THE LATEST TOOLS OF PUBLIC ADMINISTRATION IN THE PROCESS OF SOLVING SOCIO-ENVIRONMENTAL PROBLEMS AT THE LEVEL OF LOCAL GOVERNMENT

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Abstract: The relevance of the topic of the article is due to the state of the environment, which is of general concern. Among the key tasks of economic security, there are the problems of environmental security, protection of the natural environment, reproduction and rational use of natural resources. It is objectively necessary to form a system of knowledge about the sources of environmental safety in the implementation of various activities that pose an increased danger to the population and its environment. Substantiation of the concept of nature management, socially oriented to man, as a strategy and mechanism for adaptation and rehabilitation of extreme living conditions should be considered from the standpoint of minimizing the negative impact on natural objects. It is necessary to identify and scientifically explain the strengths and weaknesses of environmental legislation, show its general and special features, to give the characteristic of a condition of scientific thought concerning prospects of development of the named legislation, develop recommendations for the use of environmental regulation and public administration.

Keywords: Environment, Local self-government, Protection of natural environment, Socio-ecological problems, Tools of public administration, Use of natural resources.

1 Introduction

The scale of environmental pollution in Ukraine has reached a critical level. The total mass of accumulated waste exceeded 25 billion tons. Dumps, waste heaps, slag reservoirs, landfills occupy an area of more than 160 thousand hectares, which is equal to the territory of 4 rural areas. The annual growth of municipal solid waste exceeds 2% and amounts to 12 million tons per year [13].

The increase in the amount of hazardous waste has a negative impact on public health and the environment. Of particular concern to specialists and the public is the environmental situation in the Dnieper River basin, the main water artery of the country, which provides water needs for more than 30% of the territory and population of Ukraine, as well as a number of regions of Belarus and the Russian Federation. Experts have long assessed the ecological situation in the Dnieper River basin as an ecological crisis. The Dnieper region ranks first in the country in terms of the degree of pollution and water shortage. Polluted and very polluted, especially with nitrogen compounds, oil products, phenols, heavy metals, are the waters of the Danube, Dniester, Southern Bug, Seversky Donets. The flow of polluted effluents increased by a third, part of the polluted wastewater increased by 2.4 times, and the capacity of treatment facilities increased by only 2% [26].

The task was put forward to implement the most acute current tasks and long-term priorities of environmental safety and environmental protection at the national, regional, and facility levels, develop and improve the relevant legal framework, introduce economic instruments (phased paid environmental management) for the reproduction and rational use of natural resources [26].

The following tasks have been set for the Government:

- Guaranteeing the environmental safety of nuclear facilities and the rational protection of the population and the environment, minimizing the impact of the consequences of the accident at the Chernobyl nuclear power plant.
- Improvement of the ecological state of the Dnieper River and the quality of drinking water.
- Stabilization and improvement of the ecological situation in the cities and industrial centers of the Donetsk-Pridneprovsky region.
- Construction of new and reconstruction of existing capacities of communal wastewater treatment plants.
- Prevention of pollution of the Black and Azov seas and improvement of their ecological state.
- Formation of a balanced system of nature management and greening of technologies in industry, energy, construction, agriculture, and transport.
- Conservation of biological and landscape diversity, development of nature reserves.

It should be noted that in developed countries, scientists and specialists are very actively working to realize the cherished dream of environmentalists about waste-free and environmentally friendly production based on the concept of greening. In the West, it is called the concept of increasing the purity of production (CLEANER PRODUCTION CONCEPT). It aims to continuously improve production efficiency by reducing the amount and toxicity of all waste at the source of their generation, the use of environmentally hazardous raw materials and processes, non-renewable sources of resources, water and energy, the environmental impact of products throughout their entire life cycle.

The term "greening" adopted in Ukraine provides for a strategy for the transformation of industrial and agricultural production, and the goal is not only to satisfy human needs, but also to improve the environmental performance of production facilities. The main principle of greening is a systematic approach, which involves the improvement of natural and technical systems at all levels from sources of environmental pollution to consumers, taking into account the interaction and mutual influence of all components [5-7, 11, 41, 44-45]. The main task is to harmonize the relationship between nature and technology, and ideally, to create systems with high technical characteristics while maintaining or even recreating a favorable environmental background and ensuring the required environmental qualities at each hierarchical level.

2 Materials and Methods

The theoretical basis of the study was: the philosophical theory of the interaction between society and nature; principles of socio-economic development management; ideas of sustainable development; the principle of the ecological imperative; principles of an integrative interdisciplinary, integrated approach, a systematic approach to the study of socio-natural interaction; methods of social management, modeling and forecasting; the main provisions of social ecology, sociology, social development; basic principles of the modern theory of social management.

The theoretical and methodological base also includes:

- An institutional approach that made it possible to analyze the activities of various social institutions to ensure environmental safety, transmission of values and norms of environmental behavior and regulation of the ecosystem
- System and system-communicative approaches to the study of social phenomena
- Principles of consistency, complexity, scientific character;
- The concept of "environmental communication" (N. Luhmann), according to which society is an open system, the balance of which is disturbed by environmental problems; the constructive consciousness of active subjects acts as a counteracting factor.

3 Results and Discussion

As Professor V. Zadorsky, a recognized authority of Dnepropetrovsk ecologists, notes, first of all, it is necessary to make changes in industrial technologies, to reduce the amount of hazardous waste per unit of production in every possible way, to provide training, first of all, for workers in industry, transport, agriculture, civil servants, local government workers, and also the entire population on issues related to industrial and other waste, their minimization and environmental protection [9].

Every year, the problem of household waste disposal becomes increasingly more acute. Along with the ecological, it also has an economic aspect. It is possible to use waste to produce paper, plastics, and more. During the production of steel from scrap metal, emissions into the atmosphere are reduced by 6.5 times, water pollution – by 4 times, and the amount of solid waste by 16 times [12]. It is no coincidence that Western firms are increasingly importing scrap metal, rather than iron ore and bauxite for the production of steel and aluminum, leaving "dirty" production on the territory of the "third" world countries. In addition, steel made from scrap metal is 20 times cheaper than steel made from ore. Aluminum made from used cans is also 20 times cheaper [1, 3, 4, 16]. It is no coincidence that in developed countries separate bins are installed for household waste: for paper, for iron and aluminum cans, for glass bottles, etc. All this is economically beneficial.

In Ukraine, it has been established that the processing of 400 thousand tons of waste paper will annually replace 400 thousand tons of cellulose and save 100 thousand hectares of forest and agricultural land, 300 thousand tons of cullet will save 200 thousand tons of primary raw materials, worth 70 million hryvnias. Processing of 260 thousand tons of secondary raw materials will save UAH 30 million and significantly reduce imports of plastics. According to the calculations of scientists, already at the first stage of work on waste disposal, up to one million tons of secondary resources can be attracted to economic circulation, additionally increase output by one billion hryvnias, significantly reduce energy costs, and state budget revenues can exceed UAH 250 million [26].

In developed countries, the problems of using secondary resources are solved at the state level. There are successful national programs aimed at minimizing waste generation and ensuring reuse, recycling, safe collection and safe recycling of waste. The European Association for the Recovery and Recycling of Containers and Packaging (ERRA) has been established.

In Ukraine, the problem of collection, processing, and disposal of waste in recent years has received increassingly more attention. The state company Ukrtarapererabotka was created to coordinate the work on waste management. A draft resolution of the Cabinet of Ministers "On the introduction of a system for the processing and disposal of waste as secondary raw materials" has been developed, which provides for the creation of a system for the collection and disposal of used containers and packaging, that would ensure the reduction of the negative impact of waste on the environment and human health, the involvement of secondary material resources, saving primary raw materials, reducing imports of raw materials and products to Ukraine, increasing the output of competitive products [8, 17, 18].

However, the state did not have funds to implement this necessary program. Commercial structures, unwilling to share their excess profits, shift the work of financing waste disposal to the state, and strongly resist the state approach to solving the problem of waste disposal. They initiated the cancellation of two government resolutions adopted in pursuance of the Law of Ukraine "On Waste", which cost the country hundreds of millions of hryvnias.

Meanwhile, world experience shows that the collection and disposal of waste is economically beneficial. The tariffs proposed by the Government for the collection, sorting, transportation, processing, and disposal of used containers are economically justified and beneficial to entrepreneurs. They are 5-10 times lower compared to the tariffs of other countries of the world; however, there are no people interested in this business in Ukraine. It is much easier to make a profit on the supply of drinks in plastic bottles and bags to Ukraine, not worrying about the problem of their processing, and to criticize the authorities for polluting recreation areas and streets with household waste.

According to scientists and environmentalists, today Ukraine needs a strategy that has received the name "greening of the economy" in developed countries, the essence of which is the transition from a defensive concept (identifying and punishing those responsible for violations, fixing the consequences of technogenic impact on nature, humans, plants and animals world) to identify and eliminate the causes of environmental pollution.

Namely such a program a program of greening industrial and agricultural production, built on a systemic principle from local greening of individual installations, enterprises, regions to greening Ukraine as a whole, as well as greening at the interregional and international level, was proposed by scientists and specialists of the Dnieper region.

Their concept of greening is based on the following provisions [14-15, 19, 24, 45]:

- In the era of Ukraine's deep economic crisis, economic and environmental issues must be addressed simultaneously, subject to a single strategy for greening the economy.
- Ecologization of the economy involves focusing attention and resources not on the sphere of consumption, but on the improvement of facilities that are actual or potential sources of environmental pollution.
- The success of ecologization of the economy is largely determined by the availability of personnel sufficiently trained in the field of theory and practice of ecologization and environmental management.
- The creation of a civilized ecological market at the regional level and across the country is a necessary condition for the greening of the economy.

Tactical methods of their implementation are based on a combination of a number of special approaches to the organization of production processes, regardless of the industry where they are carried out (wastelessness through selectivity; local rather than global neutralization of emissions; flexibility of technology; multiple use of resources and energy; resource saving and waste disposal, etc.), with specific regime-technological and instrumental-design methods of implementation (managing production processes using less toxic reagents, minimizing the time of their processing, recycling and closedness of matter and energy flows, combining the processes of transformation and separation of substances, heterogenization of the system, adaptability of technology and equipment, intensification and versatility of environmental technology, etc.).

All over the world, command and repressive methods and environmental authorities, which today are not able to take on the functions of a coordinator, organizer of work on the greening of the economy, are being replaced by an ecological market. Greening the economy is not just another party slogan [20-22, 25]. This is a legislative policy that creates the most favorable treatment for enterprises engaged in the reconstruction of production in order to green it, stimulating the emergence of environmental market, primarily scientific and technical products, equipment, labor, services, etc.

World experience shows the expediency of using the tax press, the system of payments for resources and emissions in such a way that it becomes more profitable for a product manufacturer to solve environmental problems at home, and not in the sphere of consumption [27-29]. If to combine punitive and repressive measures in relation to nature pollutants with economic incentives and encouragement of greening, the latter will become a profitable item in state budget. However, even the greening

policy will not be able to fully ensure the survival of the population in a deep ecological crisis.

An analysis of the complex system "man – production – environment" shows that in order to ensure human survival, the concept of greening should be combined with two others: adaptation of a person to living conditions in environmentally unfavorable conditions and the use of human life support systems in his environment [23, 38].

The first concept involves the development and practical implementation of biomedical and non-traditional methods of prevention, adaptation, and rehabilitation of the population, based on modern scientific achievements and the integration of efforts in the fields of science, technology, education and management in a deteriorating environmental situation in Ukraine [15]. The main directions of its implementation include the following: organizing a system of environmental and education of the population and conducting direct work in environmentally stressed regions using a network of environmental education and the media; performing scientific research on the creation of adaptogens, immunogens, and detoxifiers (mainly of natural origin), methods of their application, technologies and equipment for their production; performing scientific research to systematize known and create new non-drug methods of health building and human adaptation to technogenic impacts, in particular, the development of ways to increase immunological reactivity and reduce risk factors in people exposed to harmful production factors, for those living in areas of high pollution, as well as those professionally related with sources of ionizing radiation or other harmful factors; creation of industrial production of adaptogens, immunogens, and detoxifiers mainly on the basis of Ukrainian raw material sources.

The second concept involves the creation of local life support systems for an ecologically unfavorable habitat. Already now, scientists and specialists in Ukraine have developed a technique for purifying drinking water by flotation, electroflotation, adsorption, electrocoagulation, electrocoagulation, electrodialysis, electrochemical oxidation, membrane methods, etc. Small-sized installations for purifying water, as well as air and food, from toxic substances should be present in every family already today, since the solution of global problems of greening production is not a matter of one decade.

Experts in the field of ecologization have proposed a so-called survival program, the implementation of which gives us a chance to survive. Within the framework of this program, there are a number of works ready for practical implementation, including works on the use of TPP ash, proposed by Canadian specialists. Thirty-two metals can be recovered from the ash lying in the dumps. For each item of the investment program for the greening of the Dnieper region, there are preliminary technological and economic developments.

The Dnepropetrovsk City Executive Committee signed an agreement with the Dutch company "Solid Waste" on the establishment of the company "Special Transport Systems" for garbage collection. The company supplied the city with three trucks with a capacity of 13 cubic meters with a loading capacity of 40 cubic meters after compression, 500 galvanized containers with a capacity of 0.75 cubic meters. Services will be provided not only to residents of the city, but also to commercial structures restaurants, hotels, shops, industrial enterprises. The prospects for the processing of PET bottles, tires, and other waste for the production of consumer goods for the local market and for export, the use of processed products in the construction industry are being studied [15, 19].

The head of the Pridneprovsky Cleaner Production Center names the list of objects of the investment program for the greening of the Dnieper region:

1. Creation of a plant for complex processing with the extraction of valuable metals and coal and the production of building materials from ash and slag of the Pridneprovskaya TPP.
2. Development and implementation of a pilot project for the ecologization of a thermal power plant using new technical solutions at the stage of fuel combustion (plasma illumination of the flame, swirling of interacting flows, forced emulsification of liquid fuel oil, the use of additives, including catalytic ones) and at the stage of flue gas cleaning (use of cyclic supply of energy to electrostatic precipitators, improvement of the design of collecting electrodes, dry dust extraction, etc.).
3. Development and implementation of a pilot project for the greening of a waste incineration plant with the solution of issues of reducing dioxin emissions to sanitary standards, recycling polluted water, using fly ash and slag, and increasing the efficiency of flue gas cleaning.
4. Development of a regional program for industrial waste disposal based on industrial symbiosis.
5. Development and testing of environmental audit methodology at pilot sites.
6. Development of a new technology for the treatment of Dnieper water at the Lomovsky water intake using a two-stage process of co-precipitation of radionuclides, heavy metals, and organic compounds according to the version of the Aquatech enterprise.
7. 7. Creation of the production of medical pectin a sorbent of heavy metals and radionuclides from beet pulp at the plant "Lubnyfarm".
8. Establishment of the production of food pectin at the Gubinikha sugar factory from beet pulp.
9. Development of recipes for food products and organization of their production at the enterprises of the Dnieper region with the introduction of rational pectin additives.
10. Creation of a network of health centers with consulting and diagnostic rooms, exhibitions and sales of means of adaptation and rehabilitation of human.
11. Development and implementation of a methodology for computer diagnostics of technogenic health injuries using mathematical modeling methods.
12. Development and implementation of a pilot project for the treatment of wastewater from dairy plants with the production of casein.
13. Development and implementation of a local wastewater treatment plant for a meat processing plant.
14. Development and implementation of technology for reclamation of arable lands with their release from excess radionuclides, heavy metals, and pesticides using RH technology.
15. Development and implementation of a pilot project for the utilization of spent activated sludge from treatment facilities using P5 technology and vegetable protein production technology.
16. Development of theoretical foundations for increasing the purity of production for processing industries.
17. Establishment of a mobile laboratory for express analysis of air and liquids as part of the cross-border transport study program.
18. Creation of a pilot production of environmentally friendly furniture using honeycomb structures and wood-polymer bearing elements.
19. Study of radon hazardous areas in Dnepropetrovsk and development of a program to eliminate local radon pollution.
20. Development and implementation of the program "Greening the home".
21. Creation of an interuniversity faculty of environmental education for the cycle "Environmental management and business. Market ecology".
22. Creation of an international permanent seminar for training in the direction of "Constructive ecology and business".
23. Development and implementation of the regional program "Conversion and Ecology".

The results of environmental monitoring were regularly published in the city press. Today, this work is practically reduced to zero. The funding situation is not better.

3.1 Environmental Crimes of Russia on the Territory of Ukraine

The war in Ukraine leaves behind not only many thousands of human tragedies. When the fighting ends, people will have to deal with a whole range of environmental problems, environmentalists warn [15]. Experts talk about the irreparable damage that is caused to nature. The war affected vast territories of Ukraine. These regions contain large storage facilities for hazardous waste. If the military destroys them, it could seriously pollute the waters of very large rivers. War increases the likelihood of forest fires, but at the same time, now is spring, the time when animals bring offspring. The high intensity of forest fires not only harms people and leads to air pollution, but also negatively affects biodiversity[39].

One of the wartime threats to wildlife is the targeted destruction of ecosystems and reserves. Armed conflicts become a difficult test for animals as well. According to estimates by the Ukrainian Ministry of the Environment, about 3 million hectares of protected areas are under threat of destruction due to hostilities [30]. As a result of the war unleashed by fascist Russia, a huge number of crimes against the environment have been officially recorded.

In the light of cities destroyed to the ground, brutal murders and hundreds of thousands of broken lives, these are far from all the crimes of rashists; few people think about the harm caused to nature. But in fact, it concerns everyone and will inevitably affect us for many years to come [40]. How did the war affect the environment, what could be the consequences and will it be possible to hold Russia accountable – this is acute question today.

3.2 Leakage of Hazardous Substances and Land Strewn with Toxic Waste

As of April 7, the NGO Ecodia collected data on crimes against the environment. This was reported to us by Evgenia Zasiadko, head of the NGO climate department. This entire list can be divided into categories: energy security, damage to industrial facilities, nuclear hazard, impact on ecosystems, and other things that happened as a result of hostilities (for example, a reservoir is polluted due to a bridge being blown up) [30].

According to Ecodia and the Ministry of Environmental Protection and Natural Resources of Ukraine, we learn about other crimes committed by Russia on the territory of Ukraine. Among the most resonant, there is the ammonia leak at the Sumykhimprom enterprise, which occurred on March 21. Although the poisonous cloud did not reach Sumy, the residents of Novoselitsa appeared at a big risk (it was impossible to leave the buildings, the windows had to remain closed).

Already twice rashists did a shoot to a tank with nitric acid in Rubizhne, Luhansk region. Emissions of nitric acid and its vapors threaten people and animals with mucosal burns.

On March 3, in the village of Chaiki near Kyiv, a shell hit a train with polyurethane foam, which threatens not only with direct poisoning, but also with acid rain.

On March 14, due to the shelling of the treatment facilities of the Vasilevsky water supply and drainage operation, sewage from the city enters the Dnieper without any treatment.

The shelling did not bypass also energy infrastructure. The Zolote mine was flooded, the Avdeevka coke plant and the oil refinery in the Luhansk region were ‘covered’ with Grads. Activity in the Chernobyl exclusion zone is radioactively dangerous: according to the Ministry of Environment, more than 30 fires occurred there on an area of more than 8,700 hectares. This may result in the spread of radionuclides outside the exclusion zone [10].

And that is not the final list. More than 1,400 enemy missiles have already been fired across Ukraine, and almost 5,000 pieces of Russian military equipment of various types have been destroyed. These are not just numbers, but toxic and carcinogenic garbage that is now polluting our soils and waters.

Let us not forget about the animal world. After all, these are not only pets closed in apartments (there are many such cases for various reasons, however), but also shelling of zoos. For example, on April 5, the private zoo Feldman Ecopark in Kharkov was destroyed. This is also the remaining without access pet shelters.

Also, there is intervention of the war in the life of forest and steppe animals and birds of the sky in the most crucial period for supporting populations [31-37]. Because of the fighting, migratory birds returning from wintering are forced to change migratory routes and come under fire.

According to the Ukrainian Conservation Group, 44% of the most valuable nature reserves in Ukraine are currently under the temporary control of Russian invaders or inaccessible. Askania-Nova in the Kherson region is worth mentioning! Rashists plunder our forests: they build fortifications from Ukrainian wood, lay infrastructure, heat themselves and cook both looted products and game shot in our forests on firewood.

The Rome Statute provides for liability for these crimes. Crimes against the environment in the long run will lead to an increase in mortality, because people die not only from bombings and bullets, but also from environmental pollution. Through water and soil, poison gets into food – for example, heavy metals. All this, of course, will affect health.

Unfortunately, nature is defenseless against war. While the whole world is puzzling over how to avoid an ecological catastrophe, here and now the enemy is waging his bloody war against Ukraine, bringing the country and the world closer to disaster. Evgenia Zasiadko from Ecodia commented on the environmental situation in Ukraine in the following way: “We can only record crimes against the environment, but it is very difficult to assess their scale. In addition, environmentalists cannot go to the scene and assess the situation, do tests and the like” [2].

The Ministry of the Environment, having enlisted the support of the public, is actively collecting all the facts of environmental crimes in Russia. This will open up an opportunity for Ukraine to appeal to international courts so that the aggressor state still pays not only for the damage caused to infrastructure and people, but also for the damage to the environment. It shuld be mentioned that one can monitor the current state of the environment in Ukraine using SaveEcoBot, an environmental chatbot with pollution data.

According to Yevgenia Zasiadko, the State Environmental Inspectorate is now calculating the damage caused to ecosystems: “The State Environmental Inspectorate has already made the first calculations of how the war affects the pollution of land resources. In the first three weeks, this is about $77 million in losses,” Evgenia says [30].

Yevgenia Zasyadko also reminded that the war has actually been going on since 2014, and even before February 24, environmentalists considered the occupied territories potentially dangerous for the environment, in particular, due to the flooding of mines in the Donbass, which leads to the ingress of heavy metals into groundwater [30].

What is happening can be safely called ecocide, which affects not only Ukraine. It should be noted that the term “ecocide” was presented to international lawyers in 2021 by the Stop Ecocide Foundation. Ecocide is recognized as an international crime along with war crimes, crimes against humanity, genocide and the crime of aggression. The Ecodia NGO is convinced that the seizure of the Chernobyl and Zaporozhye nuclear power plants, shelling of infrastructure facilities, industrial enterprises, which can cause environmental pollution, pollution of air, soil, water areas of the Black and Azov Seas, underground and surface waters, can also be considered ecocide.

3.3 Poultry Catastrophe

The poultry farm “Chernobaevskaya” was left without the opportunity to feed the chickens. This will lead to the extinction of the bird and the impossibility of its disposal, as well as the disposal of warehouse stocks of eggs. In fact, 3 million chickens are dying of starvation due to the fact that feed cannot be delivered to the poultry farm.

It is impossible to dispose of a bird. It is not admissible to to bury it in the ground, according to sanitary standards. The slaughter center cannot operate because there is no electricity, and it cannot cope with such a large volume of birds in such a short period of time [46]. Incineration is also not a way out of the situation, because special furnaces are needed for this. If the dead chickens begin to rot, this can lead to poisoning of the earth and air and, accordingly, outbreaks of diseases.

In addition to Chernobaevskaya, two poultry farms in the Kharkiv region, Bogodukhovskaya and Okhoche of the Avangard agricultural holding, which is part of the Ukrlandfarming group of companies, found themselves in a similar difficult situation. The largest incubator in Europe in the village of Makarov, Kyiv region, also turned out to be disconnected from electricity. The situation at poultry farms can provoke not only an ecological collapse, but also lead to a shortage of products in Ukraine. Before the war, Ukrlandfarming supplied up to 30% of the Ukrainian market with chicken eggs, according to the website of the agricultural holding [13].

Now, together with the local authorities, work is underway on how to organize the delivery of products to the townspeople. Fuel is essential to keep the factory alive and avoid an environmental disaster. Much earlier, the decision to distribute chickens was made by the Avis-Ukraine company in the Sumy region. The enterprise began to give poultry and eggs to local residents (20 eggs and 10 live chickens in one hand) as humanitarian aid.

3.4 Burning Tank Farms – the Threat of a Man-Made Disaster

The ecological collapse in Ukraine due to hostilities was talked about even before the problem with poultry farms. For the first time, environmentalists' fears were voiced on February 27 due to an enemy missile hitting an oil depot in the village of Kryachki, Vasilkovsky community, Kyiv region. Local residents were immediately asked to close the windows. Russia's actions pose a threat of a man-made disaster not only for Ukraine, but for the whole of Europe. According to preliminary estimates, environmental damage from a fire at an oil depot is about UAH 810 billion [2]. The next day, the Russian military blew up an oil depot in Akhtyrka, Sumy region. Now it is difficult to assess the damage caused by the occupiers to the ecosystem of the Sumy region.

On March 3, another shell hit the oil depot during shelling of the Aistra Combine territory. As a result, a tank group with a total volume of 5 thousand cubic meters of diesel fuel caught fire. The most dangerous in such man-made disasters is the ingress of harmful substances into the soil and groundwater. Usually, a significant excess of the amount of carcinogenic substances that threaten the health of local residents is recorded [9]. In order to avoid additional risks, it is necessary to check the water in the wells.

3.5 Ecosystem: Risks and Consequences

The issue of poultry farms is important, but it is not the most critical now. To prevent a pestilence of birds and avoid a humanitarian catastrophe, many owners of poultry farms are already distributing chicken meat. Explosions and fires at oil depots are a real environmental problem for certain territories, but namely possible accidents at nuclear power plants are a disaster for all mankind.

According to many experts, the most severe consequence of the war will be radioactive contamination of the environment with the isotopes of strontium-190, cesium-117, iodine-131, carbon-14, plutonium-239 when nuclear storage facilities are depressurized [30]. Humanity cannot allow this. Military operations in Ukraine already today have a large-scale impact on the entire ecosystem of the country. They lead to violation of the relief, destruction of the soil, pollution and poisoning of air and water, destruction of flora and fauna [42, 43]. Constant fires blazing these days in different regions also lead to terrible consequences.

Destruction of the infrastructure involved in water supply and sanitation, chemical pollution, power outages of facilities discharging wastewater pose a threat not only to water resources, but also to the ecosystem as a whole.

The war in Ukraine is a future continuous catastrophe for the whole continent. From an environmental point of view, there is no local war, since the consequences of even the smallest military action spread over the whole world and, as a result, affect the health and life of all mankind. The environment remains an unnoticed victim of war.

3.6 World Reaction to Ecocide in Ukraine

According to PAX, the largest peacekeeping organization in the Netherlands, from February 28 to March 3, the fifth UN Environment Assembly was held in the capital of Kenya, Nairobi, which also discussed the war in Ukraine. 108 civil society organizations signed a statement calling on member states of the assembly to monitor the impact of the war on the environment in cooperation with experts and public groups.

More broader was the initiative of more than 1,000 experts and non-governmental organizations who joined the global call for Russia to end the war and agreed to help monitor the environmental situation in Ukraine. They also called on the International Criminal Court, UN human rights bodies and UNEP (United Nations Environment Program) to investigate and monitor possible violations of international environmental law and human rights, and to ensure that violators are held accountable.

According to Evgenia Zasiadko, the Ministry of the Environment of Ukraine is negotiating to suspend Russia's participation in international agreements (for example, in the UN Framework Convention on Climate Change) [30]. So if the issue of ecology really worries the world, Russia will also pay for crimes against the environment.

4 Conclusion

Environmental protection and rational use of natural resources are priority tasks, since life on Earth, the health and well-being of every person depend on their solution. Under these conditions, specialists are required to be competent in this area, the task facing them is to assess the current situation in time and correctly, depending on the current situation, optimize economic activities, thereby choosing the tactics of interaction between man and nature, develop a strategy for protecting the environment and raise it to the management level, even despite hostilities in the country.

In modern conditions, the need to develop a theory of social and environmental management and put it into practice is of particular relevance, as evidenced by the environmental situation and the lack of scientific study of the concepts of optimal development of society, theories for managing the natural environment. Management of optimization of socio-ecological processes needs to find fundamentally new approaches.
The necessary environmental monitoring is a multi-purpose information system and an integral part of control, which includes not only observation and obtaining information, but also elements of decision-making and management. The concept of a system of social and environmental monitoring can provide management activities to optimize social and environmental

processes with a reliable regulatory information and analytical base with feedback, that allows government bodies to improve the quality of management of these processes.

Today, in wartime conditions, speaking of plans for the post-war restoration of the economy and the social sphere, one should not forget about solving the catastrophic environmental problems that have arisen. Without addressing these problems, they may eventually undermine efforts in other areas.

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Primary Paper Section: A

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