### Environmental Crime as a Threat to Ecological Security in Poland

#### **Abstract**

The paper discusses various threats that are an integral part of the daily lives of humans and all other living organisms worldwide. Despite numerous attempts and regulations introduced to protect the environment and ensure safety, achieving stability in this area remains elusive. The natural environment is continuously exposed to various threats, just as ecological security is at risk. In a synthetic approach, the author addresses these issues and attempts to answer the question: how does environmental crime affect the ecological security of Poland? Unfortunately, this type of crime has a very negative impact on ecological security, which is not encouraging. From the analysis of available literature and statistical data, the following conclusion can be drawn. To effectively combat environmental crime in Poland, actions should be taken to strengthen law enforcement, increase the powers of law enforcement agencies, promote cross-sectoral cooperation, and raise public awareness about environmental protection. Additionally, it is necessary to enhance international cooperation to combat transboundary environmental crime.

KEYWORDS: safety, ecology, crime, environmental protection, threats

воżенна ріąткоwsка – PhD in law, WSB Merito University in Gdańsk, ORCID – 0000-0002-4587-1032, e-mail: bozenna.piatkowska@gdansk.merito.pl

### 1 Introduction

The protection of the environment is one of the basic and fundamental values protected by Article 74 of the Polish Constitution. The state is responsible for ensuring the protection of the environment, taking into account the principle of sustainable development, and public authorities are responsible for protecting the environment and implementing policies aimed at ensuring ecological security for present and future generations. The public authorities are therefore obliged to take specific measures to protect environmental resources in order to ensure ecological security. It turns out that it is not only the public authorities that are obliged to take care of the environment, but also the citizens, as reflected in Article 86 of the Constitution of the Republic of Poland – everyone shall care for the quality of the environment and be held responsible for causing its degradation<sup>[1]</sup>.

Ecological security, also known as environmental security, is a new and vital dimension of a country's internal and international security. It is a value that motivates actions in the state's internal and external relations that affect the dynamic process of ensuring security<sup>[2]</sup>. Ecological security is one of the components of national security. Although the concept of ecological security is enshrined in the Constitution of the Republic of Poland and in many other normative acts, it is not clearly defined in any legal act in Poland. This is a major gap in Polish legislation, as the issues related to ecological security and the threats to it are extremely important.

Legal scholars point out that environmental security requires proper management of natural resources such as water, soil, forests, energy and minerals. It is necessary to reduce overexploitation of these resources and promote sustainable management to ensure their availability for future generations. It also includes measures to reduce emissions of greenhouse gases and other pollutants into the atmosphere. Reducing air, water and soil pollution is key to maintaining a healthy environment and ensuring the safety of living organisms. Biodiversity is extremely important for the balance of ecosystems and for ensuring sustainable development. Ecological security therefore requires the protection of endangered species and their habitats and the avoidance of activities that lead to the loss of biodiversity.

<sup>&</sup>lt;sup>1</sup> Constitution of the Republic of Poland of April 2, 1997, Dz. U. 1997, No. 78, item 483, as amended.

<sup>&</sup>lt;sup>2</sup> Stanisław Śladkowski, Bezpieczeństwo ekologiczne Rzeczpospolitej Polskiej (Warszawa: Wydawnictwo AON, 2004), 12.

An important aspect of ecological security is public education and awareness of environmental threats and ways to reduce them. Informing and engaging people in pro-environmental activities can help change public attitudes and behavior<sup>[3]</sup>.

In recent years, environmental protection and sustainable development have received increasing attention. Poland, a country rich in nature and ecological diversity, faces challenges in protecting its natural resources. However, in addition to problems such as ecosystem degradation and pollution, there is also a serious threat in the form of environmental crime. Environmental crime has become an increasingly serious problem in recent years. The high complexity of environmental crimes and their multifaceted nature pose a challenge to environmental inspectorates, law enforcement agencies and the judiciary.

# 2 Environmental crime and its negative impact on ecological security

Environmental crime refers to violations of laws relating to the protection and pollution of the environment. It is understood as criminal actions that lead to the destruction or degradation of ecosystems, water, air, soil, wildlife and other components of the environment. Environmental crimes have harmful consequences for human health, quality of life and ecological balance.

Below are the types of environmental crimes and their negative effects on biodiversity loss, ecosystem degradation, water and soil pollution, etc.

Illegal logging and forest degradation – includes illegal logging, clearing forests without proper permits or exceeding established limits, resulting in forest degradation and loss of habitat for many species. Forests play a key role in addressing the current climate and environmental crisis. They are among the most important natural carbon stores and sinks. It is

<sup>&</sup>lt;sup>3</sup> Diana Trzcińska, Joanna Sylwia Kierzkowska, Bezpieczeństwo ekologiczne w realizacji zadań publicznych (Warszawa: Difin, 2020), 18-27; Konrad Raczkowski, Łukasz Sułkowski, Zarządzanie bezpieczeństwem. Metody i techniki (Warszawa: Difin, 2014), 107-109.

estimated that it is estimated that the amount of carbon sequestered in forests (650 gigatonnes) is comparable to that in the atmosphere (860 gigatonnes), and that they sequester about 30% of annual CO2 emissions from the atmosphere [4]. Forests are also the most biodiverse of all terrestrial ecosystems, containing 80% of terrestrial biodiversity. In natural terms, a forest is a unique biological complex characterized by dense vegetation, including trees, shrubs and undergrowth. It is also a habitat for many animal species, a renewable natural resource of the geographical environment and the most complex biological formation, including both plants and animals [5].

Illegal logging and forest destruction is one of the most serious crimes against the environment. It involves the removal of trees from forests without the necessary permits, exceeding the established limits for cutting trees, or conducting activities that violate forest and environmental protection regulations. Such crimes have harmful consequences for forest ecosystems and society as a whole. The crime of illegal felling and destruction of forests is a consequence of ecosystem degradation, i.e. the process by which the natural environment is severely damaged or destroyed as a result of various factors, such as human activities, natural disasters, climate change, etc. These factors have a negative impact on forest ecosystems and society as a whole. These factors have a negative impact on biodiversity, ecosystem functioning and sustainable development. The forest is a complex ecosystem that provides shelter for many species of plants and animals<sup>[6]</sup>.

The removal of trees leads to the destruction of habitats, which in turn can lead to the loss of biodiversity and the depopulation, endangerment or extinction of some species. The result of ecosystem destruction is also soil degradation, which is associated with excessive land use, deforestation, over-cultivation or soil erosion, leading to soil degradation. Soil depletion, loss of fertility and erosion affect the ability to produce food and sustainable agriculture. Not insignificantly, the destruction of ecosystems

<sup>&</sup>lt;sup>4</sup> Pierre Friedlingstein, et. al, "Global Carbon Budget 2020," *Earth System Science*, no. 12 (2020), 3277 -3280.

<sup>&</sup>lt;sup>5</sup> Teresa Maria Łaguna, Mirosława Witkowska-Dąbrowska, Ekonomiczne podstawy zarządzania środowiskiem i zasobami naturalnymi (Białystok: Wydawca Ekonomia i Środowisko, 2005), 52.

<sup>&</sup>lt;sup>6</sup> Elżbieta Zębek, Magdalena Szramka, "Problematyka zanieczyszczenia lasów odpadami i spalinami w ujęciu kryminologicznym i karnym", [in:] *Prawnokarne i kryminologiczne aspekty ochrony środowiska*, ed. Wiesław Pływaczewski (Olsztyn: Uniwersytet Warmińsko-Mazurski, 2012), 356-359.

contributes to higher emissions of greenhouse gases such as carbon dioxide (CO2), which in turn affects climate change. The removal of forests, which are natural sinks for CO2, leads to higher concentrations of this gas in the atmosphere. Ecosystems provide many benefits to humans, including water purification, climate regulation, crop pollination, and the provision of food and natural resources. Destruction leads to the loss of these services, which negatively affects the quality of human life<sup>[7]</sup>.

According to Professor Bogdan Chojnicki of the Bioclimatology Laboratory at the Poznan University of Life Sciences, an expert of the Climate Coalition's Scientific Committee, deforestation is a growing problem. In the context of climate change, the ability of trees to mitigate the negative effects of global warming, if only by storing CO2, is invaluable. According to the scientist, the issue of violating the rights of indigenous peoples living in areas with large forests is also important<sup>[8]</sup>.

Wildlife trafficking is the crime of illegally hunting, fishing, trapping or trading wild animals and illegally harvesting and trading endangered plant species. Illegal trade in wildlife is a global problem of crime against the environment. It includes the illegal hunting, fishing, trapping and trade of wildlife and the illegal harvesting and trade of endangered plant species. It is an international activity that generates huge profits but has serious consequences for biodiversity and ecosystems. Here are some key aspects of illegal wildlife trade<sup>[9]</sup>:

- threat to biodiversity. It is estimated that hundreds of species are illegally hunted or fished each year, leading to depopulation or the threat of extinction;
- destruction of ecosystems. Hunting of wildlife and illegal harvesting of plants often leads to habitat degradation and destruction of ecosystems. The removal of species from their natural habitats disrupts the ecological balance and negatively impacts the functioning of the entire ecosystem;
- endangered species trade. Illegal trade involves many endangered animal and plant species, including elephants, rhinos, tigers, orcas,

<sup>&</sup>lt;sup>7</sup> Ibidem, 360.

<sup>&</sup>lt;sup>8</sup> Szerzej Krzysztof Urban, "Wycinka ma zły wpływ na klimat i na samopoczucie. Lasy dają nam ulgę" *Smog Lab*, 21 March 2022. https://smoglab.pl/wycinka-ma-zly-wplyw-na-klimat-i-na-samopoczucie-lasy-daja-nam-ulge/. [accessed: 16.07.2024].

<sup>&</sup>lt;sup>9</sup> Ewelina Melaniuk, "Przestępczość wobec dzikich zwierząt w ujęciu prawno-kryminologicznym" *Biuletyn Kryminologiczny*, No. 26 (2019): 134-144.

parrots and rhododendron trees. This trade often leads to their extinction or near extinction, with long-term consequences for ecosystems and the survival of these species;

- deteriorating living conditions for animals. Many wild animals are captured inhumanely, transported in cruel conditions, and often die during transport;
- a serious threat to public health wildlife trade can contribute to the spread of zoonotic diseases such as Ebola virus, SARS-CoV-2 (COVID-19) and malaria.

Elephants are killed for their tusks, rhinos for their horns used in traditional Asian medicine, sharks for their fins used to make the world's most exclusive soup, and so on. The fact that animals are deprived of their lives, from which, for example, highly valuable furs are obtained, has contributed to the decline of many species. Considering the situation of sharks, the species that constitute their food are beginning to multiply at such a rate that it leads to a loss of food. in the form of algae, plankton, etc. Illegal trade in wildlife can therefore lead to the introduction of invasive plant and animal species that threaten the ecological balance. Sometimes they colonize entire ecosystems, depleting and destroying them<sup>[10]</sup>.

Pollution is any activity that causes contamination of air, water or soil, such as illegal dumping of waste, illegal discharge of toxic substances or failure to comply with emission regulations. Substances that pollute the atmosphere affect all elements of the environment, mainly due to their nature and ease of dispersal. Examples of pollution<sup>[11]</sup>:

- air pollution results from emissions of toxic substances such as sulfur dioxide, nitrogen oxides, particulate matter, aerosols, or greenhouse gases. The main sources of air pollution are fossil fuel combustion, industrial emissions, transportation, and waste incineration;
- Water pollution. It includes pollution of rivers, lakes, seas and other bodies of water by chemicals, such as toxins, pesticides, fertilizers, petroleum products, municipal wastewater and industrial

Edyta Drzazga, "Kontrola społeczna nielegalnego obrotu dziką fauną i florą w Polsce", [in:] Prawo publiczne i prawo karne w XXI wieku: wybrane zagadnienia, ed. Łukasz B. Pilarz (Lublin: Wydawnictwo Naukowe Tygiel, 2019), 104.

Henryk Popiel, Magdalena Koziara, "Zagrożenia dla środowiska naturalnego w związku z prowadzeniem działalności gospodarczej" Nowoczesne Systemy Zarządzania, No. 1 (2012): 31-42.

wastewater. This causes water degradation, a threat to aquatic organisms and a problem with access to clean drinking water;

- soil pollution. Harmful substances such as pesticides, industrial chemicals, heavy metals or waste are introduced into the soil. This leads to loss of soil fertility, contamination of plants, reduction of biodiversity and threats to human health;
- waste pollution caused by improper waste management and storage. Dumping waste in landfills, uncontrolled waste incineration or inadequate waste treatment can lead to soil, water and air pollution and cause health risks to humans and animals.

The impact of air pollution on the environment is an extremely important issue, not only because of the prevalence of this phenomenon, the amount of pollutants emitted, the wide range of effects, but also because these pollutants affect other elements of the environment, including, above all, human health<sup>[12]</sup>.

Emissions of harmful chemicals into the atmosphere, soil, and water have severely depleted the Earth's natural resources. The exploitation of natural, non-renewable energy and raw material sources leads to their systematic depletion. The mining technologies used do not protect the local environment from degradation due to mining damage, chemical or radiological contamination, devastation of the landscape, destruction of the natural biosphere of plants and animals. Similar risks arise from the negative environmental impact of transportation and processing of extracted raw materials. There are also phenomena related to the environmental changes that have occurred: the greenhouse effect, acid rain, the depletion of the stratospheric ozone layer, climate change, and many others [13].

Poaching and wildlife trafficking are criminal activities that cause serious damage to wildlife populations and contribute to the loss of biodiversity. Poaching is the illegal hunting, fishing or trapping of wildlife, while wildlife trafficking is the illegal sale and movement of wildlife products.

<sup>&</sup>lt;sup>12</sup> Katarzyna Juda-Rezler, Oddziaływanie zanieczyszczeń powietrza na środowisko (Warszawa: Oficyna Wydawnicza Politechnik Warszawskiej, 2006), 244-245.

<sup>&</sup>lt;sup>13</sup> Kazimierz Górka, Bazyli Poskropko, Wojciech Radecki, Ochrona środowiska. Problemy społeczne, ekonomiczne i prawne (Warszawa: Państwowe Wydawnictwo Ekonomiczne, 1995). Zob. też Jerzy Merkisz, Ireneusz Pielecha, Alternatywne paliwa i układy napędowe pojazdów (Poznań: Wydawnictwo Politechniki Poznańskiej, 2004), 43-44.

Poaching and wildlife product trafficking have serious implications for ecological security:

- poaching and trade in wildlife products contribute to the collapse of populations of endangered species. Hunting these animals for their parts, such as bones, skins, pelts, horns or tusks, leads to population decline and, in some cases, species extinction. This severely disrupts the ecological balance and destroys biodiversity;
- poaching negatively impacts ecosystems that are home to endangered species. These species play important ecological roles, such as regulating populations of other organisms, pollinating plants and decomposing dead matter. Their depletion can lead to the disruption of food chains and the destruction of ecosystems;
- poaching contributes to biodiversity loss by eliminating key species in ecosystems. This leads to genetic impoverishment, reduced biodiversity and reduced resilience of ecosystems to environmental change;
- ecosystem services, such as the provision of clean water, climate regulation and food, are seriously threatened by poaching and the illegal trade in wildlife products. The weakening of these services can have negative impacts on human communities that depend on ecosystems for their well-being and survival;
- poaching and illegal trade in wildlife products often go hand in with other forms of crime, such as money laundering, corruption and drug trafficking. These activities lead to criminalization and social destabilization, with far-reaching consequences for environmental and social security<sup>[14]</sup>.

Illegal extraction of natural resources refers to mining activities that are conducted without the required permits, outside of legal and economic regulations, and without regard to environmental standards and labor rights. It is a serious crime that has a negative impact on the environment, the economy and local communities. Illegal natural resource extraction can involve various sectors, such as mining, logging, oil, natural gas, minerals,

Melaniuk, "Przestępczość", 140-142.

gems, timber and other natural resources<sup>[15]</sup>. Examples include illegal gold mining, illegal logging in protected forest areas, illegal diamond mining, or illegal oil extraction in areas where it is prohibited. Illegal extraction of natural resources has serious consequences in the form of:

- environmental degradation, such as deforestation, habitat destruction and water, soil or air pollution. This has a negative impact on ecosystems, biodiversity and ecological stability;
- extraction of natural resources without proper rules and regulations, which leads to mismanagement and overuse of resources, resulting in their depletion;
- violating the rights of local communities, such as the right to property, the right to the environment, the right to use natural resources, or the right to share in economic benefits;
- crime, corruption and the activities of organized crime groups.
  Criminals use illegal mining to finance other crimes, such as arms trafficking and drug trafficking.

Changes in the environment caused by factors such as climate, environmental disasters or economic activity have a significant impact on changing the value system adopted in environmental law, and consequently on the shape of the good in the form of environmental security  $^{[16]}$ .

In summary, the major environmental threats to environmental security include:

- 1. rapid population growth;
- 2. damage to the ozone layer of the atmosphere;
- earth climate change;
- 4. progressive chemical pollution of the biosphere;
- 5. forest disappearance;
- 6. degradation of farmland;
- 7. overexploitation of ecosystems;

Patrz: NIK, Informacja o wynikach kontroli, *Wykrywanie i przeciwdziałanie nielegalnej eksploatacji kopalin*, 24 November 2023. https://www.nik.gov.pl/kontrole/P/23/060/. [accessed: 16.07.2024].

Piotr Korzeniowski, Bezpieczeństwo ekologiczne jako instytucja prawa ochrony środowiska (Łódź: Wydawnictwo Uniwersytetu Łódzkiego, 2012), 151.

- 8. heavy use of pesticides and mineral fertilizers contributing to soil erosion;
- 9. a systematic decline in water resources;
- 10. large population movements;
- 11. urbanization and waste generation<sup>[17]</sup>.

Environmental law and the values it represents should prevent the emergence of a number of crises, such as raw materials, food, energy or the effects of climate change. An example of a serious threat to environmental security with a significant impact on the established value system could be nuclear power, especially its uncontrolled development. The primary issue here is the safety of nuclear power itself and its impact on the state of ecological security. However, the key issue is the value system adopted in the legal regulations defining the principles of nuclear safety<sup>[18]</sup>.

Environmental crime has serious consequences for environmental security and has a negative impact on society and the economy. These consequences include economic losses, threats to public health, and the destruction of cultural heritage associated with nature. Economic losses resulting from environmental crime can be substantial. Events such as floods, droughts, hurricanes and earthquakes lead to the destruction of infrastructure, agriculture, homes and businesses, resulting in lost jobs, reduced production and lower incomes<sup>[19]</sup>. The cost of recovering from such disasters is high and the process can take many years. Public health risks are another important consideration. Climate change can lead to the spread of vector-borne diseases such as malaria, dengue fever and Lyme disease by altering the distribution of disease vector populations. Natural disasters such as floods and hurricanes can also lead to a lack of access to clean water, medicines and medical care, increasing the risk of infectious diseases and other health risks. The destruction of cultural heritage associated with nature is another serious problem. Many communities have strong ties to nature and cultural heritage. The destruction of ecosystems,

<sup>&</sup>lt;sup>17</sup> Stanisław Wiąckowski, Irena Wiąckowska, *Globalne zagrożenia środowiska* (Kielce: Katedra Ochrony i Środowiska WSP, 1999), 11-15.

<sup>&</sup>lt;sup>18</sup> Zdzisław Celiński, Energetyka jądrowa a społeczeństwo (Warszawa: Wydawnictwo Naukowe PWN, 1992), 81 i ff.

<sup>&</sup>lt;sup>19</sup> Marcin Wielec, "Przestępczość środowiskowa – wprowadzenie do problematyki", [in:] *Przestępczość środowiskowa – współczesne wyzwanie dla organów ścigania oraz Inspekcji Ochrony Środowiska*, ed. Marcin Wielec (Warszawa: Instytut Wymiaru Sprawiedliwości, 2022), 17 i ff.

such as rainforests and coral reefs, results in the loss of unique plant and animal species and sites of cultural and historical significance. This in turn can lead to the loss of identity, traditions and cultural heritage that are important to local communities<sup>[20]</sup>.

In order to deal with these consequences, it is important to take action at both the social and the economic level. Strengthening monitoring and early warning systems, building more resilient infrastructure, investing in the development of a sustainable economy, promoting education on environmental protection and cultural heritage, and taking action to mitigate climate change are just some of the measures that can benefit society and the economy, as well as help protect the cultural heritage associated with nature.

## 3 Environmental crime in Poland – analysis of the phenomenon. Institutional-legal system

Wildlife crime is one of the main causes of species extinction worldwide. In 2022, a report on wildlife crime in Poland was published as part of the Successful Wildlife Crime Prosecution in Europe project, which shows that Polish services are facing serious problems in the fight against criminals. The period covered by the study was 2015 – 2020, and as the document states, in these years alone Polish customs officers confiscated more than 420,000 specimens of protected plant and animal species, and police officers uncovered 33,870 violations of the Law on Environmental Protection of April, 2001<sup>[21]</sup>.

According to the report, poaching, illegal trade and smuggling of protected species, and environmental pollution are serious crimes with

<sup>&</sup>lt;sup>20</sup> Andrzej Bałandynowicz, "Przestępczość przeciwko środowisku naturalnemu" Consilium Iuridicum, No. 1-2 (2022): 9-10.

<sup>&</sup>lt;sup>21</sup> Raport. Przestępczość przeciwko dzikiej przyrodzie w Polsce Studium przypadków w latach 2015 do 2020, 7, 20-25. https://stopwildlifecrime.eu/polish-national-report/. [accessed 18.07.2024]. The project began in September 2020 and will run until the end of August 2023. The project is aimed at representatives of the judiciary, law enforcement agencies, professionals from NGOs and other experts in the field of combating wildlife crime.

increasingly severe penalties. As of September 1, 2022, new regulations will come into force in Poland. According to them, environmental destruction will be punished more severely than before (Article 47 § 2 of the Criminal Code and Articles 181 – 188a of the Criminal Code are mentioned). The authors of the report wonder whether this is enough. Before the new legislation came into force in 2002, relatively few acts harmful to nature were classified as crimes. Most of the 33,870 violations of the Law on Nature Protection were considered misdemeanors, and almost half of the cases ended with a warning. Penalties, including severe ones, were rather rare. Even fewer cases ended with a final conviction. Between 2015 and 2020, only 938 proceedings ended with a criminal case in court, 484 cases involved destruction of nature, 345 involved illegal trade in protected species, and 109 involved violations of inland fishing [22].

Based on the data in the above report and an analysis of the available literature in the field described and statistical data, several common factors contributing to the growth of this type of crime can be distinguished.

One is the lack of effective safeguards, which makes it easy for criminals to take advantage of the situation. Poor infrastructure, lack of adequate monitoring and control, and limited access to technology make environmental protection inadequate. Until mid-2022, there were low penalties and weak enforcement - environmental criminals were either not held accountable or the penalties for such crimes were low, which encouraged them to continue violating the environment because they felt they had impunity. Corruption in environmental systems is also the element that allows environmental crime to grow unchecked. Criminals can easily bribe officials to avoid prosecution or punishment. In addition, there is a high demand for illegal products, such as timber from illegal logging, endangered animal and plant species, illegal waste, or drugs. When demand for such products is high, criminals will find ways to supply them, leading to an increase in environmental crime. However, there is still a lack of public awareness of the consequences of environmental crime. If the public is unaware of the negative impact on the environment, they may be less proactive in combating these crimes and fail to report them to the appropriate law enforcement agencies.

Environmental crime is often closely linked to the socio-economic context of a region. Analysis of this context can help to understand the factors

that contribute to the occurrence of such crimes. Here are some of the socioeconomic aspects that influence environmental crime.

In regions affected by poverty and social inequality, criminals are more likely to engage in illegal activities to earn a living. Unemployment, low income, and limited access to resources drive some individuals to engage in criminal activities, including environmental crime.

When local communities do not have access to legitimate alternative sources of income, such as sustainable agriculture, ecotourism or environmental programs, illegal activities such as natural resource theft become tempting. Lack of environmental education and awareness can lead to misuse of natural resources and a lack of understanding of the environmental consequences. In this case, environmental crimes may result from a lack of knowledge or a failure to understand the consequences of one's actions. Economic systems based on short-term benefits that do not consider long-term environmental consequences can encourage irresponsible use of natural resources and lead to environmental crimes. A lack of environmental awareness and concern for long-term impacts can contribute to this approach.

Statistics published by the Police Department (they refer only to police actions) show that environmental pollution, destruction of plants and animals, and improper handling of waste were the crimes that dominated between 2011 and 2021. The data show that while in 2011 there were 265 proceedings initiated for crimes under Articles 181-188 of the Criminal Code, in 2020 there were already 739, and in 2021 there were 795. This means that in 11 years the number of ongoing cases has tripled. Taking into account the number of declared crimes against the environment, in 2011 there were 87, and a year later – 73. In the following years there were even more. From 2017 there was a fourfold increase in the number of established crimes: from 109 to 439 in 2020. By contrast, in 2021 there were slightly fewer crimes against the environment: 388. In terms of detected crimes, in 2011 there were 49, in 2012 – 40, in 2013 – 89. After a decrease between 2014 and 2017, the number of detected crimes against the environment increased significantly (over 100) and in 2020 there were 313 of them. While in 2021 – 261<sup>[23]</sup>

As the data show, the largest number of cases initiated, ascertained and detected crimes are related to three types of crimes are related to the three types of crimes described in Articles 181, 182 and 183 of the Criminal Code.

<sup>&</sup>lt;sup>23</sup> Przestępstwa przeciwko środowisku (181-188) – Statystyka. https://statystyka.policja.pl/st/kodeks-karny/przestepstwa-przeciwko-3. [accessed: 18.07.2024].

Between 2011 and 2021, the largest number of proceedings under Article 181 of the CC was initiated in 2017 – 106, while the smallest number (50) was initiated in 2012. In turn, the number of such crimes detected ranged from 13 (in 2012) to 33 (in 2020 and 2021). In contrast, the highest number of detected crimes of this type was in 2021 – 14. The above is reflected in Table 1.

Table 1 Destruction of flora and fauna under Article 181 § 1-5 of the Criminal Code for 2011-2021.

Year	Number of pro- ceedings initiated	Number of ascer- tained crimes	Crimes detected	Detection rate (in%)
2021	65	33	14	40,00
2020	72	33	9	27,30
2019	60	22	4	18,20
2018	67	14	6	42,90
2017	106	19	5	26,30
2016	68	31	11	35,50
2015	61	17	9	52,90
2014	80	17	4	23,50
2013	59	17	7	41,20
2012	50	13	7	53,80
2011	72	17	9	52,90

Source: Own compilation based on Przestępstwa.

Proceedings under Article 182 of the Criminal Code have increased since 2015: then there were 100, in 2020 – already 169, while in 2021 – 171. The least crimes of this type were detected in 2011 – only 6, and the most in 2021 – 37. Detected crimes of this type in 2012-2017 were several per year, in subsequent years – more than a dozen. In 2011, no crimes of water, air or soil pollution were detected, in 2021 there were 19 such cases. These data are presented in Table 2.

Table 2. Environmental pollution (Article 182 of the Criminal Code) for 2011-2021.

Year	Number of pro- ceedings initiated	Number of ascer- tained crimes	Crimes detected	Detection rate (in%)
2021	171	37	19	51,35
2020	169	35	10	28,60

Year	Number of pro- ceedings initiated	Number of ascer- tained crimes	Crimes detected	Detection rate (in%)
2019	134	29	14	48,30
2018	129	31	15	48,40
2017	111	22	7	31,80
2016	109	19	9	47,40
2015	100	16	6	37,50
2014	91	14	2	14,30
2013	99	24	7	29,20
2012	95	8	4	50,00
2011	60	6	0	0,00

Source: Own compilation based on Przestępstwa.

The number of police proceedings in cases under Article 183 of the Criminal Code has shown an upward trend since 2013 – then there were 150, in 2020 – already 454, and in 2021 – 515. As for established crimes, the increase was recorded in 2018-2020: in 2018 there were 94, in 2019 – 167, in 2020 – 352. In 2021 there were less – 296. The same was true for detected crimes – In 2018 there were 70, a year later – 109, in 2020 – already 287. In 2021 there were 214 such crimes.

Table 3. Improper handling of waste (Article 183 of the Criminal Code) for 2011-2021.

Year	Number of pro- ceedings initiated	Number of ascer- tained crimes	Crimes detected	Detection rate (in%)
2021	515	296	214	72,30
2020	454	352	287	81,30
2019	412	167	109	65,30
2018	345	94	70	74,50
2017	249	51	28	54,90
2016	224	48	32	65,30
2015	175	43	31	72,10
2014	172	56	32	57,10
2013	150	75	53	70,70
2012	172	42	23	53,50
2011	99	35	26	74,30

Source: Own compilation based on Przestępstwa.

Independently of police statistics, investigations into violations of other environmental laws are carried out by the Environmental Protection Inspectorate. The report of the Environmental Protection Inspectorate for 2021 shows that environmental inspectors carried out 40,768 inspections. They found 10,971 violations of various types of environmental regulations and issued 2,517 decisions on fines and fees/increased fees in the total amount of PLN 98,030,451.60. The largest number of decisions (804) concerned non-compliance with the Waste Act. A year earlier, in 2020, environmental inspectors imposed 1,909 fines in the total amount of PLN 73,441,074.05.

It is also important to present the legal regulations on environmental protection in force in Poland and the responsible institutions in this area.

The primary legislation governing the phenomenon in question is the Law of April 16, 2004 on the Protection of Nature, which regulates the protection of nature and biodiversity, including the creation of protected areas, the protection of endangered species and the protection of natural habitats<sup>[24]</sup>. In addition to the above-mentioned Act, the issue is regulated by thematic Acts, such as the Act of April 14, 1985, on inland fishing, the Act of September 28, 1991, on forests, the Act of February 3, 1995, on the protection of agricultural and forest land, the Act of August 21, 1997, on the protection of animals, the Act of April 13, 2007, on the prevention of environmental damage and its remediation, the Act of October 3, 2008, on the provision of information on the environment. Hunting Law, Law of August 21, 1997 on the Protection of Animals, Law of April 13, 2007 on the Prevention of Environmental Damage and its Remedy, Law of October 3, 2008 on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessment, Law of December 19, 2014 on Marine Fisheries, Law of August 11, 2021 on Alien Species.

Several hundred implementing acts have been issued for almost every law, in the form of regulations by the minister in charge of the environment or the Council of Ministers. Such a multitude of regulations makes them unreadable and unsustainable. Amendments to individual laws are also not insignificant, which certainly does not have a positive effect – for example, the Law on Nature Protection has been amended 53 times since it was in effect, i.e. from 2004 to 2022, or on average every 4 months<sup>[25]</sup>.

Laws 2023, item 1336, as amended.

<sup>25</sup> Raport, 9.

With regard to criminal responsibility, since this element should be key in the context of punishing offenders, it should be noted that criminal provisions are scattered in various laws. In addition, some of the criminal provisions are also found in the Law of June 6, 1997, the Criminal Code, and the Law of May 20, 1971, the Code of Crimes. In a word, such scattered criminal provisions are generally more beneficial to the perpetrators of crimes, because law enforcement agencies have difficulties in classifying crimes.

The institutions responsible for environmental protection in Poland are the Ministry of Climate and Environment, which is responsible for developing and implementing environmental policy and coordinating environmental protection activities, and the General Inspectorate for Environmental Protection (GIOS), a control body responsible for supervising and monitoring environmental protection activities. In addition, regional environmental inspectorates perform inspection functions at the provincial level.

Environmental crimes and offenses are dealt with by officers and representatives of the Police, Prosecutor's Office, Customs and Tax Service, Municipal Police, Forest Guard and State Hunting Agency.

NGOs and the local community also play an important role. The former include, among others:

- Greenpeace Poland that works to protect the environment by conducting information campaigns, monitoring industrial activities, taking legal action and lobbying for effective environmental protection;
- WWF Poland focuses on the conservation of biodiversity, sustainable management of natural resources and protection of ecosystems. The organization conducts field projects, public education and cooperation with local communities:
- Our Earth Foundation promotes sustainable development, nature conservation and environmental education. The organization conducts information campaigns, training, and supports local conservation projects.

#### Regarding the local community, among others:

 community organizations, which are local associations and social initiatives that work to protect the environment - these are usually groups that work on clean water, forest protection, waste separation, or environmental education;

- aommunity environmental patrols operate in some regions and aim to monitor and report illegal activities against the environment, such as illegal logging or illegal dumping;
- awareness and education campaigns may include workshops, lectures, clean-ups or tree planting.

It is important for law enforcement, NGOs and the community to work together and share information to effectively combat environmental crime. Joint action, monitoring, reporting of suspicious activities, and public education are key to raising awareness and effectively combating this type of crime.

### 4 Summary and conclusions

The following elements, among others, should be considered in order to ensure the effectiveness of the measures:

- law enforcement. It is important that environmental crimes are properly prosecuted and that offenders are punished. However, low penalties, delays in prosecution, and limited legal, financial, and logistical tools can undermine the effectiveness of enforcement;
- intersectoral cooperation. Effective and efficient combating of environmental crime requires strong cooperation between law enforcement agencies, NGOs, local authorities and the community. This cooperation can lead to information sharing, investigative support and increased public awareness;
- Education and public awareness. NGOs and the local community play an important role in raising public awareness of environmental protection and environmental crime.

Challenges, on the other hand, include:

 Lack of sufficient financial, human, and technological instruments, which can make it challenging for law enforcement agencies and

- NGOs to effectively combat environmental crime. Limited resources can lead to inadequate oversight;
- corruption, which poses a serious threat to effectively combating environmental crime. Criminals can easily bribe officials, leading to a lack of enforcement and undermining environmental protection efforts;
- lack of cross-sectoral cooperation, both at the government and community levels, can limit the effectiveness of efforts. Lack of communication, lack of local community involvement, or unwillingness to cooperate can hinder the identification, prosecution, and reduction of environmental crimes;
- Difficulties in identifying perpetrators. Organized crime groups operating on a large scale, in areas that are difficult to access, or among a variety of actors can make it difficult for law enforcement to identify and prosecute perpetrators.

#### Bibliography

- Bałandynowicz Andrzej, "Przestępczość przeciwko środowisku naturalnemu" Consilium Iuridicum, No. 1-2 (2022): 7-33.
- Celiński Zdzisław, Energetyka jądrowa a społeczeństwo. Warszawa: Wydawnictwo Naukowe PWN, 1992.
- Drzazga Edyta, "Kontrola społeczna nielegalnego obrotu dziką fauną i florą w Polsce", [in:] *Prawo publiczne i prawo karne w XXI wieku: wybrane zagadnienia*, ed. Łukasz B. Pilarz. Lublin: Wydawnictwo Naukowe Tygiel, 2019.
- Friedlingstein Pierre, Michale O'Sullivan, Matthew W. Jones, Robbie M. Andrew, Judith Hauck, "Global Carbon Budget 2020" *Earth System Science*, No. 12 (2020): 3269-3340.
- Górka Kazimierz, Bazyli Poskropko, Wojciech Radecki, *Ochrona środowiska*. *Problemy społeczne, ekonomiczne i prawne*. Warszawa: Państwowe Wydawnictwo Ekonomiczne, 1995.
- Informacja o realizacji zadań Inspekcji Ochrony Środowiska w 2020, 2021 r. https://www.gios.gov.pl/pl/dla-obywateli/raporty-publikacje-opracowania.
- Juda-Rezler Katarzyna, *Oddziaływanie zanieczyszczeń powietrza na środowisko*. Warszawa: Oficyna Wydawnicza Politechnik Warszawskiej, 2006.

- Korzeniowski Piotr, Bezpieczeństwo ekologiczne jako instytucja prawa ochrony środowiska. Łódź: Wydawnictwo Uniwersytetu Łódzkiego, 2012.
- Łaguna Teresa Maria, Mirosława Witkowska-Dąbrowska, Ekonomiczne podstawy zarządzania środowiskiem i zasobami naturalnymi. Białystok: Wydawca Ekonomia i Środowisko, 2005.
- Melaniuk Ewelina, "Przestępczość wobec dzikich zwierząt w ujęciu prawno-kryminologicznym" Biuletyn Kryminologiczny, No. 26 (2019): 130-160.
- Merkisz Jerzy, Ireneusz Pielecha, Alternatywne paliwa i układy napędowe pojazdów. Poznań: Wydawnictwo Politechniki Poznańskiej, 2004.
- Prawnokarne i kryminologiczne aspekty ochrony środowiska, ed. Wiesław Pływaczewski. Olsztyn: Uniwersytet Warmińsko-Mazurski, 2012.
- Popiel Henryk, Magdalena Koziara, "Zagrożenia dla środowiska naturalnego w związku z prowadzeniem działalności gospodarczej" Nowoczesne Systemy Zarządzania, No. 1 (2012): 29-46.
- Przestępstwa przeciwko środowisku (181-188) Statystyka. https://statystyka.policja.pl/st/kodeks-karny/przestepstwa-przeciwko-3.
- Raczkowski Konrad, Łukasz Sułkowski, *Zarządzanie bezpieczeństwem. Metody i techniki*. Warszawa: Difin, 2014.
- Raport. Przestępczość przeciwko dzikiej przyrodzie w Polsce Studium przypadków w latach 2015 do 2020, 1-25. https://stopwildlifecrime.eu/polish-national-report/.
- Śladkowski Stanisław, Bezpieczeństwo ekologiczne Rzeczpospolitej Polskiej. Warszawa: Wydawnictwo AON, 2004.
- Trzcińska Diana, Joanna Sylwia Kierzkowska, Bezpieczeństwo ekologiczne w realizacji zadań publicznych. Warszawa: Difin, 2020.
- Urban Krzysztof, "Wycinka ma zły wpływ na klimat i na samopoczucie. Lasy dają nam ulgę," *Smog Lab*, 21 March 2022. https://smoglab.pl/wycinka-ma-zly-wplyw-na-klimat-i-na-samopoczucie-lasy-daja-nam-ulge/.
- Wiąckowski Stanisław, Irena Wiąckowska, *Globalne zagrożenia środowiska*. Kielce: Katedra Ochrony i Środowiska WSP, 1999.
- Wielec Marcin, "Przestępczość środowiskowa wprowadzenie do problematyki", [in:] Przestępczość środowiskowa współczesne wyzwanie dla organów ścigania oraz Inspekcji Ochrony Środowiska, ed. Marcin Wielec. Warszawa: Instytut Wymiaru Sprawiedliwości, 2022.
- Zębek Elżbieta, Magdalena Szramka, "Problematyka zanieczyszczenia lasów odpadami i spalinami w ujęciu kryminologicznym i karnym", [in:] *Prawnokarne i kryminologiczne aspekty ochrony środowiska*, ed. Wiesław Pływaczewski. 356-359. Olsztyn: Uniwersytet Warmińsko-Mazurski, 2012.

