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Research Article

INSTITUTING PRINCIPLES FOR THE REPRODUCTION (RESTORATION) OF NATURAL RESOURCES AND COMPLEXES IN THE CONTEXT OF ENSURING AND PROTECTING FUNDAMENTAL HUMAN RIGHTS

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CONFLICTS OF INTEREST

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The author declares that she was not involved in any state bodies, courts, or any other organisation's activities related to the discussed views and case-law.

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bstract This article is devoted to the study of instituting principles for the reproduction (restoration) of natural resources and complexes in the context of ensuring and protecting fundamental human rights. The paper analyses these principles and proposes dividing them into four groups according to their functional purpose: systemforming, organisational, preventive, and that of economic direction. The principle of legal provision for the ecosystem approach to the reproduction (restoration) of natural resources and complexes and the 'net gain' principle are of particular interest in the system for the reproduction (restoration) of natural resources and complexes. These two principles should be considered the most important ones and be the basis for the following: organising and implementing measures for the reproduction (restoration) of natural resources and complexes; recovering and improving the quality of ecosystems; preventing and eliminating harmful economic impacts on the environment and human health; ensuring the sustainable functioning of ecosystems by indissolubly linking and balancing all environmental objects.

It is established that instituting principles for the reproduction (restoration) of natural resources and complexes are universal regulations of positive law, generally influencing the formation of state environmental policy and law-making, as well as litigation in Ukraine that is concerns environmental law principles.

Keywords: law principles, environmental law principles, principles of instituting the reproduction (restoration) of natural resources and complexes, principle of legal provision for the ecosystem approach to the reproduction (restoration) of natural resources and complexes, 'net gain' principle, 'environmental net gain' principle.

1 INTRODUCTION

Humanity is now facing global environmental problems, primarily related to the imbalance of biosphere subsystems, resulting in a reduction or complete loss of natural object ability to self-regulate. The rate of the negative anthropogenic impact on the planet's natural objects has significantly accelerated, leading to the emergence of ozone holes, climate change, biodiversity reduction, environmental depletion (especially drinking water), environmental pollution, and waste accumulation. Over the past 50 years, humanity has changed ecosystems both more quickly and on a larger scale than in any other comparable period in human history. These changes have been dictated by the necessity of meeting all the growing needs of mankind for food, fresh water, wood, fibre, and fuel. They have caused significant, mostly

irreversible, losses of the diversity of life on Earth. Humanity currently needs the resources of 1.6 planet Earths annually to produce goods and services at the modern level. In addition, according to the UN, about 3 billion people will face a water shortage problem by 2025. At this point, 60% of EU waters are no longer healthy,³ the number of animals living in forests has more than halved since 1970,4 the world's vertebrate populations have shrunk by 60%,5 half of the Alps' glaciers will have melted by 2050, and 90% may have disappeared by the end of the century. Due to global warming in Ukraine, about 650,000 hectares of land will likely have been flooded. Thirty-four Ukrainian cities, including Odessa, Kherson, Mykolaiiy, Mariupol, Berdiansk, and Kerch, will have been partially flooded, and six cities and 62 villages will have been completely flooded by 2100.7 Moreover, one of the most pressing issues today is the problem of the Earth's oversaturation with waste, especially plastic.8 With the spread of COVID-19, AIDS, tuberculosis, and hepatitis B and C, medical waste is becoming especially relevant (to understand the scale of the problem, in Ukraine, each hospital bed generates an average of 2 to 10 kilograms of medical waste per day, which is more than three tons per year). Thus, unless states join forces and take steps to recycle waste, the amount of waste on Earth will have increased by 70% by 2050,10 which will cause an even greater impact on the degradation of ecosystems and ecosystem services, which could significantly increase in the first half of the current century and become a major obstacle to achieving the Millennium Development Goals.11

According to the Californian *Global Footprint Network*, the so-called 'Day of Exceeding the Permissible Level of Earth's Resources', 'World Ecological Debt Day' or 'Earth Overshoot Day' is the date when humanity's needs for biological resources exceeds the Earth's annual capacity to renew (theoretically speaking, humanity 'ticks' with nature and future generations from a relevant date to the end of the year). This happened on 29 July 2019 (the earliest date predicted since the beginning of the environmental crisis of the 70s), but the 2020 COVID-19 pandemic 'shifted' the Eco-Debt Day for three weeks. Thus, humanity returned to the 2013 level of resource

W Reid, 'Millennium ecosystem assessment: Survey of initial impacts' (Millenniumassessment.org, March 2006) <www.millenniumassessment.org> accessed 15 March 2021.

^{2 &#}x27;Conference of the parties to the Convention on biological diversity – What is it and why is it important?' (*Wwf.ua*, 29 December 2016) https://wwf.ua/?288810/cbd-2016> accessed 18 March 2021.

^{3 &}quot;#Protect water: Privacy statement' (*Living Rivers Europe*, 2021) https://www.livingrivers.eu/ accessed 29 March 2021.

^{4 &#}x27;Living planet report 2020' (Wwf.ua, 2020) <LivingPlanetReport 2020 | Publications | WWF (worldwildlife.org)> accessed 29 March 2021.

^{5 &#}x27;The number of vertebrate populations in the world has decreased by 60% – WWF report' (*Wwf.ua*, 30 October 2018) https://wwf.panda.org/?337451/lpr-2018> accessed 29 March 2021.

⁶ D Carrington, 'Two-thirds of glacier ice in the Alp's will have melt by 2100' (*The Guardian*, 9 April 2019). https://www.theguardian.com/environment/2019/apr/09/two-thirds-glaciers-alps-alpine-doomed-climate-change-ice accessed 18 March 2021.

⁷ O Viruk, 'Which cities of Ukraine may have been flooded due to climate change by 2100' (*The Village Ukraina*, 16 January 2019) https://www.the-village.com.ua/village/city/city-news/280889-yaki-mista-ukrayini-mozhe-zatopiti-cherez-zminu-klimatu-do-2100-roku accessed 18 March 2021.

According to the American agency 24/7 Wall Street, Ukraine with a population of 41,980,000, ranked the 9th in the rating of countries with the largest amount of waste per capita after the United States, with a population of 325,147,121. 'Ukraine is in the Top countries list with the largest amount of waste per capita' (*Ukrainska Pravda*, 15 July 2019) https://www.pravda.com.ua/news/2019/07/15/7220956/ accessed 15 March 2021.

⁹ S Kutsevliak, 'Medical waste is a new environmental threat to the country' (*Informatsiine Ahenstvo Interfax-Ukraina*, 29 May 2020) https://ua.interfax.com.ua/news/blog/665612.html accessed 15 March 2021.

¹⁰ World Economic Forum (WEF), 'Annual Report 2019-2020' (Weforum.org, 23 November 2020) https://www.weforum.org/reports/annual-report-2019-2020 accessed 15 March 2021.

¹¹ W Reid, 'Millennium ecosystem assessment: Survey of initial impacts' (*Millenniumassessment.org*, March 2006) <www.millenniumassessment.org> accessed 15 March 2021.

use. The closure of borders and factories, together with the general decline in economic activity, has led to a reduction in the ecological footprint of humanity – in particular, carbon emissions (14.5% lower than in 2019) and deforestation consequences (8.4% lower than in 2019). Such an 'improvement' is temporary, though. It is simply impossible to remedy the current state of the environment with the help of technical solutions alone, without changing anything else. According to Laurel Henscom, 'The current sudden ecological footprint reduction should not be taken for progress. This year, more than ever, Ecological Debt Day emphasizes the need for strategies to increase overall resilience to change'. The total ecological debt of mankind is now equal to 18 Earth years; in other words, it will take 18 years to completely restore our planet to compensate for the damage caused by overusing natural resources.

First of all, there is the issue of biodiversity restoration. Biodiversity loss and ecosystem collapse are some of the most serious threats for humanity to face in the next decade; thus, protecting and restoring biodiversity and well-functioning ecosystems are key to increasing our resilience and preventing the emergence and spread of diseases in the future. Excessive, irrational, and inefficient use of natural resources by humans has brought impoverished natural ecosystems, disrupting natural connections. Therefore, humanity has faced the problem of increasing the Earth's temperatures by more than three degrees Celsius, which will lead to mass species extinction and make part of the planet uninhabitable and unsuitable for life.14 Humanity has by now experienced the long-term effects of climate change. For instance, in 2020, Finland had increased monthly precipitation rates, causing the temperature to be one to two degrees colder than usual, while Portugal experienced the hottest July in 90 years of observations, and France, since 1959. California's average temperature is increasing faster than the Earth's as a whole, and rainfall is still declining. In 2020, California broke its own temperature record: 54.4 degrees Celsius in Death Valley, which has resulted in wildfires increasing by 40% every ten years. 16 In 2019, a new temperature record was set in Britain (the temperature in Cambridge rose to 38.7 degrees Celsius). Moreover, according to experts, maintaining current atmospheric emissions, 40-degree heat will have hit Britain by 2100, increasing every three and a half years instead of 100-300 years.¹⁷ According to the Australian office of the World Wildlife Fund, the largest wildfires in Australia caused by drought have killed about 1.25 billion animals. In addition, in June 2020, snow fell in the Republic of South Africa, Lesotho. It should be added that the recent COVID-19 pandemic exacerbates the need to protect and restore nature; it raises awareness about how our own health and that of ecosystems are closely connected.18

¹² A Gavrilova, 'How and what we owe the planet: What you need to know about Eco-Debt Day' (*Buro 247.ua*, 1 September 2020) https://www.buro247.ua/lifestyle/how-and-what-we-owe-the-planet.html accessed 18 March 2021.

¹³ Global Footprint Network, 'Delayed Environmental Debt Day claims the opportunity to build a future in harmony with the planet' (*Earthovershootday.org*, August 2020) https://www.overshootday.org/newsroom/press-release-august-2020-russian/ accessed 18 March 2021.

¹⁴ Geographic Distribution, 'Special report: Global warming of 1.5 °C' (*Ipcc.ch*, 12 March 2020) https://www.ipcc.ch/sr15/> accessed 10 May 2021.

¹⁵ Copernicus Climate Change Service, 'Climate bulletins' (Climate.Copernicus.eu, 7 June 2021) https://climate.copernicus.eu/monthly-climate-bulletins accessed 10 May 2021.

^{16 &#}x27;Governor Gavin Newsom provides an update on the state's response to the West Coast heat wave and the #COVID19 pandemic' (*Facebook.com*, 17 August 2020) accessed 03 June 2021.">https://www.facebook.com/282059655808032/videos/337529733942010?_tn_==F> accessed 03 June 2021.

¹⁷ N Christidis, M McCarthy, PA Stott, 'The increasing likelihood of temperatures above 30 to 40°C in the United Kingdom' (2020) 11 Nature Communicators 3093 (*Nature.com*, 30 June 2020) https://www.nature.com/articles/s41467-020-16834-0> accessed 03 June 2021.

European Commission (EC), 'EU Biodiversity Strategy for 2030: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions' (Eur-lex.europa.eu, 20 May 2020) https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380 accessed 18 March 2021.

In the context of the above, it is advisable to take the issue of environmental safety and human rights ratio into consideration. The state of environmental safety provides for the rate of protecting and using such human rights as the right to life, safe environment, compensation for damages, etc. In 2001, Klaus Töpfer, in his statement to the fifty-seventh meeting of the Commission on Human Rights, emphasised that

human rights cannot be ensured in a degraded or contaminated environment. The fundamental right to life is endangered by deforestation and soil degradation, influence of polluted drinking water, hazardous waste and toxic chemicals. Environmental conditions apparently help to determine the extent to which people use their basic rights to life, health, adequate nutrition and housing, as well as conventional livelihoods and cultures. It is time to recognize that those who pollute or destroy the natural environment not only commit crimes against nature, but also violate human rights.¹⁹

The basis for combining human rights, health, and environmental protection was laid down in the first principle of the Stockholm Declaration on environmental issues,²⁰ declaring that

The man has the fundamental right to freedom, equality and favorable living conditions in the environment, the quality of which allows leading a decent and prosperous life, and bears the primary responsibility for improving and protecting the environment for the benefit of the present and further generations.

UN General Assembly Resolution 45/94 on the need to ensure a healthy environment for human well-being²¹ continues the idea of combining human rights, health, and environmental protection, emphasising the fact that all people have the right to live in an environment sufficient for health and well-being. The resolution called for increased efforts to provide a better and healthier environment.

In Ukraine, the Action Program of the Cabinet of Ministers of Ukraine of 4 October 2019²² defines the priority goals set by the government to make Ukrainians live longer, safer, more prosperous, and happier lives. This program is based on a human-centric approach, with the following goals: Goal 9.4. Ukrainians live in a favourable and clean environment; Goal 9.5. Ukrainians suffer less from waste accumulation; Goal 9.6. Ukrainians use natural resources more efficiently and economically; Goal 9.7. Ukrainians preserve natural ecosystems for descendants, Goal 9.8. Ukrainians are aware of the consequences of global climate change, take measures to prevent them whilst being ready to adapt to them; Goal 10.1. Ukrainians live in comfortable cities and villages; Goal 10.7. Ukrainians responsibly handle household waste and do not litter the surrounding living space, etc. Achieving these goals will be a solid foundation for implementing the state's strategic course towards gaining full membership in the European Union and the North Atlantic Treaty Organization. It should be added that the key postulate of Ukraine's environmental legislation and policy should be restoring (reproducing) natural resources and complexes to preserve the natural resource

¹⁹ UN General Assembly Resolution 35/8 'On Historical Responsibility of States for the Preservation of Nature for Present and Future Generations' [1980] UNGA 7; A/RES/35/8 (30 October 1980) http://www.worldlii.org/int/other/UNGA/1980/7.pdf> accessed 10 May 2021.

²⁰ Stockholm Declaration on the Human Environment, in Report of the United Nations Conference on the Human Environment, UN Doc.A/CONF.48/14, at 2 and Corr.1 (1972) https://www.ipcc.ch/apps/njlite/srex/njlite_download.php?id=6471> accessed 10 May 2021.

²¹ UN General Assembly Resolution 45/94 'On the Need to Ensure a Healthy Environment for the Wellbeing of Individuals' https://undocs.org/ru/A/RES/45/94 accessed 10 May 2021.

²² Resolution of the Verkhovna Rada of Ukraine 'On the Action Program of the Cabinet of Ministers of Ukraine' [2019] Vidomosti of the Verkhovna Rada 1/2 https://zakon.rada.gov.ua/laws/show/188-20#n2 accessed 10 May 2021.

potential and 'secure future of Ukraine', ²³ since biodiversity loss and ecosystem depletion and destruction are the biggest threats to humanity in general and Ukrainian people in particular because they expose our country's economic foundations to danger. ²⁴

In this context, it should be emphasised that to restore biodiversity by 2030, it is essential to enhance the protection and restoration of nature, which in turn necessitates the development, adoption, and implementation of completely new approaches to the legal regulation of public relations aimed at reproducing (restoring) natural resources and complexes, based on which a system of relevant environmental principles will be formed to serve as a guideline for both law-making and law enforcement activities and justice development, as well as to ensure the uniformity of environmental and legal system development and functioning. In this regard, the development and legal consolidation for the reproduction (restoration) of natural resources and complexes principles are believed, on the one hand, to be a guarantee of achieving sustainable development goals, and, on the other hand, to be a basis not only for 'ensuring permanent economic development providing maximum conservation and reproduction of the environment and its components'25 but also for forming the possibility of returning to a healthy and safe life and health environment. Taking this into consideration, the relevance of scientifically studying the formation of the system for the reproduction (restoration) of natural resources and complexes principles is increasing. In addition, these principles are a constituent of ensuring and protecting fundamental human rights, especially the rights to life and a safe environment for life and health. The Constitution of Ukraine defines the right to a safe environment for life and health and compensation for damages caused by violating the latter as one of the basic constitutional human rights (Art. 50).²⁶ 'In this context, judicial practice is a special form and system of actions among other types of legal and practical activities to protect and defend the rights, freedoms and legitimate interests of individuals, facing legal consequences, in the environmental sphere in particular²⁷ It should be emphasised that the right to protect the violated constitutional right to a safe environment belongs to everyone and can be exercised by citizens personally or jointly through associations (the relevant decision is contained in case no. 826/9432/17 para. 54).²⁸

The question of the need to protect the environment to ensure and protect fundamental human rights first arose after the 1972 UN Conference on the Environment (Stockholm).²⁹

HV Anisimova, 'The security future of Ukraine in the context of integrated processes: environmental and legal aspects' (International scientific-practical conference 'The third meeting of experts of related departments to discuss the strategy of evolution of agricultural, land, environmental and natural resource relations in the context of integration development of Ukraine', Odessa, 7-10 June 1018) 76-81.

²⁴ HV Anisimova, OV Donets, 'Ecosystem approach to the restoration (reproduction) of natural resources and complexes as a basis for the modern concept of national environmental policy' (2020) 2 Environmental Law 7-13.

²⁵ OH Koteniov, 'The principles of natural resources law' (PhD (Law) thesis abstract, Yaroslav Mudryi National Law University, 2017) 3-4 http://nauka.nlu.edu.ua/download/diss/Kotenov/a_Kotenov.pdf accessed 18 March 2021.

²⁶ Constitution of Ukraine [1996] Vidomosti of the Verkhovna Rada 30/141 https://zakon.rada.gov.ua/laws/show/254%D0%BA/96-%D0%B2%D1%80#Text accessed 10 May 2021.

^{27 &#}x27;Whether Ukrainian legislation allows effective resolution of environmental disputes' (*Sud.ua*, 15 November 2019) https://sud.ua/ru/news/publication/154700-chi-dozvolyaye-ukrayinske-zakonodavstvo-efektivno-virishuvati-ekologichni-spori> accessed 10 May 2021.

²⁸ Resolution of the Supreme Court of Ukraine of 2 October 2019 in case no 826/9432/17 proceedings no K/9901/14908/19 on recognition of illegal actions and omissions, recognition of agreed limits on hunting animals, obligation of the defendants to take measures to eliminate violation of the plaintiff's rights and interests violation, invalidation of the Order no 482 of 19 December 2017 https://reyestr.court.gov.ua/Review/848060041> accessed 10 May 2021.

²⁹ Stockholm Declaration on the Human Environment, in Report of the United Nations Conference on the Human Environment, UN Doc.A/CONF.48/14, at 2 and Corr.1 (1972) https://www.ipcc.ch/apps/njlite/srex/njlite_download.php?id=6471> accessed 10 May 2021.

Furthermore, the 1992 UN Conference on Environment and Development (Rio de Janeiro),³⁰ as well as the Stockholm Declaration, were strongly anthropocentric. Thus, Principle 1 of the Rio Declaration defines human concerns as a central link in providing for sustainable development. People have the right to live in good health and work productively in harmony with nature. Principle 1 of the Stockholm Declaration states that man has the fundamental right to freedom, equality, and favourable living conditions in the environment, the quality of which allows for a decent and prosperous life, and bears the primary responsibility for protecting and improving the latter for the benefit of present and further generations. Several documents adopted within the UN system also recognise the link between human rights and environmental protection. These include the 2005 Human Rights Commission Resolution on Negative Effects of the Illegal Movement and Disposal of Toxic and Hazardous Products and Wastes on Human Rights³¹ and the 1990 UN General Assembly Resolution on the Need to Ensure a Healthy Environment for Human Well-being.³² The relevant link can be considered in two aspects: first, environmental protection can be a means of achieving the goal of adhering to universal human rights standards (e.g., human rights to life, health, and nutrition); secondly, legal protection of human rights can become a means of accomplishing the goals of protecting and preserving the environment (for example, protecting the right to obtain environmental information or the right to access to justice).³³ Taking these aspects into account, the relevance of the scientific study of natural resources and complexes restoration (reproduction) principles is growing.

The aim of the present article is to determine the place of the reproduction (restoration) of natural resources and complexes principles as an institutional component of environmental law; to draw conclusions and make proposals for improving (modernising) the system of principles in this area; to define the role and importance of principles for developing justice in Ukraine; and improve the conceptual model of environmental law principles in the context of the doctrine and strategy of legal reform, taking into account the legal positions and case-law of the European Court of Human Rights (ECtHR).

2 BACKGROUND

Legal principles are the basis for regulating any social relations, which include relations arising between subjects concerning the protection, preservation, and reproduction (restoration) of natural objects and complexes. Developing, legally consolidating, and observing relevant principles are the basis for forming harmonious relations between society and nature, rational nature management, and sustainable development.

³⁰ Rio Declaration on Environment and Development. Adopted by the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 https://zakon.rada.gov.ua/laws/show/995_455#Text accessed 22 March 2021.

³¹ UN Commission on Human Rights, Human Rights Resolution 2005/15: Adverse Effects of the Illicit Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights, 14 April 2005, E/CN.4/RES/2005/15 https://www.refworld.org/docid/45377c32c.html accessed 6 June 2021.

³² UN Commission on Human Rights, Human Rights and the Environment, 6 March 1990, E/CN.4/ RES/1990/41 https://www.refworld.org/docid/3b00f04030.html accessed 6 June 2021.

³³ VA Suchkova, 'On the issue of the classification of environmental human rights' (2006) 2 Moscow Journal of International Law 146-157; MO Medvedieva, 'The right to a favourable environment in the context of universal human rights standards' (2009) 83 (II) Actual Problems of International Relations 161-165, 162 accessed 6 June 2021.

Environmental law principles have repeatedly been the subject of research by such scientists as V.I. Andreitsev,³⁴ H.V. Anisimova,³⁵ M.M. Brinchuk,³⁶ A.P. Hetman,³⁷ I.I. Karakash,³⁸ A.M. Kolodii,³⁹ V.V. Kostytskii,⁴⁰ O.G. Koteniov,⁴¹ L.L. Chausovata,⁴² etc. Issues of reproducing (restoring) certain natural resources have been the subject of research by N.S. Gavrysh,⁴³ E.H. Degodiuk,⁴⁴ O.B. Kyshko-Yerli,⁴⁵ T.V. Lisova,⁴⁶ O.V. Lukash,⁴⁷ etc. Meanwhile, special comprehensive scientific research devoted to instituting principles of natural resources and complexes restoration (reproduction) has not yet been carried out. In addition, their relations with the principles of international environmental law and that of Ukraine have not yet been identified.

In transforming H.V. Anisimova's⁴⁸ idea on instituting natural resources and complexes restoration (reproduction) principles, it should be emphasised that due to the study of these principles, it will be possible to: (a) clarify ways of developing environmental legislation and environmental and legal science in the field of the reproduction (restoration) of natural resources and complexes; (b) identify strategic priorities for developing environmental law systems; (c) regulate the expediency of the ratio of public and private environmental interests for reproducing (restoring) natural resources and complexes; (d) form the principles of natural resources and complexes restoration (reproduction), their function, development, and improvement prospects; (e) outline the main directions of the state environmental policy in the field of reproducing (restoring) natural resources and complexes, etc.

3 KEY INFORMATION

'The principles of natural environmental law are the reflection of information in it, subsequently in positive environmental law of the main relations that actually exist in the

- 34 VI Andreitsev, Environmental law: course of lectures (Ventyri 1996).
- 35 HV Anisimova, Theoretical principles of environmental legislation development in the context of natural and legal doctrine (Pravo 2019).
- 36 MM Brinchuk, Environmental law principles (Yurlitinform 2013).
- 37 AP Hetman, 'Methodological principles of establishing legal environmental protection foundations' (2011) 3 (4) Law of Ukraine 12-21.; AP Hetman, *Thirty years with environmental law* (Krossrod 2013) 158-161; AP Hetman, NA Orlov, 'Environmental audit and legal problems of improving environmental management based on the principles of sustainable development' (2008) 21 (60) Scientific Notes of Taurida National University. Legal Sciences 153-159.
- 38 II Karakash (ed), Environmental law of Ukraine (Feniks 2012).
- 39 AM Kolodii, Principles of Ukrainian law (Yurinkom Inter 1998).
- 40 VV Kostytslyi, Environmental law (Kolo 2012).
- 41 OH Koteniov, 'The principles of natural resources law' (PhD (Law) thesis, Yaroslav Mudryi National Law University 2017).
- 42 LL Chausova, 'Principles of environmental law of Ukraine' (PhD (Law) thesis abstract, Yaroslav the Wise National Law Academy of Ukraine 1998); LL Chausova, 'Principles of environmental law of Ukraine' (PhD (Law) thesis, Yaroslav the Wise National Law Academy of Ukraine 1998).
- 43 NS Havrysh, 'Legal regime of soils in Ukraine' (Dr.Sc. (Law) thesis, National University 'Odessa Law Academy' 2018).
- 44 EH Degodiuk, 'The current state of land resources in Ukraine and ways to restore land and nature use' (All-Ukrainian scientific and practical conference, Kharkiv, 29-30 September 2001) 37-42.
- 45 OB Kyshko-Yerli, 'Lands requiring restoration as a new category of lands of Ukraine' (2011) 4 Law Review of Kyiv University of Law 297-300.
- 46 TV Lisova, Legal provision of land restoration: theoretical and practical problems (CJSC 'Kharkiv drukarnia' 2020) 396.
- 47 OV Lukash, 'The importance of ecological networks for protecting and reproducing land resources of Ukraine' (All-Ukrainian scientific and practical conference, Kharkiv, 29-30 September 2001) 150-152.
- 48 HV Anisimova, 'Principles of environmental law: concepts and types' (International scientific and practical conference, Khakriv, 20-21 November 2020) 486 https://dspace.nlu.edu.ua/bitstream/123456789/7204/1/Anisimova_485.pdf accessed 22 March 2021.

system of law, 49 Organising and implementing measures for the protection, conservation, and reproduction (restoration) of natural resources and complexes should be particularly based on the system of principles. In general, the system of environmental law principles is: (a) a multi-vector caused by the species diversity of social environmental relations, 'thorough differentiation of legal protection and use regulation'50 and via the reproduction (restoration) of certain natural resources, and (b) dynamic, as it is constantly supplemented by new fundamentals and ideas formed as the ecological consciousness of mankind evolves. In terms of environmental, social, and economic significance, such principles are quite diverse, some of which are reflected in legal regulations (for example, Art. 50 of the Constitution of Ukraine, Art. 3 of the Law of Ukraine 'On Environmental Protection'51), whereas others are not. Consolidating the law principles of a particular industry in its sources can obviously be considered an ideal option, a model of a perfect legal system.⁵² Moreover, an increasing number of legal regulations provide for separate articles establishing the principles of social institutions organisation, functioning, and ratio,53 such as Art. 9 of the Law of Ukraine (hereinafter – LoU) 'On the Animal Kingdom', 54 Art. 23 of the LoU 'On the Plant Kingdom', 55 Art. 4 of the LoU 'On the Ecological Network of Ukraine', 56 and others.

The list of basic environmental protection principles is primarily reflected in Art. 3 of the LoU 'On Environmental Protection.' This article contains only one principle directly related to natural resources and complexes restoration (reproduction), namely, the principle of greening material production based on the complexity of decisions on the environmental protection, use, and reproduction of renewable natural resources and the broad implementation of new technologies. This principle 'emphasizes on closer integration of environmental factors into the fabric of material production'57 and is largely correlated with Principle 8 of the Rio Declaration on Environment and Development.⁵⁸ In addition, in terms of the research issue, the 'complexity' of the approach to make decisions on reproducing renewable natural resources is of particular interest, at it ensures, on the one hand, comprehensiveness and completeness of the information needed for proper decision-making and analysis, and, on the other hand, systematic and planned implementation of necessary actions in the field of reproducing (restoring) natural resources (taking into account the sustainability of relationships between natural objects), the implementation of which should consider the information on causes and sources of natural resources state changes and consequences of implementing relevant activities. Thus, the complexity of the approach to making decisions on reproducing renewable natural resources should involve the relationship and succession

⁴⁹ Ibid. 485-488.

⁵⁰ OH Koteniov, 'The principles of natural resources law' (PhD (Law) thesis abstract, Yaroslav Mudryi National Law University, 2017) 23 http://nauka.nlu.edu.ua/download/diss/Kotenov/a_Kotenov.pdf accessed 22 March 2021.

⁵¹ Law of Ukraine 'On Environmental Protection' [1991] Vidomosti of the Verkhovna Rada 41/546 https://zakon.rada.gov.ua/laws/show/1264-12#Text accessed 22 March 2021.

⁵² PD Pylypenko, Scientific works by Pylypenko Pylyp Danylovych. Selected (Kolo 2013) 157.

⁵³ AM Kolodii, Principles of Ukrainian law (Yurinkom Inter 1998) 24.

⁵⁴ Law of Ukraine 'On Animal Kingdom' [2001] Vidomosti of the Verkhovna Rada 14/97 https://zakon.rada.gov.ua/laws/show/2894-14#Text accessed 22 March 2021.

⁵⁵ Law of Ukraine 'On Plant Kingdom' [1999] Vidomosti of the Verkhovna Rada 22/198 https://zakon.rada.gov.ua/laws/show/591-14#Text accessed 12 March 2021.

Law of Ukraine 'On the Ecological Network of Ukraine' [2004] Vidomosti of the Verkhovna Rada 45/502 https://zakon.rada.gov.ua/laws/show/1864-15#Text accessed 22 March 2021.

⁵⁷ NR Malysheva, Scientific and practical commentary to the Law of Ukraine 'On Environmental Protection' (Pravo 2017).

⁵⁸ Rio Declaration on Environment and Development. Adopted by the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 https://zakon.rada.gov.ua/laws/show/995_455#Text accessed 22 March 2021.

of the following four components: 'collecting and processing information' – 'analysing information' – 'making decisions' – 'implementing planned activities'.

Regarding the analysis of Art. 3 of the LoU 'On Environmental Protection', it should be noted that most of the enshrined principles form the basis for legally regulating the reproduction (restoration) of natural resources and complexes with little correlation are accordingly included in the system of the relevant institution principles.⁵⁹ These principles are as follows: a) ensuring the environment is ecologically safe for human life and health; b) establishing the preventive nature of environmental protection measures; c) preservation of spatial and species diversity as well as natural object and complex integrity; d) scientifically substantiated ecological, economic and social interests of society based on a combination of interdisciplinary knowledge of ecological, social, natural, and technical sciences and forecasting the state of the environment; e) publicity and democracy in decision-making, the implementation of which affects the state of the environment and the formation of the population's environmental outlook; f) scientifically substantiated standardisation of economic and other activities impact on the environment; g) compensation for damage caused by violating environmental legislation; g) addressing issues of environmental protection and use of natural resources, taking into account the degree of anthropogenic change of territories and the cumulative effect of factors adversely affecting the environmental situation. The list is not exhaustive and can be expanded, clarified, and specified due to the principles derived from international and domestic experience in the field of the reproduction (restoration) of natural resources and complexes. Among such principles, the following should be of particular interest: the principle of legal provision for the ecosystem approach to the reproduction (restoration) of natural resources and complexes and the principle of 'net gain'/ 'environmental net gain', the introduction of which into the national legal field should become a reference for further law-making. This will ensure the impetus for creating an effective legal regulation mechanism in the field of environmental restoration.

3.1. The Principle of Legal Provision for the Ecosystem Approach to the Reproduction (Restoration) of Natural Resources and Complexes

Such 'new' environmental law principles, in our opinion, should, first of all, include the principle of legal provision for the ecosystem approach to reproducing (restoring) natural resources and complexes, the implementation of which will be an organic embodiment of Sustainable Development Goals, which is part of the Development Agenda for the period till 2030, as well as the EU Biodiversity Strategy till 2030: Returning Nature to Our Lives (hereinafter – the Biodiversity Strategy – *author's note*). The formation of this principle is based on natural and legal principles, and it significantly affects the formation of state environmental policy and determines its general direction and development trends in the field of the reproduction (restoration) of natural resources and complexes. Thus, the goal of Ukraine's state environmental policy for the period till 2030⁶⁰ is to achieve a good environmental state by introducing an ecosystem approach to all areas of socio-economic development of Ukraine to provide for the constitutional right of every citizen to a clean and

⁵⁹ A corresponding idea, but regarding legal regulation in the field of forming and preserving the national ecological network was expressed by MYa Vashchyshyn. See: MYa Vashchyshyn, 'Special principles of legal regulation in the field of national ecological network formation and preservation' (2015) 2 Scientific Bulletin of Lviv State University of Internal Affairs 78-88, 79.

⁶⁰ Law of Ukraine 'On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period till 2030' [2019] Vidomosti of the Verkhovna Rada 16/70 https://zakon.rada.gov.ua/laws/show/2697-19#Text accessed 11 March 2021.

safe environment, to implement balanced nature management, and to conserve and restore natural ecosystems. It should be noted that the LoU 'On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period till 2020'61 recognised

the stabilization and improvement of Ukraine's environmental state by integrating environmental policy into the socio-economic development of Ukraine to ensure environmentally friendly for life and health of population environment, the introduction of an ecologically balanced system of nature use and natural ecosystems preservation

as the goal of the national environmental policy, without considering the issue of reproducing (restoring) natural resources and complexes, which is unacceptable in the context of accelerating environmental degradation processes in Ukraine.

Consequently, restoring biosphere functions of certain natural objects (for example, wetlands) should include the improvement of the whole complex, or rather, ecosystems, and be ensured by a number of measures such as reforestation, creation of water protection zones and biosphere reserves, etc. That is why it is essential to move away from a differentiated object-based approach to restoration. In addition, the international community is increasingly focusing on the concepts such as 'nature health', 'nature restoration, 'ecosystem restoration,' or 'biodiversity restoration'. Thus, there is a move away from the idea of conserving and restoring certain natural objects (land, water objects, animal and plant kingdoms). Art. 1 of the Biodiversity Strategy is a great example of normatively consolidating the principle of legal provision for the ecosystem approach to restore the air quality. It emphasises that 'nature is a vital ally in the fight against climate change. ⁶² Nature regulates the climate; thus, nature-based solutions, ⁶³ such as protection and restoration of wetlands, peatlands, and coastal ecosystems or balanced management of marine areas, forests, pastures, and agricultural soils, will be significant for reducing emissions and adapting to climate change. Cultivating biomass on peatlands and lands with peat soil not only provides for their restoration but also prevents the emission of greenhouse gases into the environment and contributes to restoring meadow and aquatic ecosystems. Moreover, it creates an environment for the productive reintroduction of those flora and fauna species that are indicative of this ecosystem.⁶⁴

It should be noted that there have recently been cases of the so-called 'natural resources restoration', the result of which is destructing or causing significant damage to other natural resources. Thus, the negative impacts on agriculture mainly occur after applying mineral fertilisers, unjustifiably overestimated their doses, which results not only in crop quality deterioration but also in a significant amount of chemicals entering the biosphere (soil, water objects, and atmosphere). Nitrate washing is particularly damaging from an environmental point of view. Another major problem for Ukraine is invasive species

transforming entire ecosystems and making them poor in biodiversity, thus, displacing natural species. Some of them are species-transformers, which not only displace one or two natural competitors, but also change the environmental conditions by their vital activity (for example, some plants have the ability to modify soil chemical

⁶¹ Law of Ukraine 'On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period till 2020' [2010] Vidomosti of the Verkhovna Rada 26/218 https://zakon.rada.gov.ua/laws/show/2818-17#Text accessed 11 March 2021.

^{62 &#}x27;Global assessment report on biodiversity and ecosystem services' (*Ipbes.net*, 2019) https://ipbes.net/global-assessment accessed 11 March 2021.

⁶³ European Commission (EC), 'Nature-based solutions' (*Ec.europa.eu*, 2020) https://ec.europa.eu/research/environment/index.cfm?pg=nbs> accessed 11 March 2021.

⁶⁴ BO Sydoruk, 'Ensuring the balanced use of wetlands and peatlands on an ecosystem approach' (2016) 1 Balanced Nature Use 16-21 http://nbuv.gov.ua/UJRN/Zp_2016_1_5 accessed 14 March 2021.

composition). New conditions attract other uncharacteristic species, resulting in changing the whole ecosystem etc.⁶⁵

The possibility of the existence of such situations is mainly caused by the lack of an ecosystem approach to natural resources and complexes protection and reproduction (restoration).

Thus, the expediency of applying the ecosystem approach to the reproduction (restoration) of natural resources and complexes is primarily due to the objectively existing relations between natural objects and the interdependence of quantitative and qualitative indicators of natural objects on the ecosystem state as a whole. In this regard, measures for the reproduction (restoration) of natural resources and complexes, based on the ecosystem approach, should be made, considering the results of scientific research and development, as well as environmental impact assessment and strategic environmental assessment, which will 'ensure the restoration from 25% to 44% of primary ecosystem services along with the restoration of animal, plant and other biodiversity of the latter undamaged ecosystem.'66 Moreover, the ecosystem approach to the reproduction (restoration) of natural resources and complexes provides an opportunity to form a comprehensive view of violating existing relations between natural objects in the relevant area, ensuring the development of the most effective balancing measures, taking into consideration the further optimisation of various types of nature management and simultaneously preserving and improving the environment for its future use. Thus, introducing the principle of legal provision for the ecosystem principle to the reproduction (restoration) of natural resources and complexes will be the basis for developing fundamentally new approaches to legally regulating this area, eliminating the rupture and disproportion of environmental relationships between land, water resources, objects of the animal and plant kingdoms, etc. The implementation of this principle will also be of great importance for the judiciary of Ukraine, especially when protecting fundamental human rights, such as the right to a safe environment for life and health, and when considering cases of compensation for damage caused by violating natural resource and environmental legislation.

It should be added that the given principle, while closely connected with other environmental law principles, also has a relatively independent meaning due to the specifics of a particular public relations area. Consequently, it forms the basis not only for the emergence and formation of other principles ensuring nature restoration, since it focuses on all natural objects inseparability but also a basis for combining certain regulations into a single environmental law institution for the reproduction (restoration) of natural resources and complexes.

3.2. The 'Net Gain' or 'Environmental Net Gain' Principle

This principle is most widespread and commonly implemented in terms of biodiversity restoration. Thus, the 2030 Biodiversity Strategy provides that 'the world must adhere to the "net gain" principle in order to return to nature more than it requires. It must undertake to prevent species from extinction owing to human fault, at least where this can be avoided. Moreover,

^{65 &#}x27;What are invasive species and how do they affect biodiversity?' (*Epl.org*, 9 November 2020) http://epl.org.ua/human-posts/shho-take-invazijni-vydy-i-yak-vony-vplyvayut-na-bioriznoman ittya/#:~:text=%D0%92%D1%96%D0%B4%D0%BE%D0%BC%D0%B8%D0%B8%D0%BC%D0%B8%20%D0%BF%D1%80%D0%B8%D0%BA%D0%BB%D0%B0%D0%B4%D0%B0%D0%BC%D0%B8%20%D1%96%D0%BD%D0%B2%D0%B0%D0%B7%D1%96%D0%B9%D0%BD%D0%B8%D1%85%20%D1%80%D0%BE%D1%81%D0%BB%D0%B8%D0%BD%20%D0%B2,%D0%B0%D0%BA%D0%B0%D1%86%D1%96%D1%8F%20%D0%B1%D1%96%D0%BB%D0%B0%20(Robinia%20 pseudoacacia)> accessed 14 March 2021.

⁶⁶ W Reid, 'Millennium ecosystem assessment: Survey of initial impacts' (Millenniumassessment.org, March 2006) <www.millenniumassessment.org> accessed 15 March 2021.

introducing the biodiversity 'net gain' principle was launched earlier as part of a new approach to improve England's planning system to protect the environment and create places for living and working. The government's spring statement in 201967 stated that 'biodiversity net gain' was necessary for all of England's development. A later report on 23 July 2019⁶⁸ determined requirements aimed at achieving biodiversity net gains to be implemented in a two-year 'transitional period' after the new environmental law for England had entered into force. The introduction of a new planning activity permit to implement the biodiversity 'net gain' principle might be issued only if the new development project increases rather than reduces the level of biodiversity present on the site proposed by the Department of Environment, Food and Rural Affairs (hereinafter - DEFRA). It may thus be essential to conduct a basic assessment of what is currently present in the area and then assess how the proposed projects will increase this level and eventually achieve a 10% gain after the project has been implemented. Measuring biodiversity levels before and after constructing anything will be based on the Biodiversity Metric 2.0, providing a way to gauge and account for both biodiversity losses and benefits as a result of reconstruction or land use changes. It should be added that the biodiversity indicator 2.0 is also extended to aquatic ecosystems. Natural England is responsible for implementing the biodiversity 'net gain' principle. This involves measures to restore the ecosystem as a whole, which will result in biodiversity improvement (namely, before the recovery). The 'net gain' is thus obtained. CIEEM, CIRIA, and IEMA have developed 10 'constituent' principles-guidelines to ensure the highest quality 'net gain' principle implementation.⁶⁹

Principle 1. Apply the Mitigation Hierarchy. The 'net gain' interpretation implies the 'compensation' option outside the relevant area to be an extreme measure. That is, if a 10% gain is not obtained in a certain area, the entity can invest in other areas determined by the local authorities or in national strategic habitats. Thus, this principle determines the priority direction to avoid negative impacts on biodiversity and – only in cases of its impossibility or extreme situations – directs particular activities to minimise perilous impacts. It should be added that this project implementation involves developing local strategies for nature conservation to determine the current biodiversity levels and identify opportunities for the reproduction (restoration) of natural resources and complexes.

Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere. This principle mandates that 'permanent habitats', such as virgin and ancient forests, secular trees, wetlands, sand dunes, salt marshes, etc., be subject to the 'compensation' option in accordance with the National Planning Policy Framework⁷⁰ and the Conservation of Habitats and Species Regulations.⁷¹ Thus, Section 175(c) of the NPPF⁷² states that 'the construction, leading to indispensable habitats (such as ancient forests and secular trees) loss or deterioration, should be abandoned if there are no completely exceptional reasons and an appropriate compensation strategy'.

^{67 &#}x27;RTPI response to the DEFRA consultation on Biodiversity Net Gain' (*Royal Town Planning Institute*, 1 Feb 2019) https://www.rtpi.org.uk/consultations/2019/february/rtpi-response-to-the-defra-consultation-on-biodiversity-net-gain/ accessed 25 March 2021.

⁶⁸ Department for Environment, Food & Rural Affairs (DEFRA) 'Biodiversity net gain: updating planning requirements' (*Gov.uk*, 15 October 2019) https://www.gov.uk/government/consultations/biodiversity-net-gain-updating-planning-requirements accessed 25 March 2021.

^{69 &#}x27;Biodiversity net gain. Good practice principles for development. A practical guide' (*Cieem.net*, 2016) <<u>Biodiversity-Net-Gain-Principles.pdf</u> (<u>cieem.net</u>)> accessed 26 March 2021.

⁷⁰ Ministry of Housing, Communities and Local Government (MHCLG), 'National Planning Policy Framework' (2019) 68-69 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf accessed 26 March 2021.

⁷¹ Conservation of Habitats and Species Regulations (2017) https://www.legislation.gov.uk/uksi/2017/1012/contents/made> accessed 26 March 2021.

⁷² Ministry of Housing, Communities and Local Government (MHCLG), 'National Planning Policy Framework' (2019) 68-69 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf accessed 26 March 2021.

Principle 3. Be inclusive and equitable. This principle provides for stakeholders' engagement at all stages, including design, monitoring, control, etc.; partners can be involved in achieving the 'net gain' goal, as well as a fair benefit distribution between stakeholders.

Principle 4. Address risks. The principle is aimed at reducing hurdles, uncertainties, and other hazards when obtaining 'net gain', which involves the development and application of methods intended to forecast and 'add contingencies' while calculating biodiversity loss, gains, and compensation for the time between the losses incurred and the benefits obtained.

Principle 5. Make a measurable 'net gain' contribution. 'Net gain' is a measurable goal for development projects where the impact on biodiversity is outweighed by the mitigation hierarchy principle; namely, the primary task is to avoid negative impacts, and in case of the impossibility of this, to minimise them, in particular, by reproduction and/ or compensation. The 'notable contribution' principle involves receiving a certain overall benefit that can be calculated. Thus, DEFRA⁷³ determines a 10% gain in biodiversity and ecosystems services, which directly contributes to achieving nature conservation priorities.

Principle 6. Achieve the best outcomes for biodiversity. Obtaining the best results in the field of biodiversity restoration is impossible without making management decisions aimed at reducing the negative impact on ecosystems. These should be based on reliable, complete, and comprehensive information of the state of local ecosystems and relations between natural objects, as well as the impact of human activity on the environment. In general, implementing management activities in the field of the reproduction (restoration) of natural resources and complexes should consider the following: 1) ensuring environmental compensation is equivalent to the type, quantity, state, location, and duration of biodiversity loss/restoration; 2) providing compensation for the losses of one biodiversity type by restoring and/or increasing quantitative/qualitative indicators of another type that ensures greater benefits for nature conservation; 3) achieving 'net gain' at the local level should contribute to implementing nature conservation priorities at the local, regional, and national levels; 4) improving existing habitats or creating new ones should be the priority to get the best result for biodiversity gain; 5) strengthening environmental relations by creating larger integrated territories to enhance the natural resource potential, preserve landscape, biodiversity, and habitats, and increase valuable fauna and flora species, including genetic foundation, should be one of the priority directions.

Principle 7. Be additional. The essence of this principle is to establish and achieve the goals of conserving and reproducing (restoring) natural resources and complexes that would exceed existing obligations. That is, the idea is to implement ambitious projects with high standards, but not those that would undoubtedly come into force.

Principle 8. Create a 'net gain' legacy. Obtaining 'net gain' in the long run is possible in the case of: 1) stakeholder engagement and joint coordination of practical solutions aimed at implementing the 'net gain' principle; 2) adaptive management planning and special financing provision for long-term programs aimed at the reproduction (restoration) of natural resources and complexes; 3) development and implementation of the biodiversity 'net gain' projects that are resistant to external factors, especially to climate changes; 4) reduction of risks from other types of land use; 5) avoiding the displacement of harmful activities from one place to another; 6) management provision at the local level, aimed at implementing the 'net gain' principle.

Principle 9. Optimise sustainability. Implementing this principle provides for a certain prioritisation of biodiversity 'net gain' while forming state environmental policy, making

^{73 &#}x27;RTPI response to the DEFRA consultation on Biodiversity Net Gain' (*Royal Town Planning Institute*, 1 Feb 2019) https://www.rtpi.org.uk/consultations/2019/february/rtpi-response-to-the-defraconsultation-on-biodiversity-net-gain/ accessed 25 March 2021.

management decisions, etc., taking into account the optimisation of environmental benefits for sustainable social development and economic growth.

Principle 10. Be transparent. This principle provides for the timely provision for complete, comprehensive, and reliable information on actions aimed at implementing the 'net gain' principle to all stakeholders, as well as introducing educational activities.

In conclusion, it should be noted that the principle of 'net gain' or 'environmental net gain' has not yet been sufficiently regulated, in contrast to the 'biodiversity net gain' principle. Moreover, 'environmental net gain' includes the same constituents as the principle of 'biodiversity net gain' but requires a wider range of environmental benefits for the environment as a whole. It should be added that the 'net gain' principle has not yet been directly embodied in the field of national law. It can even be stated that there are no environmental and legal norms specifically aimed at obtaining environmental net gains in general or for biodiversity. The exception may be such regulations as the LoU 'On Environmental Impact Assessment', and 'On Strategic Environmental Assessment', the scope of which is to regulate the relations based on environmental impact assessment, including public health, environmental damage prevention, environmental safety, environmental protection, and rational use and reproduction of natural resources in the decision-making process of conducting economic activities, which can have a significant impact on the environment, taking into account public and private interests.

In this regard, it can be stated that the current environmental legislation of Ukraine is mostly focused on protection, ensuring environmental safety, environmental protection, and rational management of natural resources. The issue of legal provision for the reproduction (restoration) of natural resources and complexes is superficially regulated. Therefore, it requires significantly updating and improvement by introducing the 'net gain' principle in the national environmental legislation, which, in turn, can be the basis for developing a systematic approach to project analysis. The latter will include not only an assessment of the impact of planned activities on the environment but also the ratio of expected costs of each project with its economic, environmental, and social benefits. There is currently no relevant legislation on this topic. One of the most controversial bills in the field of ecological modernisation of industry (the LoU 'On Prevention, Reduction and Control of Industrial Pollution'76), developed and submitted to the Verkhovna Rada in order to fulfil Ukraine's obligations to the EU, the European Atomic Energy Community, and their member states within the framework of the Association Agreement, provides for introducing an 'integrated permit' in Ukraine. It establishes specific environmental standards for enterprises - in particular, the level of maximum acceptable emissions into the atmosphere, water use, and waste management measures. However, it does not require any percentage of 'net gain'.

3.3. The System of Instituting the Principles of Reproduction (Restoration) of Natural Resources and Complexes

To fully consider the essence of instituting the reproduction (restoration) of natural resources and complexes principles, it will also be expedient to explore their place and role in the

⁷⁴ Law of Ukraine 'On Environmental Impact Assessment' [2017] Vidomosti of the Verkhovna Rada 29/315 https://zakon.rada.gov.ua/laws/show/2059-19#Text accessed 23 March 2021.

⁷⁵ Law of Ukraine 'On Strategic Environmental Assessment' [2018] Vidomosti of the Verkhovna Rada 16/138 https://zakon.rada.gov.ua/laws/show/2354-19#Text accessed 23 March 2021.

⁷⁶ Draft Law of Ukraine 'On Prevention, Reduction and Control of Pollution Occurring as a Result of Industrial Activity' [2020] the Verkhovna Rada of Ukraine 4167 http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=70077> accessed 26 March 2021.

system of environmental law principles, since the structure, content, and system of the latter is dynamic and cannot remain unchanged.

The law principles are classified in accordance with various grounds as follows: with the form of normative expression (namely, with the regulatory source in which they are enshrined in international and domestic declarations, the Constitution, and current environmental legislation); with the scope of validity (in one or more fields of law, and law as a whole); with the content (general social and special legal⁷⁷), etc. In the science of environmental law, there are other divisions of principles according to their significance (based on two main features – scope and significance). It should be noted that in the thesis research 'Principles of Environmental Law, L.L. Chausova identified the following four groups of environmental law principles: fundamental, branch, sub-branch, and institutional principles, 78 along with the dominating and leading ones, which are in a certain co-subordination to the former and (b) according to types of natural objects,⁷⁹ etc. However, in 1995, A.P. Hetman, studying the environmental process principles, emphasised the law principles should be divided into those of common law, inter-branch, branch, and branch institutions, between which there are dialectical relations and interdependence. Common law principles, on which the whole legal system is based, are directly related to each of the fields of law, including the environmental one. Inter-branch and branch principles not only express the objective essence of these industries and groups but also provide for the existence of common law principles. There is a similar relationship between the principles of branch institutions, branch, and inter-branch law ones.80

The system of environmental law is believed to provide for a logical, consistent combination of principles, which are interdependent at the functional basis level, into a single whole. The mechanism of forming the system of environmental law principles can be represented as follows: each separate principle contributes to the process of regulating social, environmental relationships not autonomously but in combination with other ones, united by numerous interconnections. It is in the system that the mechanism of each principle's action, role, and importance for environmental law characteristics as an independent field of law is fully revealed. Thus, the question about the role and place of principles for the reproduction (restoration) of natural resources and complexes in the system of environmental law principles arises.

Determining the place of the reproduction (restoration) of natural resources and complexes principles in the system of environmental law principles provides for establishing objective relations between the former and the latter regarding interdependence and internal consistency. The first step will be *to distinguish the macro level in the system of environmental law principles*, including system-forming, universal, and integral ones on which the whole system of law is based. Such principles are those of democracy, the supremacy of law, legality, humanism, etc. The leading place is occupied by the supremacy of law principle, which has been studied by such scholars as: H.V. Anisimova, 81 A.P. Hetman, 82 S.P. Holovatyi, 83

⁷⁷ HV Anisimova, Theoretical principles of environmental legislation development in the context of natural and legal doctrine (Pravo 2019) 197.

⁷⁸ LL Chausova, 'Principles of environmental law of Ukraine' (PhD (Law) thesis abstract, Yaroslav the Wise National Law Academy of Ukraine 1998) 3.

⁷⁹ Ibid. 43-49.

⁸⁰ AP Hetman, 'Principles in the ecological process. Regional environmental problems' (Conference of the VM Koretsky State and Law Institute NAS of Ukraine, Kyiv, 7 July 1995) 28-44; AP Hetman, *Thirty years with environmental law* (Krossrod 2013) 159.

⁸¹ HV Anisimova, Theoretical principles of environmental legislation development in the context of natural and legal doctrine (Pravo 2019) 207-220.

⁸² AP Hetman, 'The supremacy of law in the institution of nature management and environmental protection' (2017) 1-2 Environmental Law of Ukraine 2-8; AP Hetman, 'Understanding the supremacy of law in the system of environmental legislation of Ukraine' (2017) 5 Law of Ukraine 44-62.

⁸³ SP Holovatyi, Rule of law (Feniks 2006).

S.I. Maksymov,⁸⁴ O.V. Petryshyn,⁸⁵ S.P. Pohrebniak,⁸⁶ P.M. Rabinovych,⁸⁷ etc. The supremacy of law is the rule of law in society, which requires the state to implement the latter in law-making and law enforcement activities, in particular, those laws that should include ideas of social justice, freedom, equality, etc. One of its manifestations is that the law is not only limited by the legislation as one of its forms but also includes other social regulators, including norms of morality, traditions, customs, etc. In the decision in Klass v. Germany (1978), the court noted that one of the fundamental principles of a democratic society is the law supremacy principle enshrined in the Preamble to the 1950 Convention for the Protection of Human Rights and Fundamental Freedoms, according to which the interference of public administration in the sphere of personal rights must be the object of effective monitoring, usually carried out by judges since judicial control is the best guarantee of independence, impartiality, and proper procedure.88 The Constitutional Court of Ukraine considers the supremacy of law elements to be the principles of equality and justice, legal certainty, and the clarity and ambiguity of legal regulations since nothing else can ensure its equal application, preclude unlimited interpretation in law enforcement practice, and prevent arbitrariness.89 Thus, considering the content of Art. 8 of the Constitution of Ukraine and the practice of the Constitutional Court of Ukraine, the supremacy of law should be particularly regarded as a mechanism for ensuring control over the use of state power and protecting individuals from arbitrary actions of state power. 90 In addition, A.P. Hetman regards the supremacy of law to be a 'chain', enabling the easy and correct reform of the national environmental law of vector direction since the declaration of Ukraine as a 'sovereign, independent, democratic, social, legal and environmental state', which will be an innovative model of its social and state development. Supporting this thesis, H.V. Anisimova adds that this principle will contribute to reforming environmental legislation in the context of European integration processes,⁹¹ taking into account the obligations stated in the Political Principles of President von der Leyen and the European Green Course, as well as the Commitment to prevent the extinction of species through human fault provided for in the 2030 EU Biodiversity Conservation Strategy. 92

Along with the macro-level environmental law principles, it is necessary to allocate a number of levels of different directions, such as organisational, preventive, protective, and those regarding economic stability, etc.

⁸⁴ SI Maksymov, Constitutional principle of the supremacy of law: general and special. Philosophy of law: modern interpretations: selected: articles, analyst. reviews, translations (2003-2011) (Pravo 2012).

⁸⁵ OV Petryshyn, 'The supremacy of law as a law principle' (2006) 1 (19) Ukrainian Law 49-57.

⁸⁶ SP Pogrebnyak, 'The supremacy of law principle: some theoretical problems' (2006) 1 (19) Journal of the National Academy of Legal Sciences of Ukraine 210-220.

⁸⁷ PM Rabinovich, Human and citizen rights in the Constitution of Ukraine (before the integration of original constitutional provisions) (Pravo 1997).

⁸⁸ Klass v Germany (1978) 2 EHRR 214, 235 http://eurocourt.in.ua/Article.asp?AIdx=416 accessed 6 June 2021.

⁸⁹ Judgement of the Constitutional Court of Ukraine in the case on the constitutional petition of 51 People's Deputies of Ukraine on compliance with the Constitution of Ukraine (constitutionality) of the provisions of Art. 92, para. 6 Ch. X 'Transitional Provisions' of the Land Code of Ukraine (Case of permanent land use) of 22 September 2005 no 5-rp/2005. Case no 1-17/2005 https://zakon.rada.gov.ua/laws/show/v005p710-05#Text accessed 21 March 2021.

⁹⁰ Catalogue of legal positions of the Constitutional Court of Ukraine (1997-2020) Ch. 3 Fundamentals of constitutional order. General Principles Subpara. 3.4. The supremacy of law. Constitutional Court of Ukraine https://ccu.gov.ua/storinka-knygy/34-verhovenstvo-prava accessed 21 March 2021.

⁹¹ HV Anisimova, Theoretical principles of environmental legislation development in the context of natural and legal doctrine: monograph (Pravo 2019) 214.

⁹² European Commission (EC), 'EU Biodiversity Strategy for 2030: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions' (*Eur-lex.europa.eu*, 20 May 2020) https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380 accessed 26 March 2021.

Organisational principles are aimed at choosing the optimal structure and management staff, distributing competencies between the subjects, and deciding on the most effective measure to reproduce (restore) natural resources and complexes. The 'idea of coordinating and streamlining certain elements of the system' is a functional basis for including this principle into those of organisational direction, which can ensure the high efficiency of public authorities and local self-government bodies. Within the principles of organisational direction, a special place is occupied by the environmental process principles. A.P. Hetman's works devoted to their study determine 'the procedure for the activities of state environmental protection authorities and other environmental law subjects to address individual cases in the field of rational nature management, natural environment reproduction and protection.'93

The principles of organisational direction include the following: the principle of legal provision for accessibility, reliability, and timeliness of environmental information, the principle of rational nature management; the principle of legal provision for managing targeted natural resources; the principle of scientifically justified coordination of ecological, economic, and social interests based on combining interdisciplinary environmental, social, natural, and technical sciences knowledge and forecasting the state of the environment; the principle of considering environmental impacts on the environment when making management decisions on implementing planned activities; the principle of greening material production on the basis of comprehensive decisions on environmental protection, use, and reproduction of renewable natural resources, and widespread introduction of new technologies; the principle of solving the issues of the reproduction (restoration) of natural resources and complexes regarding the degree of anthropogenic change of territories and the cumulative effect of factors that negatively affect the environmental situation; the principle of scientifically justified regulation of the economic and other activities impact on the environment, etc.

Preventive and protective principles contribute to developing the law as a regulator of public relations and include the following:

- the system of measures for the rational management of natural resources, natural resources reproduction (restoration), and the preservation of particularly valuable and unique natural complexes, as well as limiting the negative anthropogenic impact on the environment and protecting violated fundamental human rights;
- normatively established mechanisms for making perpetrators accountable in case of violating the legislation in the field of environmental protection;
- the legal influence on the individual and social consciousness, which consists in forming legal consciousness and legal culture and eradicating legal nihilism and antisocial behaviour (real or permissible) from individuals' consciousnesses.

Such principles, in our opinion, include the following: the 'net gain' principle; the principle of legal provision for an ecosystem approach to the reproduction (restoration) of natural resources and complexes; the principle of ensuring the environment is ecologically safe for human life and health; the principle of the preventive nature of environmental protection measures; the principle of the inevitable liability for violating the legislation on environmental protection; the principle of the legal provision for combining measures to stimulate environmental protection and the reproduction (restoration) of natural resources and complexes and responsibility for causing environmental damage; the principle of legal provision for sustaining natural systems; the principle of legal provision for preserving and reproducing (restoring) spatial and species diversity and integrity of natural objects and complexes, etc.

⁹³ AP Hetman, Procedural regulations and relations in environmental law (Osnova 1994); AP Hetman, 'Principles in the ecological process. Regional environmental problems' (Conference of the VM Koretsky State and Law Institute NAS of Ukraine, Kyiv, 7 July 1995) 28-44; AP Hetman, Thirty years with environmental law (Krossrod 2013) 160.

Economic and stabilisation principles are the basis for forming the system of economic measures and incentives of a property nature, aimed at legally providing rational nature management, environmental protection, and the reproduction (restoration) of natural resources and complexes. Such principles include the following: the principle of compensation for damage caused by violating the environmental legislation; the principle of charging for environmental pollution and damage to the quality of natural resources; the principle of legal provision for greening material production based on comprehensive solutions in matters of environmental protection, renewable natural resource use and reproduction, the widespread introduction of new technologies, etc.

Particular attention should be paid to the principle of compensation for damages caused by violating environmental legislation or 'the polluter pays'. According to Art. 69 of LoU 'On Environmental Protection, damage caused by breaking environmental legislation is subject to full compensation. According to the general rules of civil proceedings (Part 1 of Art. 1166 and Art. 1192 of the Civil Code of Ukraine), compensation for damages is carried out by restitution in kind or reimbursement of losses in full. Individuals who have suffered such damage are entitled to compensation for unearned income for the time necessary to restore health, environmental quality, and the state of natural resources suitable for their target use. The peculiarity of reimbursing such damage is to use its assessment and calculate special methods and fees, such as the Cabinet of Ministers of Ukraine (hereinafter - CMU) Resolutions 'On approval of fees for calculating the amount of damage caused to forests, 94 'On fees for calculating the amount of damage caused to green plantations within cities and other inhabited settlements; 95 'On approval of fees for calculating the amount of compensation for damage caused by illegal extraction (collection) or destruction of valuable species of aquatic bioresources,36 On approval of the methodology for determining the amount of damage caused by the unauthorized occupation of land plots, their use for non-target purposes, removal of soil cover (fertile soil laver) without special permission, 97 etc. Moreover, environmental and economic assessments of natural objects' value do not always coincide and are often differentiated by climatic, regional, and other conditions. It should be added that the system of methods developed in Ukraine to calculate the amount of damage caused by environmental offences does not consider the means necessary for carrying out restoration actions, and the liability for the damage caused by violating the environmental legislation is not limited to the type of natural resources. The purposes of the former are to punish the person found guilty of causing harm and compensate for the damage caused to the state in connection with environmental legislation violations.

Instead, in the EU, environmental liability in accordance with the Directive 2004/35/UN 'On environmental liability for preventing and eliminating consequences of environmental damage' (hereinafter – Directive 2004/35/UN)⁹⁸ implies the polluter's obligation to take

⁹⁴ Cabinet of Ministers of Ukraine (CMU) Resolution 56/1868/30 'On approval of fees for calculating the amount of damage caused to forests' https://zakon.rada.gov.ua/laws/show/665-2008-%D0%BF#Text accessed 10 June 2021.

⁹⁵ Cabinet of Ministers of Ukraine (CMU) Resolution 559/110/14 'On fees for calculating the amount of damage caused to green plantations within cities and other inhabited settlements' https://zakon.rada.gov.ua/laws/show/559-99-%D0%BF#Text accessed 10 June 2021.

Oabinet of Ministers of Ukraine (CMU) Resolution 1209/3342/35 'On approval of fees for calculating the amount of compensation for damage caused by illegal extraction (collection) or destruction of valuable species of aquatic bioresources' https://zakon.rada.gov.ua/laws/show/1209-2011-%D0%BF#Text accessed 10 June 2021.

⁹⁷ Cabinet of Ministers of Ukraine (CMU) Resolution 55/2221/31 'On approval of the methodology for determining the amount of damage caused by unauthorized occupation of land plots, their use for non-target purposes, removal of soil cover (fertile soil layer) without special permission' https://zakon.rada.gov.ua/laws/show/963-2007-%D0%BF#Text accessed 10 June 2021.

⁹⁸ Directive 2004/35/UN 'On environmental liability for preventing and eliminating consequences of environmental damage' https://zakon.rada.gov.ua/laws/show/994_965#Text accessed 10 June 2021.

measures to prevent environmental damage from happening or eliminate the consequences of environmental damage to restore natural resources to the state in which they were before its occurrence and cover the costs of the measures taken. Moreover, such restoration is carried out by the person who has caused the environmental damage within a specific plan to eliminate the consequences of such damage. Therefore, the Directive does not grant physical or legal entities the right to any reimbursement due to environmental damage or the imminent threat of its occurrence. In fact, Directive 2004/35/UN sets out the legal framework for a mechanism to prevent or eliminate environmental damage consequences, the result of which is to restore natural resources to their original state. However, member states are to independently establish their own methods for determining and calculating the scope of environmental damage, the assessment of which is usually based on the analysis of equivalent resources, determining the need and cost of natural resources or environmental services restoration. 99 Annex II to the Directive 2004/35/UN sets out recommended methods for analysing equivalent resources, namely: 1) 'resources for resources', in which lost resource restoration occurs by replacing with new ones, 2) 'services for services'/ 'environmental services', which are the functions performed by natural objects for ecosystems (e.g., water purification, biodiversity conservation) or the population itself (e.g., flood protection, recreational opportunities); the physical amount of remedial measures may be less or greater than the actual amount of damage, and 3) 'cost per cost'/ 'cost per expenses', which is used if the given methods cannot be implemented, in particular, when the proposed remedial measures create other natural resources or services or if, in certain cases, the damage caused cannot be accurately measured.

In view of the above, it is necessary to dramatically change the legal fundamentals of the compensation for damages in Ukraine. The first step in this direction should be the Directive 2004/35/UN ratification and the introduction into the national legal field of such concepts as 'direct environmental liability' (which is applied to three types of natural resources, protected species and habitats, water resources, soils; it occurs regardless of the subject's fault) and 'guilty environmental liability' (which is applied only to protected species and habitats). In addition, it is necessary to change the vector of environmental liability in Ukraine to punish the person found guilty of causing harm and compensate for the damage caused to the state in connection with environmental legislation violations to restore natural resources to their original state by taking preventive and remedial measures at the subject's own expense. Significant in this regard is the case against the Union of India, ¹⁰⁰ in which the Supreme Court concluded that 'the "polluter pays" principle means that absolute liability for environmental damage extends not only to compensation for pollution to victims but also to the cost of restoring environmental degradation'.

It should be added that in recent years, the practice of creating and applying classical case-law has started to occur in Ukraine. In developing the law supremacy principle, the Verkhovna Rada of Ukraine has enshrined that all ECtHR decisions rendered against any of the member states of the European Council are binding on Ukrainian courts. ¹⁰¹ It should be noted that the issue of violating the right to life due to negative environmental factors was initiated by the ECtHR in *Guerra and others v. Italy* (Application no. 14967/89,

^{99 &#}x27;Environmental liability: EU experience and opportunities for Ukraine' (Society and environment portal, September 2018) accessed 10 June 2021.

¹⁰⁰ AIR 1997 SC 734: (1997) 2 SCC 353 https://www.legalbites.in/right-to-life-personal-liberty-article-21/ accessed 12 June 2021.

^{&#}x27;Environmental issues in the practice of the European Court of Human Rights and their impact on judicial practice in Ukraine' (Ecobusiness Group, 24 July 2020) accessed 12 June 2021.">June 2021.

Judgment of 19/02/1998). 102 Another interesting example of environmental human rights protection is *Hutton and Others v. the United Kingdom* (Application no. 36022/97, Judgment of 08/07/2003), 103 which concerned noise pollution in the immediate vicinity of London Heathrow Airport and, in particular, the adequacy of research conducted by the authorities to introduce a noise quota system. Nowadays, the ECtHR has considered several cases against Ukraine regarding environmental protection. There are few Judgments, but they are of special value. In particular, these are Dubetskaya and Others v. Ukraine (Application no. 30499/03, Judgment of 10/02/2011), Grimkovska v. Ukraine (Application no. 38182/03, Judgment of 21/07/2011), and Dzemyuk v. Ukraine (Application no. 42488/02, Judgment of 04/09/2014). Analysing the ECtHR practice in cases against Ukraine in which the environmental and legal component is present, H.V. Anisimova and Ie.M. Kopytsya¹⁰⁴ distinguish nine categories of cases: the first one concerns the violation of the environment safe for life and health right (interpretation of Art. 2, 8 of the Convention for the Protection of Human Rights and Fundamental Freedoms (hereinafter - the Convention);105 the **second** is related to the violation of Art. 1 of the First Protocol of the ECHR, stipulating that 'every physical or legal entity is entitled to peacefully own his property. No one shall be deprived of his property other than in public interests and on the terms stipulated by law and general principles of international law'; the *third* implies the specifics of applying the doctrine of ultravires (outside the powers) in order to guarantee protection from mistakes of public authorities operating in environmental relations outside the powers (competences) granted to them by national legislation; the *fourth* provides for the access to justice (where the right is guaranteed by Art. 6 of the Convention) when protecting their valid or imaginary environmental rights, as well as cases regarding public participation; the *fifth* represents the interpretation of Art. 8 of the Convention on the Right to Respect for Private and Family Life, in particular, in terms of ensuring a fair balance between the interests of the individual and those of society in environmental relations; the sixth concerns the right to freedom of expression (Art. 10) regarding access to environmental information (information on the state of the environment); the seventh is related to the right to a fair remedy (Art. 13); the eighth represents cases of wavering obligations while emergency (Art. 15); the *ninth* provides for climate cases (regarding the protection of climatic rights, living conditions, which are being actively formed)'. Nevertheless, despite positive developments in the field of ensuring and protecting fundamental rights in Ukraine, it should be noted that there is no legal consolidation of the priority to take preventive and remedial measures by people who have caused damage to the environment and cover the costs of carrying out appropriate measures, as well as determining the amount of environmental damage, considering the cost of measures necessary to restore natural resources to their original state.

¹⁰² Case of Guerra and others v Italy App no 14967/89 (ECtHR, Judgment 19 February 1998) https://antifrau.cat/resources/sentencia_tribunal_europeu_drets_humans_guerra_i_altres_vs_italia.pdf>
accessed 8 September 2021.

¹⁰³ Hatton and Others v the United Kingdom App no 36022/97 (ECtHR, Judgment 8 July 2003) https://hudoc.echr.coe.int/eng#{%22itemid%22:[%22001-61188%22]}> accessed 8 September 2021.

¹⁰⁴ HV Anisimova, IeM Kopitsa, 'The role of courts in environmental rights protection in the context of the state policy of Ukraine' (2021) 2 (10) Access to Justice in Eastern Europe 164-176 http://ajee-journal.com/the-role-of-courts-in-environmental-rights-protection-in-the-context-of-the-state-policy-of-ukraine accessed 12 June 2021.

¹⁰⁵ Convention for the Protection of Human Rights and Fundamental Freedoms 475/97-VR/270 https://zakon.rada.gov.ua/laws/show/995_004#Text accessed 12 June 2021.

4 CONCLUDING REMARKS

To conclude, it should be noted that the Ratification of the 1997 Convention for the Protection of Human Rights and Fundamental Freedoms was a crucial step towards forming legal protection of human rights and freedoms and their legitimate interests in Ukraine. However, national legislation does not contain a detailed legal mechanism on how to protect the environmental rights of citizens. It is merely stipulated that violated rights of citizens in the field of environmental protection can be restored, and their protection is considered in court in accordance with the legislation of Ukraine (Art. 11 of the Law of Ukraine 'On Environmental Protection'). Therefore, it is important for ensuring the supremacy of law and protecting the environmental rights of citizens to have an effective judicial system, which should be accessible to citizens so they can protect their violated environmental rights. Having recognised the practice of the ECtHR as a mandatory source of law in Ukraine, the Ukrainian legislator has incorporated European standards for protecting human rights into the national legal system. It is impossible not to consent with the opinion of Judge of the Supreme Court of Ukraine G. Vronskaya (formerly Acting Minister of Ecology and Natural Resources of Ukraine), who noted that solving problems of environmental human rights protection should be carried out, first, at the national level. This can be achieved both by improving national legislation and using the practice of the ECtHR as a source of law by national courts and applying the provisions of international agreements ratified by Ukraine in this area. 106 Concerning this context, there seems to be a significant disadvantage to leaving the issue of reproducing (restoring) natural resources and complexes in Ukraine out of the legislator's meticulous attention since it is the state of the environment the directly affects human life and health. Developing and consolidating the system of the reproduction (restoration) of natural resources and complexes principles at the legislative level will give a powerful impetus to the process of reforming environmental management, which requires fundamental changes in approaches to planning public policy, transforming environmental institutions, and preventing violation of environmental legislation and control based on risk-oriented indicators. In addition, Ukraine must take the next step towards environmental protection, namely, to change the security vector of our state from the program of exclusively preserving the environment to reproducing (restoring) the environment and ecosystems of our country¹⁰⁷ – a return to nature is needed to make environmental protection and climate change issues a priority on the country's agenda.

With this in mind, the issue of introducing the principles for the reproduction (restoration) of natural resources and complexes into the national legal field as universal normative principles of positive law influence the formation of state environmental policy and law-making in general, as well as litigation in Ukraine, and specialise the environmental law principles, specifying the latter. Of particular significance is the principle of legal provision for the ecosystem approach to the reproduction (restoration) of natural resources and complexes together with the 'net gain' principle. These two are the guiding principles on which we should base the organisation and implementation of measures for the reproduction (restoration) of natural resources and complexes; the recovery and improvement of the quality of ecosystems; the prevention and elimination of harmful economic impacts on the environment and human health; the sustainable functioning of environmental systems in which all environmental objects are indissolubly linked and balanced.

^{&#}x27;Environmental issues in the practice of the European Court of Human Rights and their impact on judicial practice in Ukraine' (Ecobusiness Group, 24 July 2020) https://ecolog-ua.com/news/pytannya-ohorony-dovkillya-v-praktyci-yespl-ta-yih-vplyv-na-sudovu-praktyku-v-ukrayini accessed 8 September 2021.

¹⁰⁷ Implementation of the Environmental Protection Program (vector of security) is one of the top priorities of reforms defined by the Sustainable Development Strategy 'Ukraine-2020', approved by Presidential Decree no 5 of January 12, 2015.

The question of relegating principles to a certain 'group' of principles in the system of environmental law can be debated and is the subject of further research. The presented material ensures that each level of the environmental law principles system contains the principles of legal regulation of social relations in the field of the reproduction (restoration) of natural resources and complexes. However, it is crucial to ascertain the low level of such regulation in this field, which raises the issue of the relevance of developing the concept of Ukraine's natural resource reproduction, preventive and recovery measures by business entities, and methods of equivalent resources for assessing recovery measures, etc.

REFERENCES

- AIR 1997 SC 734: (1997) 2 SCC 353 https://www.legalbites.in/right-to-life-personal-liberty-article-21/ accessed 12 June 2021.
- 2. Andreitsev VI, Environmental law: course of lectures (Ventyri 1996).
- 3. Anisimova HV, 'The security future of Ukraine in the context of integrated processes: environmental and legal aspects' (International scientific-practical conference 'The third meeting of experts of related departments to discuss the strategy of evolution of agricultural, land, environmental and natural resource relations in the context of integration development of Ukraine', Odessa, 7-10 June 1018) 76-81.
- 4. Anisimova HV, Theoretical principles of environmental legislation development in the context of natural and legal doctrine (Pravo 2019).
- 5. Anisimova HV, Donets OV, 'Ecosystem approach to the restoration (reproduction) of natural resources and complexes as a basis for the modern concept of national environmental policy' (2020) 2 Environmental Law 7-13.
- Anisimova HV, 'Principles of environmental law: concepts and types' (International scientific and practical conference, Khakriv, 20-21 November 2020) https://dspace.nlu.edu.ua/bitstream/123456789/7204/1/Anisimova_485.pdf accessed 22 March 2021.
- 7. Anisimova HV, Kopitsa leM, 'The role of courts in environmental rights protection in the context of the state policy of Ukraine' (2021) 2 (10) Access to Justice in Eastern Europe 164-176 http://ajee-journal.com/the-role-of-courts-in-environmental-rights-protection-in-the-context-of-the-state-policy-of-ukraine accessed 12 June 2021.
- 8. Brinchuk MM, Environmental law principles (Yurlitinform 2013).
- 9. 'Biodiversity net gain. Good practice principles for development. A practical guide' (*Cieem. net*, 2016) <Biodiversity-Net-Gain-Principles.pdf (cieem.net)> accessed 26 March 2021.
- Cabinet of Ministers of Ukraine (CMU) Resolution 56/1868/30 'On approval of fees for calculating the amount of damage caused to forests' https://zakon.rada.gov.ua/laws/show/665-2008-%D0%BF#Text accessed 10 June 2021.
- 11. Cabinet of Ministers of Ukraine (CMU) Resolution 559/110/14 'On fees for calculating the amount of damage caused to green plantations within cities and other inhabited settlements' https://zakon.rada.gov.ua/laws/show/559-99-%D0%BF#Text accessed 10 June 2021.
- 12. Cabinet of Ministers of Ukraine (CMU) Resolution 1209/3342/35 'On approval of fees for calculating the amount of compensation for damage caused by illegal extraction (collection) or destruction of valuable species of aquatic bioresources' https://zakon.rada.gov.ua/laws/show/1209-2011-%D0%BF#Text accessed 10 June 2021.
- Cabinet of Ministers of Ukraine (CMU) Resolution 55/2221/31 'On approval of the methodology for determining the amount of damage caused by unauthorized

- occupation of land plots, their use for non-target purposes, removal of soil cover (fertile soil layer) without special permission' https://zakon.rada.gov.ua/laws/show/963-2007-%D0%BF#Text accessed 10 June 2021.
- 14. Carrington D, 'Two-thirds of glacier ice in the Alp's will have melt by 2100' (*The Guardian*, 9 April 2019). https://www.theguardian.com/environment/2019/apr/09/two-thirds-glaciers-alps-alpine-doomed-climate-change-ice accessed 18 March 2021.
- Catalogue of legal positions of the Constitutional Court of Ukraine (1997-2020) Ch. 3
 Fundamentals of constitutional order. General Principles Subpara. 3.4. The supremacy of
 law. Constitutional Court of Ukraine https://ccu.gov.ua/storinka-knygy/34-verhovenstvo-prava accessed 21 March 2021.
- 16. Chausova LL, 'Principles of environmental law of Ukraine' (PhD (Law) thesis abstract, Yaroslav the Wise National Law Academy of Ukraine 1998).
- 17. Christidis N, McCarthy M, Stott PA, 'The increasing likelihood of temperatures above 30 to 40°C in the United Kingdom' (2020) 11 Nature Communicators 3093 (*Nature.com*, 30 June 2020) https://www.nature.com/articles/s41467-020-16834-0 accessed 03 June 2021.
- 18. 'Conference of the parties to the Convention on biological diversity What is it and why is it important?' (*Wwf.ua*, 29 December 2016) https://wwf.ua/?288810/cbd-2016> accessed 18 March 2021.
- 19. Conservation of Habitats and Species Regulations (2017) https://www.legislation.gov.uk/uksi/2017/1012/contents/made accessed 26 March 2021.
- 20. Constitution of Ukraine [1996] Vidomosti of the Verkhovna Rada 30/141 https://zakon.rada.gov.ua/laws/show/254%D0%BA/96-%D0%B2%D1%80#Text accessed 10 May 2021.
- 21. Copernicus Climate Change Service, 'Climate bulletins' (*Climate.Copernicus.eu*, 7 June 2021) https://climate.copernicus.eu/monthly-climate-bulletins accessed 10 May 2021.
- 22. Convention for the Protection of Human Rights and Fundamental Freedoms 475/97-VR/270 https://zakon.rada.gov.ua/laws/show/995_004#Text accessed 12 June 2021.
- 23. Guerra and others v Italy App no 116/1996/735/932 (ECtHR, Judgment 19 February 1998) https://antifrau.cat/resources/sentencia_tribunal_europeu_drets_humans_guerra_i_altres_vs_italia.pdf> accessed 8 September 2021.
- 24. Degodiuk EH, 'The current state of land resources in Ukraine and ways to restore land and nature use' (All-Ukrainian scientific and practical conference, Kharkiv, 29-30 September 2001) 37-42.
- 25. Department for Environment, Food & Rural Affairs (DEFRA), 'Biodiversity net gain: updating planning requirements' (*Gov.uk*, 15 October 2019) https://www.gov.uk/government/consultations/biodiversity-net-gain-updating-planning-requirements accessed 25 March 2021.
- 26. Directive 2004/35/UN 'On environmental liability for preventing and eliminating consequences of environmental damage' https://zakon.rada.gov.ua/laws/show/994_965#Text accessed 10 June 2021.
- 27. Draft Law of Ukraine 'On Prevention, Reduction and Control of Pollution Occurring as a Result of Industrial Activity' [2020] the Verkhovna Rada of Ukraine 4167 http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=70077> accessed 26 March 2021.
- 'Environmental issues in the practice of the European Court of Human Rights and their impact on judicial practice in Ukraine' (Ecobusiness Group, 24 July 2020) https://ecolog-ua.com/news/pytannya-ohorony-dovkillya-v-praktyci-yespl-ta-yih-vplyv-na-sudovu-praktyku-v-ukrayini accessed 12 June 2021.

- 29. 'Environmental liability: EU experience and opportunities for Ukraine' (Society and environment portal, September 2018) accessed 10 June 2021.
- European Commission (EC), 'EU Biodiversity Strategy for 2030: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions' (Eur-lex.europa.eu, 20 May 2020) https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380 accessed 18 March 2021.
- 31. European Commission (EC), 'Nature-based solutions' (*Ec.europa.eu*, 2020) https://ec.europa.eu/research/environment/index.cfm?pg=nbs> accessed 11 March 2021.
- 32. Hatton and Others v the United Kingdom App no 36022/97 (ECtHR, Judgment (8 July 2003) https://hudoc.echr.coe.int/eng#{%22itemid%22:[%22001-61188%22]} accessed 8 September 2021.
- 33. Havrysh NS, 'Legal regime of soils in Ukraine' (Dr.Sc. (Law) thesis, National University "Odessa Law Academy" 2018).
- 34. Hetman AP, 'Principles in the ecological process. Regional environmental problems' (Conference of the VM Koretsky State and Law Institute NAS of Ukraine, Kyiv, 7 July 1995) 28-44.
- 35. Hetman AP, Orlov NA, 'Environmental audit and legal problems of improving environmental management based on the principles of sustainable development' (2008) 21(60) Scientific Notes of Taurida National University. Legal Sciences 153-159.
- 36. Hetman AP, 'Methodological principles of establishing legal environmental protection foundations' (2011) 3 (4) Law of Ukraine 12-21.
- 37. Hetman AP, 'Understanding the supremacy of law in the system of environmental legislation of Ukraine' (2017) 5 Law of Ukraine 44-62.
- 38. Hetman AP, 'The supremacy of law in the institution of nature management and environmental protection' (2017) 1-2 Environmental Law of Ukraine 2-8.
- 39. Holovatyi SP, Rule of law (Feniks 2006).
- 40. Gavrilova A, 'How and what we owe the planet: What you need to know about Eco-Debt Day' (*Buro 247.ua*, 1 September 2020) https://www.buro247.ua/lifestyle/how-and-what-we-owe-the-planet.html accessed 18 March 2021.
- 41. Geographic Distribution, 'Special report: Global warming of 1.5 °C' (*lpcc.ch,* 12 March 2020) https://www.ipcc.ch/sr15/ accessed 10 May 2021.
- 42. 'Global assessment report on biodiversity and ecosystem services' (*lpbes.net*, 2019) https://ipbes.net/global-assessment accessed 11 March 2021.
- 43. 'Global Footprint Network 'Delayed Environmental Debt Day claims the opportunity to build a future in harmony with the planet' (*Earthovershootday.org*, August 2020) https://www.overshootday.org/newsroom/press-release-august-2020-russian/ accessed 18 March 2021.
- 44. 'Governor Gavin Newsom provides an update on the state's response to the West Coast heat wave and the #COVID19 pandemic' (*Facebook.com*, 17 August 2020) https://www.facebook.com/282059655808032/videos/337529733942010?__tn__=F accessed 03 June 2021.
- 45. Judgement of the Constitutional Court of Ukraine in the case on the constitutional petition of 51 People's Deputies of Ukraine on compliance with the Constitution of Ukraine

(constitutionality) of the provisions of Art. 92, para. 6 Ch. X 'Transitional Provisions' of the Land Code of Ukraine (Case of permanent land use) of 22 September 2005 no 5-rp/2005. Case no 1-17/2005 https://zakon.rada.gov.ua/laws/show/v005p710-05#Text accessed 21 March 2021.

- 46. Karakash II (ed), Environmental law of Ukraine (Feniks 2012).
- 47. Klass v. Germany (1978) 2 EHRR 214, 235 http://eurocourt.in.ua/Article.asp?Aldx=416 accessed 6 June 2021.
- 48. Kolodii AM, Principles of Ukrainian law (Yurinkom Inter 1998).
- 49. Kostytslyi VV, Environmental law (Kolo 2012).
- 50. Koteniov OH, 'The principles of natural resources law' (PhD (Law) thesis abstract, Yaroslav Mudryi National Law University, 2017) http://nauka.nlu.edu.ua/download/diss/Kotenov/a_Kotenov.pdf accessed 18 March 2021.
- 51. Kutsevliak S, 'Medical waste is a new environmental threat to the country' (*Informatsiine Ahenstvo Interfax-Ukraina*, 29 May 2020) https://ua.interfax.com.ua/news/blog/665612.html accessed 15 March 2021.
- 52. Kyshko-Yerli OB, 'Lands requiring restoration as a new category of lands of Ukraine' (2011) 4 Law Review of Kyiv University of Law 297-300.
- 53. Law of Ukraine 'On Environmental Protection' [1991] Vidomosti of the Verkhovna Rada 41/546 https://zakon.rada.gov.ua/laws/show/1264-12#Text accessed 22 March 2021.
- 54. Law of Ukraine 'On Plant Kingdom' [1999] Vidomosti of the Verkhovna Rada 22/198 https://zakon.rada.gov.ua/laws/show/591-14#Text accessed 12 March 2021.
- 55. Law of Ukraine 'On Animal Kingdom' [2001] Vidomosti of the Verkhovna Rada 14/97 https://zakon.rada.gov.ua/laws/show/2894-14#Text accessed 22 March 2021.
- 56. Law of Ukraine 'On the Ecological Network of Ukraine' [2004] Vidomosti of the Verkhovna Rada 45/502 https://zakon.rada.gov.ua/laws/show/1864-15#Text accessed 22 March 2021.
- 57. Law of Ukraine 'On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period till 2020' [2010] Vidomosti of the Verkhovna Rada 26/218 https://zakon.rada.gov.ua/laws/show/2818-17#Text accessed 11 March 2021.
- 58. Law of Ukraine 'On Environmental Impact Assessment' [2017] Vidomosti of the Verkhovna Rada 29/315 https://zakon.rada.gov.ua/laws/show/2059-19#Text accessed 23 March 2021.
- 59. Law of Ukraine 'On Strategic Environmental Assessment' [2018] Vidomosti of the Verkhovna Rada 16/138 https://zakon.rada.gov.ua/laws/show/2354-19#Text accessed 23 March 2021.
- 60. Law of Ukraine 'On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period till 2030' [2019] Vidomosti of the Verkhovna Rada 16/70 https://zakon.rada.gov.ua/laws/show/2697-19#Text accessed 11 March 2021.
- 61. Lisova TV, Legal provision of land restoration: theoretical and practical problems (CJSC 'Kharkiv drukarnia' 2020).
- 62. 'Living planet report 2020' (Wwf.ua, 2020) < Living Planet Report 2020 | Publications | WWF (worldwildlife.org) > accessed 29 March 2021.
- 63. Lukash OV, 'The importance of ecological networks for protecting and reproducing land resources of Ukraine' (All-Ukrainian scientific and practical conference, Kharkiv, 29-30 September 2001) 150-152.
- 64. Maksymov SI, Constitutional principle of the supremacy of law: general and special. Philosophy of law: modern interpretations: selected: articles, analyst. reviews, translations (2003-2011) (Pravo 2012).

- 65. Malysheva NR, Scientific and practical commentary to the Law of Ukraine 'On Environmental Protection' (Pravo 2017).
- 66. Medvedieva MO, 'The right to a favourable environment in the context of universal human rights standards' (2009) 83 (II) Actual Problems of International Relations 161-165, 162 accessed 6 June 2021.
- 67. Ministry of Housing, Communities and Local Government (MHCLG), 'National Planning Policy Framework' (2019) 68-69 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf accessed 26 March 2021.
- 68. Pylypenko PD, Scientific works by Pylypenko Pylyp Danylovych. Selected (Kolo 2013).
- 69. Petryshyn OV, 'The supremacy of law as a law principle' (2006) 1 (19) Ukrainian Law 49-57.
- 70. Pogrebnyak SP, 'The supremacy of law principle: some theoretical problems' (2006) 1(19) Journal of the National Academy of Legal Sciences of Ukraine 210-220.
- 71. '#Protect water: Privacy statement' (*Living Rivers Europe, 2021*) https://www.livingrivers.eu/ accessed 29 March 2021.
- 72. Rabinovich PM, Human and citizen rights in the Constitution of Ukraine (before the integration of original constitutional provisions) (Pravo 1997).
- 73. Reid W, 'Millennium ecosystem assessment: Survey of initial impacts' (Millennium assessment. org, March 2006) < www.millennium assessment.org > accessed 15 March 2021.
- 74. Resolution of the Supreme Court of Ukraine of 2 October 2019 in Case no 826/9432/17 proceedings no K/9901/14908/19 on recognition of illegal actions and omissions, recognition of agreed limits on hunting animals, obligation of the defendants to take measures to eliminate violation of the plaintiff's rights and interests violation, invalidation of the Order no 482 of 19 December 2017 https://reyestr.court.gov.ua/Review/848060041 accessed 10 May 2021.
- 75. Resolution of the Verkhovna Rada of Ukraine 'On the Action Program of the Cabinet of Ministers of Ukraine' [2019] Vidomosti of the Verkhovna Rada 1/2 https://zakon.rada.gov.ua/laws/show/188-20#n2 accessed 10 May 2021.
- 76. Rio Declaration on Environment and Development. Adopted by the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 https://zakon.rada.gov.ua/laws/show/995_455#Text accessed 22 March 2021.
- 77. 'RTPI response to the DEFRA consultation on Biodiversity Net Gain' (*Royal Town Planning Institute*, 1 Feb 2019) https://www.rtpi.org.uk/consultations/2019/february/rtpi-response-to-the-defra-consultation-on-biodiversity-net-gain/ accessed 25 March 2021.
- 78. Stockholm Declaration on the Human Environment, in Report of the United Nations Conference on the Human Environment, UN Doc.A/CONF.48/14, at 2 and Corr.1 (1972) https://www.ipcc.ch/apps/njlite/srex/njlite_download.php?id=6471 accessed 10 May 2021.
- 79. Suchkova VA, 'On the issue of the classification of environmental human rights' (2006) 2 Moscow Journal of International Law 146-157.
- 80. Sydoruk BO, 'Ensuring the balanced use of wetlands and peatlands on an ecosystem approach' (2016) 1 Balanced Nature Use 16-21 http://nbuv.gov.ua/UJRN/Zp_2016_1_5 accessed 14 March 2021.
- 81. 'The number of vertebrate populations in the world has decreased by 60% WWF report' (*Wwf.ua*, 30 October 2018) https://wwf.panda.org/?337451/lpr-2018 accessed 29 March 2021.

- 82. 'Ukraine is in the Top countries list with the largest amount of waste per capita' (*Ukrainska Pravda*, 15 July 2019) https://www.pravda.com.ua/news/2019/07/15/7220956/ accessed 15 March 2021.
- 83. UN Commission on Human Rights, Human Rights and the Environment, 6 March 1990, E/CN.4/RES/1990/41 https://www.refworld.org/docid/3b00f04030.html accessed 6 June 2021.
- 84. UN Commission on Human Rights, Human Rights Resolution 2005/15: Adverse Effects of the Illicit Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights, 14 April 2005, E/CN.4/RES/2005/15 https://www.refworld.org/docid/45377c32c.html accessed 6 June 2021.
- 85. UN General Assembly Resolution 35/8 'On Historical Responsibility of States for the Preservation of Nature for Present and Future Generations [1980] UNGA 7; A/RES/35/8 (30 October 1980) http://www.worldlii.org/int/other/UNGA/1980/7.pdf accessed 10 May 2021.
- 86. UN General Assembly Resolution 45/94 'On the Need to Ensure a Healthy Environment for the Well-being of Individuals' https://undocs.org/ru/A/RES/45/94 accessed 10 May 2021.
- 87. Vashchyshyn MYa, 'Special principles of legal regulation in the field of national ecological network formation and preservation' (2015) 2 Scientific Bulletin of Lviv State University of Internal Affairs 78-88.
- 88. Viruk O, 'Which cities of Ukraine may have been flooded due to climate change by 2100' (*The Village Ukraina*, 16 January 2019) https://www.the-village.com.ua/village/city/city-news/280889-yaki-mista-ukrayini-mozhe-zatopiti-cherez-zminu-klimatu-do-2100-roku-accessed 18 March 2021.
- 89. 'What are invasive species and how do they affect biodiversity?' (*Epl.org*, 9 November 2020) http://epl.org.ua/human-posts/shho-take-invazijni-vydy-i-yak-vony-vplyvayut-na-bioriznomanittya/#:~:text=%D0%92%D1%96%D0%B4%D0%BE%D0%BC%D0%B8%D0%BC%D0%B8%20%D0%BF%D1%80%D0%B8%D0%BA%D0%BB%D0%B0%D0%B4%D0%B0%D0%B0%D0%B8%20%D1%96%D0%BD%D0%B2%D0%B0%D0%B7%D1%96%D0%B9%D0%B0%D0%B8%D1%85%20%D1%80%D0%BE%D1%81%D0%BB%D0%B8%D0%B8%D0%B0%20%D0%BA%D0%B0%D1%86%D1%96%D1%80%D1%86%D1%80%D1%86%D1%80%D1%86%D1%80%
- 90. 'Whether Ukrainian legislation allows effective resolution of environmental disputes' (Sud.ua, 15 November 2019) https://sud.ua/ru/news/publication/154700-chi-dozvolyaye-ukrayinske-zakonodavstvo-efektivno-virishuvati-ekologichni-spori-accessed 10 May 2021.
- 91. World Economic Forum (WEF), 'Annual Report 2019-2020' (*Weforum.org*, 23 November 2020) https://www.weforum.org/reports/annual-report-2019-2020 accessed 15 March 2021.