environmental conditions.[1007] I would like to highlight that

[1007] ATANASOVA, Daniela – KRASTEVA, Nadezhda. Environmental Protection and the New Safeguards Provided in Directive (EU) 2024/1203 on the Protection

this is very important and very much needed in the legal conditions of the Slovak Republic, where the line between an environmental administrative offense and an environmental crime is often very thin and ambiguous.

From the enforcement perspective, the Environmental Crime Directive provides not only substantive criminal law definitions, but also a governance framework to ensure adequate implementation. It introduces obligations for Member States to develop national strategies, designate specialised bodies, and report regularly. This institutional architecture is especially important for Member States like Slovakia, where enforcement practice has historically suffered from fragmentation and under-resourcing. In the Slovak context, various institutional gaps, including insufficient support for field inspectors such as water guards, have long undermined effective enforcement, as described by Máčaj[1008]. Strengthening these frontline enforcement bodies will be essential if the Directive's goals are to be realised [2].

At the legislative level, the Directive will also require important adjustments to Slovak criminal law. Existing criminal offences related to environmental harm must be revised to align with the new EU definitions and qualification criteria. This includes revisiting thresholds for severity, restructuring penalties, and ensuring that legal persons are adequately covered. According to V. Vomáčka, "Harmonising the level of penalties while considering the specific nature of each infringement will hopefully equalise the odds across EU waters and serve as a potent model for Member States seeking to bolster the efficacy of their own environmental enforcement frameworks."[1009] The Slovak Ministry of Justice has

of the Environment Through Criminal Law. Environment. Technology, 2024, Vol. 16(2), pp. 39.

[1008] MÁČAJ, Ľudovít. The effectivness of enforcing administrative legal responsibility in water protection. *Bratislavské právnické fórum 2024. Procesné zásady práva na spravodlivý proces*. Faculty of Law of Comenius University in Bratislava, Bratislava, 2024, p. 13.

[1009] VOMÁČKA, Vojtech: EU rule of law actors and the environmental crime directive: upholding the law in a new era of ecological challenges, ERA Forum (2024), p. 298. DOI: https://doi.org/10.1007/s12027-024-00801-z.

already initiated legislative proceedings (PI/2024/235) to transpose the Directive, and further amendments to the Criminal Code are expected. The challenge, as noted by M. Prokeinová and R. Blažek, will be to ensure that these changes are not merely formal, but also supported by clear institutional mandates, sufficient resources, and judicial specialisation[1010].

The ECLC and the Environmental Crime Directive offer, when placed side by side, a legal toolbox – one based on international cooperation, the other of EU integration that aims to strengthen the criminal law dimension of environmental protection. Their success will ultimately depend on political will, legal transposition, and day-to-day enforcement practice. For Slovakia and other Member States, the years ahead will be decisive in transforming these high-level commitments into a more just and sustainable approach to environmental harm.

Taken together, the ECLC and the Environmental Crime Directive constitute a complementary legal toolbox – one anchored in broad-based international cooperation, the other in the deeper integration mechanisms of EU law – both aiming to reinforce the criminal law dimension of environmental protection. Their success will ultimately depend on political will, legal transposition, and day-to-day enforcement practice. In the broader context, these instruments align with the objectives of the European Green Deal, the UN Sustainable Development Goals, and international commitments under various international treaties covering a broad range of environmental issues. Over the next decade, their implementation will be a critical test of whether high-level environmental criminal law commitments can translate into tangible reductions in environmental harm. For Slovakia and other Member States, this will require sustained investment in enforcement capacity, coherent judicial interpretation, and a

[1010] BLAŽEK, Radovan – PROKEINOVÁ, Margita. Trestné činy proti životnému prostrediu v kontexte európskych štandardov po novele Trestného zákona. *Bratislavské právnické fórum 2024: Europeizácia trestného práva a princípy právneho štátu*. Faculty of Law of Comenius University in Bratislava, Bratislava, 2024, p. 213.

cultural shift towards treating environmental harm as a serious criminal matter.

List of Bibliography

Books and Official Publications

- Council of Europe. Convention on the Protection of the Environment through Criminal Law. Strasbourg, 2025.

- Council of Europe. Explanatory Report to the Convention on the Protection of the Environment through Criminal Law. Strasbourg, 2025.

- European Parliament and Council. Directive (EU) 2024/1203 of 11 April 2024 on the protection of the environment through criminal law and replacing Directives 2008/99/EC and 2009/123/EC. OJ L, 2024.

- European Commission. Impact Assessment accompanying the Proposal for a Directive of the European Parliament and of the Council on the protection of the environment through criminal law. Brussels: European Commission, 2021. SWD(2021) 451 final.

- United Nations. Minamata Convention on Mercury. Geneva, 2013.

- United Nations. Stockholm Convention on Persistent Organic Pollutants. Geneva, 2001.

- United Nations. Montreal Protocol on Substances that Deplete the Ozone Layer. Montreal, 1987.

Chapters in Books / Papers in Collections

- BLAŽEK Radovan, Prokeinová Margita. Trestné činy proti životnému prostrediu v kontexte európskych štandardov po novele Trestného zákona. In: ADAMKOVIČ Marek, HOCHMANN Roland, ŤAŽKÁ Veronika (eds.). *Bratislavské právnické fórum 2024: Europeizácia trestného práva a princípy právneho štátu*. Bratislava: Právnická fakulta UK, 2024, pp. 200–216. ISBN 978-80-7160-732-8.

- MÁČAJ Ľudovít. The effectiveness of enforcing administrative legal responsibility in water protection. In: GARŽÍK Tomáš, ZEMANOVÁ Alžbeta & ŤAŽKÁ Veronika (eds.). *Bratislavské právnické fórum 2024: Procesné zásady práva na spravodlivý proces*. Bratislava: Právnická fakulta Univerzity Komenského v Bratislave, 2024, pp. 7–13. ISBN 978-80-7160-729-8.

Journal Articles

- FAURE, Michael. The Creation of an Autonomous Environmental Crime through the New EU Environmental Crime Directive. Eucrim, 2024, 2, pp. 75–83. DOI: https://doi.org/10.30709/eucrim-2024-011.

- ATANASOVA, Daniela – KRASTEVA, Nadezhda. Environmental Protection and the New Safeguards Provided in Directive (EU) 2024/1203 on the Protection of the Environment Through Criminal Law. *Environment. Technology. Resources.*, 2024, vol. 6(1), pp. 45–62. ISSN 1691-5402.

- VOMÁČKA, Vojtěch. EU rule of law actors and the environmental crime directive: upholding the law in a new era of ecological challenges. ERA Forum, 2024, vol. 25(4), pp. 281–299. DOI: https://doi.org/10.1007/s12027-024-00801-z.

Other Legal Sources / Cases

- Reykjavik Declaration. Fourth Summit of Heads of State and Government of the Council of Europe. Adopted 17 May 2023. Strasbourg: Council of Europe.

- Council of Europe. European Convention on Mutual Assistance in Criminal Matters (ETS No. 30). Strasbourg, 1959.

- Council of Europe. Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime (ETS No. 141). Strasbourg, 1990.

- Council of Europe. Criminal Law Convention on Corruption (ETS No. 173). Strasbourg, 1999.

7.2. International Criminal Environmental Law[1011]

JUDr. Lukáš Mareček, PhD.

Department of International Law and International Relations, Faculty of Law, Comenius University Bratislava

lukas.marecek@flaw.uniba.sk

Introduction

Environmental protection has long been not only an internal matter of states. States are under obligation not to cause significant damages to the environment in any of their activities.[1012] Nevertheless, international environmental law is matched by a lack of effective means to address environmental challenges.[1013]

This paper aims to examine the possibility of inferring the international criminal responsibility of an individual for large-scale environmental destruction as an effective measure to protect the environment and environmental rights.

To achieve the set aim, we will use standard methods of theoretical legal research using logical and hermeneutic methods. The basis for the research will be the formal and subsidiary sources of international law. The doctrinal approach to the examination of international law will also be used, as the of nature of law is argumentative, and not axiomatic.[1014]

Widespread destruction of the environment as a war crime

International customary law, as reflected in the Rome Statute of the International Criminal Court (ICC), prohibits "intentionally

[1011] This article was written with the support of the VEGA project n. 1/0713/23 - *International legal protection of environmental rights - quo vadis?*

[1012] GOLOVKO, Liudmyla: International Legal Mechanisms for holding the Russian Federation accountable for causing Environmental Damage as a result of Armed Aggression against Ukraine In *Bratislava Law Review*. Vol. 7, No. 1 (2023), p. 33.

[1013] Compare DAMOHORSKÝ, Milan et al.: *Právo životního prostředí*. Praha: C. H. Beck, 2003, s. 85-86.

[1014] KNAPP, Viktor: *Teorie práva*. Praha : C.H. Beck, 1995, s. 167.

launching an attack in the knowledge that such attack will cause incidental… widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated."[1015] Such conduct qualifies as a war crime of other serious violations of laws and customs applicable in international armed conflicts. Specifically, it reflects the regulation of art. 35 par. 2 and art. 55 of Additional Protocol I (1977) to the Geneva Conventions of 1949.

However, the Rome Statute does not contain a similar provision in relation to non-international armed conflicts. However, other provisions of the Rome Statute, which are primarily intended for the protection of the civilian population and objects, can protect by effect also the environment. Destruction of the environment may fulfil the factual basis of the war crime of pillaging,[1016] or destroying or seizing the property of an adversary unless such destruction or seizure be imperatively demanded by the necessities of the conflict.[1017]

Even though the existing case law did not confirm explicitly that environment can be understood as a part of the property, the existing case law confirms, that the term property can be interpreted extensively.[1018] In recent jurisprudence (Bemba,

[1015] Art. 8 (2) (b) (iv), Rome Statute of the ICC (1998).
[1016] Art. 8 (2) (e) (v), Rome Statute of the ICC (1998). „… pillage only applies to natural resources that can be subject to ownership and constitute "property"… The prohibition covers pillage of natural resources, whether owned by the State, communities or private persons… The applicability of the prohibition of pillage to natural resources has been confirmed by the International Court of Justice, which found in the Armed Activities judgment, that Uganda was internationally responsible "for acts of looting, plundering and exploitation of the [Democratic Republic of the Congo]'s natural resources"" Draft principles on protection of the environment in relation to armed conflicts, with commentaries In *Yearbook of the International Law Commission*, 2022, vol. II, Part Two. p. 150.
[1017] Art. 8 (2) (e) (xii), Rome Statute of the ICC (1998).
[1018] „… the property in question – whether moveable or immoveable, private or public – must belong to individuals or entities aligned with or with allegiance to a party to the conflict adverse or hostile to the perpetrator…" *Katanga*, Judgment pursuant to article 74 of the Statute, 7 March 2014, para. 892.

Ntaganda), the environment was not the central point of the indictment.[1019]

Some components of the environment are eligible objects of property rights. On the other hand, the destruction of "own property", for example, in the defensive application of scorched earth tactics on one's territory, is not covered by war crimes.

The interpretation of the term "widespread, long-term and severe damage" remains an open question. International jurisprudence has not interpreted these terms. However, the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (1977, ENMOD) can serve as a guide, where the term "widespread" must be interpreted as affecting a territory of several hundred square kilometres, the term "long-term" as exceeding several months or season and the term "severe" as causing significant disruption or harm to human life, nature or economic resources."[1020]

[1019] In the case of Ntaganda, the court ultimately found the defendant not guilty of looting natural resources, despite the fact that it was proven. Closer see PEREIRA, Ricardo: After the ICC Office of the Prosecutor's 2016 Policy Paper on Case Selection and Prioritisation: Towards an International Crime of Ecocide? In *Criminal Law Forum*. Vol. 31 (2020), pp. 208-209.

[1020] „...The term 'severe' in ENMOD has been interpreted by the Committee on Disarmament to mean 'serious or significant disruption or harm to human life, natural and economic resources or other assets'... the Committee on Disarmament has interpreted 'widespread' to mean harm encompassing an area on the scale of several hundred square kilometres. Background material to API similarly focuses only on geographic scale, defining 'widespread' as thousands of square kilometres.... The requirement of 'widespread' may also be satisfied if damage crosses state boundaries, reflecting the principle of prevention of significant transboundary harm, recognised in international and environmental law... The Committee on Disarmament has interpreted the closely related term 'long-lasting', the term used in ENMOD, to mean a period of several months or a season, while the background materials to API interpret 'long-term' as a period of decades." Stop Ecocide Foundation: *Independent Expert Panel for the Legal Definition of Ecocide: Commentary and Core Text*, June 2021. Online: https://static1.squarespace.com/static/5ca2608ab914493c64ef1f6d/t/60d7479cf8e7e5461534dd07/1624721314430/SE+Foundation+Commentary+and+core+text+revised+%281%29.pdf. Also JANKUV, Juraj: *Environmentalizácia medzinárodného práva verejného a jej vplyv na právo Európskej únie a právny poriadok Slovenskej republiky*. Praha: Leges, 2021, s. 290.

Jurisprudence in the field of environmental war crimes is not developed. The International Military Tribunal for Nuremberg condemned Jodl for using scorched earth tactics, which do not aims primarily the environment, but primarily involve the destruction of food, transport infrastructure and other potentially useful for the enemy's armed forces, and the perpetrator for these reasons may destroy the environment.

The International Criminal Tribunal for the former Yugoslavia almost got into the issue, when the prosecutor established a committee of inquiry to clarify the facts of the raids by NATO air forces on the Pančevo area. According to findings, these raids caused the spread of toxic clouds in an area of 15 km^2 for more than 10 days. Acid rains were recorded in the area during this period. The committee secured evidence of a negative impact on biodiversity in the vicinity of the bombed area; on crops, soil, groundwater and human health. Nevertheless, the damage to the environment was not evaluated as severe and long-term, although the element of widespread was considered fulfilled. The target of the attack was assessed as a legitimate military objective and the accompanying damage to the environment (and civilians) was assessed as proportionate while maintaining the precaution principle.[1021] Therefore, the committee advised the prosecutor not to start a formal investigation.[1022] The case confirmed the conclusion found by the grammatical interpretation that the elements of widespread, long-term and severe damage to the environment must be fulfilled cumulatively. On the other hand, it is not a conclusion confirmed by the judicial panel, but these are only the prosecutor's reasons for not starting a criminal prosecution.

[1021] CHABERT, Valentina: Environmental protection in times of war: NATO's 1991 Operation Allied Force bombing campaign in the Federal Republic of Yugoslavia In: *Opinio Juris* (20.03.2022). Online: https://www.opiniojuris.it/environmental-protection-in-times-of-war-natos-1991-operation-allied-force-bombing-campaign-in-the-federal-republic-of-yugoslavia/.

[1022] Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia. Online: https://www.icty.org/x/file/Press/nato061300.pdf.

Widespread destruction of the environment as other crime under international law

International criminal law is not an end in itself, but aims to protect the interests of the international community expressed in the legal norms of other branches of international law. In other words, the international community considers some norms to be so fundamental that leaving their enforceability to the general sanctions and responsibility regime of international law was not considered sufficient. Therefore, in relation to them, a simultaneous international criminal responsibility of an individual for their violation occurs. In relation to war crimes, such norms are the norms of international humanitarian law (their serious violations). Concerning crimes against humanity and the crime of genocide, these are the core norms of international human rights law.[1023]

When analysing the definitions of crimes against humanity and the crime of genocide as defined in the Rome Statute, we find that the environment is not explicitly protected by these norms and thus confirms the previous conclusion of the doctrine that the protected interest is human rights (of the first generation, i.e. .the right to life, personal freedom, respect for family ties, etc.) of a group of individuals (in contrast to war crimes, where even one victim is sufficient, genocide and crimes against humanity require multiplicity of victims).

However, it is possible to consider the protection of the environment as a secondary object of the actual nature of the crime, i.e. protection provided alongside and thanks to the protection provided to individuals.

Specifically, the destruction of the environment can fulfil the objective side of the following crimes:

1. Crime of genocide:

[1023] Compare SVAČEK, Ondřej: *International Criminal Law*, Univerzita Palackého v Olomouci, 2012, p. 12.

"Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part."[1024]

2. Crime against humanity:

"Extermination" where "extermination" includes the intentional infliction of conditions of life, inter alia the deprivation of access to food and medicine, calculated to bring about the destruction of part of a population."[1025]

In both cases, the destruction of living conditions can consist of destruction of the environment - in the burning of forests, poisoning of water sources, air or water pollution, desertification, and so on. The prohibition of large-scale and systematic attacks on the indigenous population of the forests thus secondarily protects the forest in which they live.

Proving the commission of the crime of genocide is more difficult than in the case of crimes against humanity, as actions that destroy (also) the environment must be accompanied by a specific intent to destroy a protected group. However, it is possible, as the Al-Bashir case shows.[1026]

Outside of the framework of the core crimes under international law, as defined in the Rome Statute, the environment is also protected secondarily by suppressing the crime of terrorism. Whether terrorism is currently a crime under international law is the subject of living academic debate.[1027]

[1024] Art. 6 (c), Rome Statute of the ICC (1998).
[1025] Art. 7 (1) (b), (2))b) Rome Statute of the ICC (1998).
[1026] „... the Chamber considers that one of the reasonable conclusions that can be drawn is that the acts of contamination of water pumps... were committed in furtherance of the genocidal policy, and that the conditions of life inflicted on the Fur, Masalit and Zaghawa groups were calculated to bring about the physical destruction of a part of those ethnic groups." Para. 38 *The Prosecutor v. Omar Hassan Ahmad Al Bashir*, Second Decision on the Prosecution's Application for a Warrant of Arrest, 12 July 2010, ICC-02/05-01/09-94.
[1027] E.g. MAREČEK, Lukáš: Terrorism as a crime under international customary law introduced by special tribunal for Lebanon In *The Lawyer Quarterly*. Vol. 7, No. 2 (2017), s. 73-86. Online: https://tlq.ilaw.cas.cz/index.php/tlq/article/view/231.

Anyway, some terrorist acts can be targeted against the environment. Such an attack against the environment can be defined as a crime of terrorism, namely if the dolus specialis element is fulfilled.

The Special Tribunal for Lebanon defined the crime under customary international law as follows:

""1. The perpetration of a criminal act (such as murder, kidnapping, hostage-taking, arson, and so on), or threatening such an act. 2. The intent to spread fear among the population (which would generally entail the cre ation of public danger) or directly or indirectly coerce a national or international authority to take some action, or to refrain from taking it. 3. The act must involve transnational element."[1028]

Without fulfilling the element of dolus specialis, i.e. the intention with the motive of spreading fear or coercing a national or international authority to take (or not take) a certain action, we cannot speak of environmental terrorism[1029] in the legal sense of the word.

Thus, it is possible to argue that the destruction of the environment outside of international armed conflict still can be punished as a crime under international law. But the current legal status of criminal protection of environment *de lege lata* is insufficient, as it is protected mainly only indirectly. As some argue, inferring criminal responsibility for the destruction of the environment, apart from a war crime committed during an international armed conflict, is on lines of the principle of legality.[1030]

Ecocide – crime *de lege ferenda*

In the previous text, we came to the conclusion that damage to the environment, without a negative impact on people (and outside

[1028] Case No. STL-11-01/1, 16. February 2011, para. 85.
[1029] Has to be carefully distinguished from ecoterrorism.
[1030] PEREIRA, Ricardo: After the ICC Office of the Prosecutor's 2016 Policy Paper on Case Selection and Prioritisation: Towards an International Crime of Ecocide? In *Criminal Law Forum*. Vol. 31 (2020), s. 217.

the context of an international armed conflict), in the current state of *de lege lata* it is not covered by the protection provided by international criminal law. Whether it is, for example, pollution of the open sea, Antarctica, or any environment that does not have a criminally relevant causal nexus to causing death, bodily harm or other harm to the rights and interests of the civilian population, or protected groups. And so, given that the environment during peacetime is not protected as the primary object of any crime under international law, the crime of ecocide (less often "geocide") has to be understood as a concept *de lege ferenda*.

States, as well as experts and the wider public, are aware of this gap, and therefore there are several initiatives to establish the definition of environmental crimes under international law, called the crime of ecocide - from the Greek prefix oîkos (household), and the Latin caedo, meaning to kill. Thus, the name in a figurative sense means the destruction of the environment - the common home of people and other organisms.

The discussion on ecoside started at least in 1970s in connection to using of Agent Orange in Vietnam.[1031] Putting aside private and academic proposals,[1032] first official proposal on ecocide goes back to 1996 when the ILC prepared recommendation on this issue.[1033]

A formal proposal to supplement the Rome Statute was submitted in December 2019 by the island states of Vanuatu and the Maldives. A comprehensive proposal was presented, for example, by the non-governmental organization Stop Ecocide

[1031] ALEXANDRIA, H. A. M.: Killing Our Home: The Case for Creating an International Crime of Ecocide. In: Social Justice and Equity Law Journal. vol 6. Oregon: WILLAMETTE UNIVERSITY COLLEGE OF LAW, 2023. p. 2.
[1032] E.g. FALK, R. A.: Environmental Warfare and Ecocide — Facts, Appraisal, and Proposals. In: Bulletin of Peace Proposals. Princeton: Princeton University, 1973.
[1033] Document on crimes against the environment, prepared by Mr. Christian Tomuschat, member of the Commission ILC(XLVIII)/DC/CRD. 3, 1996. Online: https://legal.un.org/ilc/documentation/english/ilc_xlviii_dc_crd3.pdf. See also GAUGER, A.; RABATEL-FERNEL, M.P.; KULBICKI, L.; SHORT, D.; HIGGINS, P.: Ecocide is the missing 5th Crime Against Peace. London: Human Rights Consortium, School of Advanced Study, University of London, 2013. p. 10.

International, whose proposal was also noticed by the International Law Commission.

This foundation sponsors Independent Expert Panel for the Legal Definition of Ecocide (IEP) which proposes following definition: "For the purpose of this Statute, "ecocide" means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts."[1034]

In comparison to the Rome Statute's definition of environmental war crimes mentioned in the first chapter of this paper,[1035] this definition is much more extensive.

It requires "knowledge, that there is a substantial likelihood" which is a negligence standard of *mens rea* compared with the intentional standard set by the Rome Statute, where even *dolus eventualis* is not regarded as sufficient. Rome Statute requires that the perpetrator had at least knowledge, that the consequence "will occur in the ordinary course of events."[1036] Inclusion of the

---

[1034] Article 8 ter Ecocide

1. For the purpose of this Statute, "ecocide" means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.
2. For the purpose of paragraph 1:
   1. "Wanton" means with reckless disregard for damage which would be clearly excessive in relation to the social and economic benefits anticipated;
   2. "Severe" means damage which involves very serious adverse changes, disruption or harm to any element of the environment, including grave impacts on human life or natural, cultural or economic resources;
   3. "Widespread" means damage which extends beyond a limited geographic area, crosses state boundaries, or is suffered by an entire ecosystem or species or a large number of human beings;
   4. "Long-term" means damage which is irreversible or which cannot be redressed through natural recovery within a reasonable period of time; "Environment" means the earth, its biosphere, cryosphere, lithosphere, hydrosphere and atmosphere, as well as outer space." Stop Ecocide International: Legal Definition of Ecocide. Online: https://www.stopecocide.earth/legal-definition.

[1035] Art. 8 (2) (b) (iv), Rome Statute of the ICC (1998).

[1036] Art. 30 (2) (b) , Rome Statute of the ICC (1998). „The Chamber agrees with previous rulings that the phrase will occur in the ordinary course of events' as laid down in Article 30(2)(b) and (3) of the Statute which requires virtual certainty' Accordingly, any lower threshold, such as dolus eventualis, recklessness and

proposed provision on ecocide would therefore mean a special provision regarding the subjective element of a crime (*mens rea*). It is debatable why this particular crime should have a lower level, and if this would not lead to the debate, why not lower it also regarding others?

Regarding the objective element of the crime (*actus reus*) the environmental war crime requires, that the consequence – environmental damage – is widespread, long-term and severe cumulatively. The proposal provides the existence of two cumulative conditions – a) severe and b) alternatively widespread or long-term.

Naturally, the difference is also the absence of a link with an armed conflict (war nexus), so the crime of ecocide can be committed both during an armed conflict and during peace, although during an armed conflict, in the opinion of the author, the principle of specialty should be applied - that is, the act should should have qualified through the prism of a war crime.

Finally, proportionality (expressed in the element of wanton) will not be measured in relation to the military necessity (military advantage anticipated) but in relation to the social and economic benefits anticipated.

Criminal responsibility of legal persons: another challenge

If ecocide were to be defined as another crime under the Rome Statute, we face another challenge. This is the absence of criminal liability of legal entities under international law. International criminal justice has not yet taken the path of inferring criminal responsibility against legal entities, except for the Special Tribunal for Lebanon.[1037]

negligence, is insufficient to establish intent' and knowledge' in relation to a consequence under Article 30(2)(b)." Ftn 2348, The Prosecutor v. Bosco Ntaganda, Judgment, 08 July 2019. No.: ICC-01/04-02/06.

[1037] See MAREČEK, Lukáš: Criminal responsibility of legal persons introduced by the special tribunal for Lebanon In *Pécs journal of international and European law*, 2 (2020), pp. 62-70.

This is all the more prominent in the case of causing environmental damage, as multinational business companies from first-world countries, operating in developing countries, are often significant environmental harmers.[1038]

This fact is also reflected in principle number 10 of the Draft Principles of Environmental Protection during Armed Conflict from 2022,[1039] in which the International Law Commission states that states should take appropriate measures to ensure that business companies under their jurisdiction respect the protection of the environment.

Inferring criminal liability against a legal entity, not only against a natural person, is especially appropriate in cases where the destruction of the environment is not only a consequence of the individual decision of the responsible person, but is related to the generally set policy of directing the activities of the legal entity - that is, where the destruction of the environment is a manifestation system setting of the company, and where the individual's decision is only an inevitable product of this general system strategy of the legal entity.

Duty of the states to cooperate and suppress environmental criminality

Part of international criminal law in the broader sense are also so-called treaty-based crimes, i.e. crimes whose criminality results from national law and to whose criminalization states have committed in an international treaty. Among such in this context is mainly the (European) Convention on the Protection of the Environment through Criminal Law (1998), and the subsequent regional regulation.[1040]

[1038] See e. g. RAUXLOH, R.:The Role of International Criminal Law in Environmental Protection" in BOTCHWAY, F. (ed.): *Natural Resource Investment and Africa's Development* (Edward Elgar, 2011), pp. 432-434.
[1039] Draft principles on protection of the environment in relation to armed conflicts 2022.
[1040] Directive 2008/99/EC.

Another example is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973, CITES)[1041] or the Basel Convention on the Transboundary Movement of Hazardous Waste (1989).[1042]

In case of treaty-based crimes, an indirect coercive regime is applied through the fulfilment of the reception obligation by the state, which has undertaken to do so based on an international agreement. If the state fails to fulfil its reception obligation, only the state's responsibility comes into consideration. The criminal liability of individuals is indirect and its necessary prerequisite is the fulfillment of the state's obligation to establish a certain factual basis of the crime. An individual is not responsible for an action that was not criminal at the time it was committed because the state did not fulfil its reception obligation. This results in the risk of impunity for perpetrators of environmental crime in the event of the state failing to fulfil its implementation obligation.

The difference is also that the principle of universality (universal criminality) and non-statutory limitation is not applied to such treaty-based crimes. A state with jurisdiction may decide not to prosecute such a crime, the factual risk of which increases in direct proportion to the political and other position of the perpetrator in the hierarchy of the society of the given state. Another state may not have title to establish its own jurisdiction. This problem can also arise in relation to territories that do not belong to the sovereignty of any state, such as causing ecological damage on the high seas. Here, too, the approach where environmental crimes would be crimes under international law, not merely treaty-based crimes, would be beneficial.[1043]

In addition to the obligation to implement the criminalization of conduct against the environment, there is also an obligation to

[1041] Art. 8 (1) (a), CITES (1973).
[1042] Art 9, Basel Convention (1989).
[1043] Also MENZEL, Jörg: Criminal Offences against the Environment: The Emergence of International Environmental Criminal Law In *Rule of Law for Good Environmental Governance*. Singapure: Konrad-Adenauer-Stiftung, 2015, pp. 175-176.

cooperate in criminal matters related to environmental criminality. These obligations can be found in bilateral or multilateral treaties.[1044]

Conclusion

In conclusion, we can identify with the opinion that the destruction of the environment generally becomes a crime because of its humanitarian consequences.[1045] Damage to the environment is understood only as a form or method by which a certain inhumanity or cruelty is committed.

In other words, in the current state of de lege lata, it is possible to consider the destruction of the environment fundamentally only in connection with the consequences associated with a human - be it life, health or property.

The environment is protected primarily only in the form of a war crime committed during an armed conflict. In other cases, the environment is protected only as a secondary object of the crime - a secondary interest protected by law. Whether in addition to the protection of property (destroyed components of the environment are the subject of property rights) or life and health (destruction of human living conditions).

Other identified shortcomings include the impossibility of inferring criminal liability against legal entities at the level of international law, although the environment is often destroyed precisely by non-governmental organizations - business companies. Also, leaving punishment at the national level by enshrining "only" the implementation obligation of states in the case of treaty-based crimes, which can lead to the risk of impunity.

[1044] Closer Bližšie MENZEL, Jörg: Criminal Offences against the Environment: The Emergence of International Environmental Criminal Law In *Rule of Law for Good Environmental Governance*. Singapure: Konrad-Adenauer-Stiftung, 2015, p. 174.
[1045] WEINSTEIN, Tara: Prosecuting Attacks That Destroy the Environment: Environmental Crimes or Humanitarian Atrocities? In *Georgetown International Environmental Law Review*, 17/4 (2004-2005), p. 720. 697-722 at 720.

These arguments also highlight the reasons that lead to the various ambitions and proposals *de lege ferenda* to establish the the crime of ecocide.

List of Bibliography

1. DAMOHORSKÝ, Milan et al.: *Právo životního prostředí*. Praha: C. H. Beck, 2003, 511 p.

2. GOLOVKO, Liudmyla: International Legal Mechanisms for holding the Russian Federation accountable for causing Environmental Damage as a result of Armed Aggression against Ukraine In *Bratislava Law Review*. Vol. 7, No. 1 (2023), pp. 29-40.

3. CHABERT, Valentina: Environmental protection in times of war: NATO's 1991 Operation Allied Force bombing campaign in the Federal Republic of Yugoslavia In: *Opinio Juris* (20.03.2022).

4. JANKUV, Juraj: *Environmentalizácia medzinárodného práva verejného a jej vplyv na právo Európskej únie a právny poriadok Slovenskej republiky*. Praha: Leges, 2021, 388 p.

5. KNAPP, Viktor: *Teórie práva*. Praha: C.H. Beck, 1995, 247 p.

6. MAREČEK, Lukáš: Medzinárodný vojenský Tribunál v Norimbergu: príspevok k ochrane ľudských práv? In: *Ľudské práva včera a dnes: pôvod a význam ľudských práv a ich ochrana v právnej terminológii a praxi*. Banská Bystrica : Belianum, 2017, pp. 265-274.

7. MAREČEK, Lukáš: Criminal responsibility of legal persons introduced by the special tribunal for Lebanon In Pécs journal of international and European law, 2 (2020), pp. 62-70.

8. MENZEL, Jörg: Criminal Offences against the Environment: The Emergence of International Environmental Criminal Law In *Rule of Law for Good Environmental Governance*. Singapure: Konrad-Adenauer-Stiftung, 2015, pp. 169-178.

9. PEREIRA, Ricardo: After the ICC Office of the Prosecutor's 2016 Policy Paper on Case Selection and Prioritisation: Towards an International Crime of Ecocide? In *Criminal Law Forum*. Vol. 31 (2020), pp. 179-224.

10. ROBINSON, Darryl: Ecocide — Puzzles and Possibilities In *Journal of International Criminal Justice*. Vol. 20 (2022), pp. 313–347.

11. SCHABAS, William et al. (eds.): Companion to International Criminal LawCritical Perspectives, Ashgate Publishers, 2012. 600 p.

12. SVAČEK, Ondřej: *International Criminal* Law, Univerzita Palackého v Olomouci, 2012, 150 p.

13. WEINSTEIN, Tara: Prosecuting Attacks That Destroy the Environment: Environmental Crimes or Humanitarian Atrocities? In *Georgetown International Environmental Law Review*, 17/4 (2004-2005), pp. 697-722.

14. Case No. STL-11-01/1, 16. February 2011.

15. Corfu Channel Case (United Kingdom v. Albania), I.C.J. Reports 1949, p. 4.

16. Dohovor o zákaze vojenského alebo akéhokoľvek iného nepriateľského použitia prostriedkov meniacich životné prostredie z roku 1977.

17. Draft principles on protection of the environment in relation to armed conflicts, with commentaries In *Yearbook of the International Law Commission*, 2022, vol. II, Part Two.

18. Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I. C. J. Reports 1997, p. 7.

19. Legality of the Threat or Use of Nuclear Weapons, I.C.J. Reports 1996, s. 226.

20. Rome Statute of the International Criminal Court from 1998.

21. *Katanga*, Judgment pursuant to article 74 of the Statute, 7 March 2014, para. 892.

22. Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010, p. 14.

23. Stop Ecocide Foundation: *Independent Expert Panel for the Legal Definition of Ecocide: Commentary and Core Text*, June 2021.

CONCLUSION

The principles of international environmental law can be characterized as rules of conduct contained in some of its sources, which are of a highly general nature, and which arose within its framework. From the perspective of international environmental law, its principles are of particular importance, given the fact that their identification is also used as a way of approaching the content of this otherwise too extensive and fragmented branch of international law. The principles of international environmental law have historically developed in connection with the customary practice of States, the treaty-based norm-making of States, as well as the related case law of international judicial and arbitral bodies, in the given area. Many of them have also found their expression within the framework of a whole range of non-binding soft law instruments adopted by the bodies of international organizations or by major international conferences devoted to the issue of international legal protection of environment.

Climate change is something we have to deal with in our lives almost every day, especially given its negative effects. Although states have obligated themselves to duties directed towards climate neutrality and other commitments within the fight against the negative impacts of climate change, most of these rules are part of soft law or possess vague content, rendering them unenforceable. The negative effects of the climate change primarily impact human lives and human rights. We are currently witnessing the wave of case law dedicated to clarifying the obligations of states in the field of climate change, mainly focusing on its impact on human rights. This development is based on the principle of intergenerational equity, which the International Court of Justice designated as guiding principle for interpreting states´ obligations in responding to climate change. The principle of intergenerational equity helps judges to justify the connection between climate change and human rights in

order to fill the gaps in international climate change law. Nowadays, we are witnessing the growing role of national, European and international judicial systems in shaping global environmental governance and enforcement of the rules of environmental protection. The South Korea´s Constitutional Court ruling represents a precedent for climate litigation in a region acutely vulnerable to the impacts of extreme weather events and rising sea levels. The South Korean Constitutional Court's decision is part of a broader global trend where courts increasingly connect climate change and human rights, and filling the voids left by international agreements. National court cases based on individual complaints confirm and justify direct impact of climate change on fundamental rights (constitutional and international) of present and future generations, thereby demonstrating the breaching the principle of intergenerational equity. It is therefore undeniable that at the heart of the principle of intergenerational equity is the idea of protection of human rights. Experiences with case law in the field of climate change, national and international, demonstrate the growing importance and relevance of the principle of intergenerational equity as a guiding principle for states committed to fulfilling their obligations.

Rules of the international environmental law shows that states are willing to commit themselves to the obligations but are unwilling to create a sufficiently strong enforcement mechanism for these commitments. Furthermore, the implementation of the full range of obligations to avoid irreversible environmental harm is also insufficient. However, environmental degradation also affects other fields of international law, mainly human rights. It is the judicial protection of human rights, such as the right to life, that contributes to the environmental protection by applying the principle of intergenerational equity.

Developments in international law over the past decades are beginning to put the question of the perspective of international liability for harmful consequences of activities

not prohibited by international law in a somewhat different light. On the one hand, treaty-based international liability for harmful consequences resulting from non-prohibited but risky activities has not been established outside the area of damage caused by space objects. On the other hand, the unification of civil liability has played a significant role in addressing not only issues of nuclear damage but also other aspects of transboundary environmental harm. However, the conventions do not cover all cases of environmental harm. The International Law Commission tried to contribute to the progressive development and codification of international law in the area, but its originally broad and ambitious topic of "international liability" gave rise to two relatively modest outcomes, i.e., Draft articles on the prevention of transboundary harm from hazardous activities (2001) and Draft Principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities (2006). Therefore, alternatives to international liability are coming to the fore. These include, in particular, a shift towards State responsibility for unlawful conduct based on a breach of due diligence in relation to obligations requiring the prevention of environmental damage.

The direct or indirect impact of companies on the environment can be assessed from various perspectives, including on the basis of the statistics mentioned in the introduction, the key being their supply chain and transparency within it. In recent years, the legislative framework of the European Union has sought to ensure that companies are transparent in their supply chain. Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on corporate sustainability due diligence and amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859 represents a key step by which the European Union will oblige companies to legal obligations in the field of environmental protection and human rights. This significant shift in recent years signals that the ESG policy of companies should not be just a marketing move, but also an inherent part of every business,

for which companies will be penalized in case of non-compliance.

Principle 21 as a cornerstone of international environmental and natural resources law, that ought to be finally accentuated, because according to Principle 21 the states are responsible for keeping all activities within their jurisdiction or control - exploitation of their own resources including - exactly without causing damage in another state or beyond purview of their national jurisdiction, thus making any later 'burning of buildings' superfluous. Thereupon, in the next five years, just let the states fully abide by the Stockholm Principle 21 and Principle 2 of the Rio Declaration as its reinstatement, accentuating not only environmental, but also applicable developmental state policies, while working tirelessly, holding to their promises, on the complete implementation of the SDGs and the whole 2030 Agenda for Sustainable Development at its behest. This should be, after all, the highest goal.

Ukraine faces increasing environmental challenges that have both domestic and transboundary dimensions — ranging from water and air pollution to climate change and deforestation. Under these conditions, the priority is not only the need for internal reform of environmental policy but also active international cooperation. Analysis of Ukraine's interaction with international organizations demonstrates that the country has the potential for effective integration into global environmental processes, yet requires strengthening of institutional capacity, particularly in the areas of monitoring, prevention, legislation, and education. Environmental law is not only a regulatory framework but also an instrument for transforming societal and governmental practices. Strengthening integration into international agreements, attracting environmental financing, participation in European environmental programs, and the development of transboundary cooperation provide a foundation for systemic change.

By situating financial institutions within the broader context of international environmental law—including obligations under treaties such as the Paris Agreement and international customary norms—this contribution argues that finance is not merely a technical enabler but a legal actor in global environmental governance. Strengthening the international legal architecture to better integrate financial mechanisms into environmental governance and to support the achievement of climate and sustainability goals through enforceable standards and cross-border legal cooperation is necessary.

Human rights and environmental protection are increasingly intertwined in the legal landscapes of Pacific Island states. Faced with rising sea levels, biodiversity loss, and resource insecurity, these nations must navigate the dual challenge of preserving ecosystems while upholding the dignity and well-being of their populations. The protection of environmental rights in the Pacific Island States remains an emerging and increasingly important dimension of regional human rights discourse. Pacific leaders have recognized the intrinsic link between environmental sustainability and the realization of fundamental human rights, particularly within the broader framework of sustainable development. Nonetheless, regional mechanisms for enforcing these rights are still in the process of evolving and face considerable legal and institutional challenges.

While international instruments have long spoken of children and future generations in aspirational terms, recent doctrinal and jurisprudential developments point to a transformation. We see a shift happening from soft law principles toward enforceable legal rights. The unique vulnerability of children to environmental harm, and their growing role as agents of legal and societal change was highlighted. Courts are beginning to acknowledge the urgency of the climate crisis and the legitimacy of youth as claimants. The study offers de lege ferenda proposals for

strengthening children's environmental rights and reflects on the ethical dimensions of intergenerational justice.

Climate change represents one of the most significant challenges of the 21st century, affecting all areas of human life, from environmental quality and public health to the economy and fundamental human rights. Inextricably linked to climatic conditions and a healthy environment is the right to adequate food. Worsening climatic conditions, extreme weather events, droughts, floods, and soil degradation profoundly affect the availability, accessibility, usability, and stability of food sources, thereby threatening the food security of millions of people. The right to food is enshrined in key international legal documents, notably in Article 11 of the International Covenant on Economic, Social and Cultural Rights. Nevertheless, this right is only marginally included in climate policies and is part of the commitments that states have under the UNFCCC and the Paris Agreement.

The legal regulation of the use of energy resources traditionally belongs to national states. However, in the last decades, the international legal aspects of energy relations have become more and more important, in particular, due to increase of environmental issues connected with the energy sector, as one of the biggest polluters. Access to reliable, sustainable, clean and affordable energy services is a precondition for the full enjoyment of many human rights. Therefore, scholars from all over the world elaborate arguments for the international recognition of the right to access to modern energy services as a human right. In the modern literature, attention is paid to the specificities of approaches used within energy and environmental law. The elaboration of the adequate legal mechanisms of fulfilment and protection of the right to clean energy is a common task of energy and environmental law that requires joint efforts at all levels.

Adopted in the early 1990s to strengthen investment protection and promote energy cooperation, the Energy Charter Treaty now stands in tension with states' obligations

under international environmental and climate regimes. A growing body of arbitral disputes illustrates how investor protection under the ECT may collide with the implementation of environmental and climate norms, raising broader questions of coherence within a fragmented international legal order. While the ECT's environmental provisions remain limited in scope and normative strength, systemic integration offers arbitral tribunals an interpretive method to align investor protection with the objectives of environmental and climate governance.

In Ukraine, in recent years, there has been a clear trend towards an increase in the number of large-scale forest fires that spread rapidly and are difficult to extinguish. Currently, the worst level of fire safety in forests in Ukraine is observed in the Chernobyl Exclusion Zone and in the south-eastern regions of our country. The full-scale armed aggression of the Russian Federation and the constant bombing of almost the entire territory of Ukraine have significantly increased the corresponding risks, spreading them to the entire territory of our country. The issue of forest fires in the exclusion zone is currently one of the most urgent environmental and social problems of our country. Since even minor ground fires in radioactively contaminated areas have negative environmental consequences, in particular due to the accumulation in the burning litter of up to 40% of the entire stock of biologically mobile radionuclides of forest ecosystems. Large-scale forest fires in 2015 and 2020 in the exclusion zone contributed to the spread of radioactive aerosols with smoke and confirm the above. In particular, two of them in 2015 had a very negative resonance in Europe. In fact, according to modeling data from the Norwegian Institute for Atmospheric Research, these fires led to the spread of radionuclides in Belarus, Germany, Poland, the Russian Federation, Turkey, Ukraine, the Scandinavian countries and the Balkan region. The fires in 2020 had even more large-scale negative consequences and volumes for the state as a whole, including human casualties, the destruction of settlements, damage and death of forests on an area of

more than 157 thousand hectares (Zhytomyr, Kyiv and Luhansk regions) with billions of losses for society, the economy and the environment.

It should be noted that the level of fire safety in the forests of the exclusion zone is the most threatening at the present stage. The contamination of the forests of the exclusion zone, which have been under occupation since the first days of the full-scale aggression of the Russian Federation, with explosives creates new additional risks. Currently, the fire protection system in the forests of the exclusion zone does not correspond to the specifics of the designated territory, it is not able to effectively control fire safety and extinguish fires on tens of thousands of hectares of forest, since there is no effective regulatory regulation of such activities, proven technologies, fire-fighting equipment and trained specialists. Without a doubt, first of all, coordinated, regulatory and regulated interaction of specialized services and units plays a primary role in the effective implementation of fire safety in the sphere of relations we are studying.

It is substantiated that mine action should be regarded not only as a tool for ensuring safety of the population, but also as a key factor in environmental rehabilitation and sustainable development of affected areas. A peculiar attention is paid to international approaches, in particular the concept of Jus Post Bellum, the PERAC principles, the IMAS standards and the Do No Harm approach, which form the basis for "greening mine action." The example of Bosnia and Herzegovina manifests that neglecting environmental aspects of post-conflict recovery led to long-term hazards of natural resources degradation. At the same time, the experience of Croatia, where the NaturaVita project integrated mine clearance with further restoration of forests and wetlands, demonstrates the effectiveness of combining safety and environmental measures. It is concluded that for Ukraine, which has an unprecedented scale of mine danger and is on the path of European integration, it is relevant to take into account the Croatian model. It is suggested

developing national methods for environmental assessment of the consequences of mine pollution, extending environmentally-oriented methods of demining to all categories of land as well as ensuring the systematic integration of international environmental standards into national practice.

Nuclear facilities are protected as civilian objects under international humanitarian law. Protection is mainly provided by Article 56 of Additional Protocol I, which is aimed at the protection of works and installations containing dangerous forces. At the same time the scope of protection is weakened by exceptions listed in this article and disputed customary status of this provision. International legal regulation of the peaceful use of nuclear energy is problematic to use during a military conflict because peacetime nuclear treaties, such as the Convention on the Physical Protection of Nuclear Material and the Convention on Nuclear Safety, explicitly exclude their application during armed conflict. The IAEA plays a central role in setting safety standards, but its influence as we can see on the example of current war in Ukraine is limited during armed conflict because of the non-binding nature of its instruments. The examples of Chernobyl and Zaporizhia nuclear power plants illustrate these shortcomings. International legal regulation of nuclear security during armed conflict must be improved, stronger IAEA independence and clearer rules are needed to prevent nuclear catastrophes in wartime.

The recent developments at both the Council of Europe and the European Union level demonstrate a growing recognition of the need for more effective and harmonised criminal responses to environmental harm. The ECLC provides a foundational framework for defining environmental crimes, clarifying jurisdiction, and ensuring enforcement. While not yet in force, its provisions outline a vision for broad international cooperation and minimum standards in criminal environmental protection. Taken together, the ECLC and the Environmental Crime Directive

constitute a complementary legal toolbox – one anchored in broad-based international cooperation, the other in the deeper integration mechanisms of EU law – both aiming to reinforce the criminal law dimension of environmental protection. Their success will ultimately depend on political will, legal transposition, and day-to-day enforcement practice. In the broader context, these instruments align with the objectives of the European Green Deal, the UN Sustainable Development Goals, and international commitments under various international treaties covering a broad range of environmental issues. Over the next decade, their implementation will be a critical test of whether high-level environmental criminal law commitments can translate into tangible reductions in environmental harm. For Slovakia and other Member States, this will require sustained investment in enforcement capacity, coherent judicial interpretation, and a cultural shift towards treating environmental harm as a serious criminal matter.

The crime of destroying the environment is currently enshrined as a war crime committed during an international armed conflict. In other cases, the environment is protected as a secondary object of crime – a secondary interest protected by law. Whether in addition to the protection of property or life and health, etc. In the article, we also point out the impossibility of criminal liability against legal entities for international law, even though the environment is often destroyed precisely by non-governmental organisations - business corporations. Also problematic is the decision of the states to leave the punishment only at the national level embedded "only" in the implementation obligations of the states in the case of conventional treaty-based crimes, which can lead to the risk of impunity. The arguments also lead to various calls de lege ferenda to establish the crime of ecocide.



FACULTY OF LAW
Comenius University
Bratislava

ISBN: 978-80-7160-770-0

