



**ENVIRONMENT
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The rule of law for the protection of the environment

THE NATURE PROTECTED FUND IS A CONTRIBUTION INTO PRESERVATION OF LIFE ON EARTH

White Paper



The nature protected fund is a contribution into preservation of life on Earth

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The most effective mechanism for the biodiversity protection on the Earth is the preservation of species and ecosystems in the places of their natural dispersal. Creation of protected areas is a globally acknowledged tool for the protection of biodiversity. Whereas in Ukraine, the nature protected fund (NPF) is still only a partially effective tool for the preservation of biodiversity. On one hand, in the areas included in the NPF, there is usually no longer any threat of building up, the formation of landfills, mining, and other types of economic activities that are destructive to nature. On the other hand, administrative obstacles do not allow to establish a NPF where it is necessary for the reasons of biodiversity protection, and even after establishment, they do not guarantee a surveillance over erratic violations of environmental legislation: grass burning, hunting, uncontrolled recreation, etc. For this reason, Ukraine does not provide protection for a sufficient number of areas, therefore, does not guarantee the fulfillment of tasks in preserving biodiversity and the environment that is safe for human life and health.

This White Paper is intended to help in the implementation of proper reforms in the field of nature protected fund. The document focuses on selected issues - shortcomings of creation of the NPF and the lack of management plans, without which the creation of the NPF itself does not lead to real actions for the protection and recovery of populations of the species for the protection of which the NPF objects were created. The document contains environmental and economic arguments for the proposed legislative changes adoption.

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THE LIST OF ABBREVIATIONS.

MENRU – the Ministry of Environment and Natural Resources of Ukraine

NNP – National Nature Park

NPF- nature protected fund

RLP – regional landscape park

EU – European Union

IUCN – the International Union for Conservation of Nature

WWF – World Wide Fund for Nature

The purpose of new policy

The purpose of this document is a modernized mechanism of nature conservation and safe environment for people on the territory of Ukraine through the effective protection of natural areas on state-owned lands.

Section 1. Biodiversity losses of the Earth

The biological resources of the Earth are vital for the economic and social development of humanity. However, human activity has seriously damaged the condition of the environment. Desertification continues at an alarming rate and global climate change is accelerating, insects on which pollination of plants depends die off; algae in the oceans, enriching the atmosphere with oxygen, vanish. The share of areas occupied by natural ecosystems has unprecedentedly decreased. In turn, the loss of habitat quickly leads to the extinction of biological species, which is now progressing on all continents. These processes are destructive for life on Earth, and at this stage of technology and science development they should be recognized as unconvertible: humanity is not able to stop the transformation of fertile lands into the deserts and restore extinct species.

Decrease in quantity and extinction of species. Biodiversity loss is recognized as one of the major global environmental issues. According to the International Union for Conservation of Nature (IUCN), from 10 to 50% of well-studied higher taxonomic groups are endangered, including 23% of mammals, 12% of birds, 25% of conifers. This problem is even more acute for Europe - more than 43% of European bird species have unfavorable conservation status, 12% of butterfly species are very rare or have significantly reduced their quantity, 45% of reptile species and 52% of freshwater fish species are endangered¹. Scientists consider the current extinction as the fastest known to science².

The quantity of species that are not yet endangered, but nevertheless quickly decrease, is also significant and may soon be on the ragged edge. Thus, according to the Living Planet Index³, developed by the World Wide Fund of Nature (WWF), from 1970 to 2000, the quantity of vertebrates in the animal world has decreased by 40%. Over the past few centuries, as a result of human activity, the extinction rates of species have increased almost 1000 times compared with the usual rates on various phases of the Earth's history. Negative changes occur not only at the species level: ecosystems have suffered and continue to suffer significant losses. In Western and Northern Europe, 60% of wetlands are lost, natural forests are preserved only in small areas.

Losses of natural ecosystems. The main consequences of the human impact on the environment are the destruction and transformation of natural ecosystems, the over-exploitation of natural resources, and the pollution of the environment. Global climate change has become a powerful factor in environmental change, accelerated by anthropogenic factors. Even when the area of an ecosystem is not reduced, significant degradation may occur, and first of all it is the decrease in biodiversity.

Global climate change has become a powerful factor in environmental change, accelerated by anthropogenic factors. This factor has various consequences: changes of the habitats of plant and animal species, migration paths, changes in the life cycles of species, their productivity, and relationships with other species etc. As a result, changes occur at the genetic, population and ecosystem levels. Such changes may adversely affect the economics of the nation-states (for example, due to a drop in soil fertility they affect the agriculture, due to the decrease of fish stocks - the fisheries, due to the temperature and rainfall changes - the tourism industry, etc.). The ecosystem functions of biodiversity can also be changed -

¹ Kostiusyn V.A., Hubar S.I., Domashlinets V.H. The Development Strategy for Monitoring Biological Diversity in Ukraine. - Kyiv, 2009. - 60 p.

² Kolbert, Elizabeth (2014). The sixth extinction : an unnatural history. New York: Henry Holt and Co. 332 p.

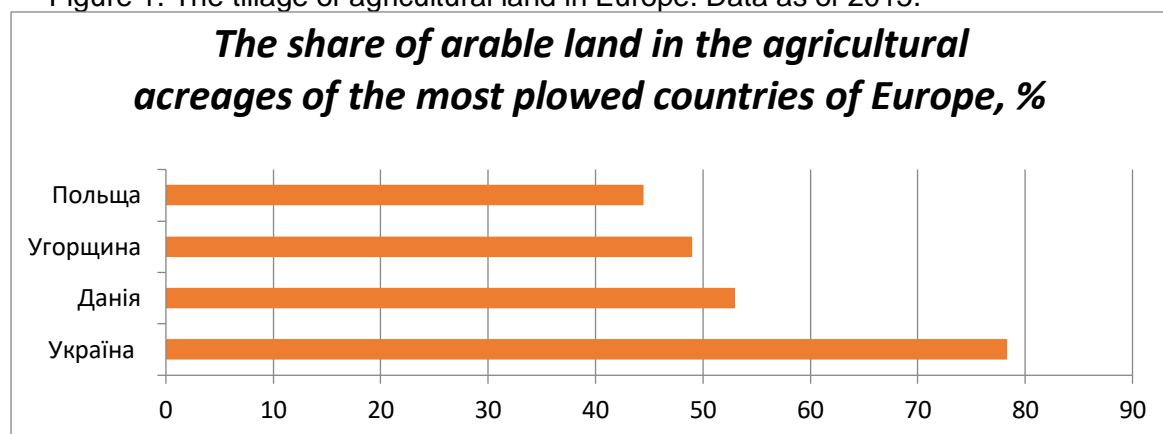
³ <http://www.livingplanetindex.org/home/index>

deposition of greenhouse gases, oxygen balance reduction in the atmosphere, natural purification of ground waters and others⁴.

Biodiversity losses in Ukraine. The problem of biodiversity loss is relevant for Ukraine, despite the fact that Ukraine occupies 5.7% of the area of Europe, at least 35% of European biodiversity is represented on its territory (more than 70 thousand species of animals and plants). According to experts, there are at least 8.7 million species in the world, no more than 1.7 million of which are currently described⁵. Therefore, the maximum quantity of diversity in Ukraine can be much greater. Lots of species and habitats are found only on the territory of our state and nowhere else in the world (it is suffice to mention the unique nature of the Crimea, the Podillia, Donetsk ridge, the Dnipro sands and the cretaceous flora of Slobozhanska Ukraine).

Unfortunately, a significant part of the natural and semi-natural landscapes of Ukraine is rapidly deteriorating under the influence of human activity. Ukraine has the largest share of agricultural and industrial land among European countries⁶. Tillage in Ukraine is one of the largest in the world and reaches 57% of the country's territory and 78% of the agricultural land area^{7,8}. Despite the efforts of the state government to reduce the level of tillage, the share of arable land in the structure of agricultural land is increasing. If in 2000 it was 77.9%, in 2013 it was 78.3%⁹. In Europe, Denmark (53%), Hungary (49%) and Poland (44.5%) have the highest levels of tillage (see Fig. 1)¹⁰.

Figure 1. The tillage of agricultural land in Europe. Data as of 2015.



Poland, Hungary, Denmark, Ukraine

The figure is prepared by the authors on the basis of research about the usage of agricultural land in the Kirovohrad region and its fertility. Source: Synytskyi S.L. etc. Agricultural land usage in the

⁴ Kostyushyn V.A., Hubar S.I., Domashlinets V.H. The Development Strategy for Monitoring Biological Diversity in Ukraine. - Kyiv, 2009. - 60 p.

⁵ Mora, C., Tittensor, D. P., Adl, S., Simpson, A. G. B. & Worm, B. How Many Species Are There on Earth and in the Ocean? PLoS Biol. 9, e1001127 (2011).

⁶ Land Fund of Ukraine as a part of the world land resources and the current condition of its use. Part 1 // Theoretical Foundations of the State Land Cadastre: Study guide/ M. G. Stupen, R.Y. Hulko, A.Yf. Mikula and others; Under total ed. N.H.Stupen. - 2nd edition, stereotypical. - Lviv: "New World-2000", 2006. - 336 p.

⁷ Havrylenko A.P. Ecogeography of Ukraine. Study Guide. - M. - 2008, - 646 p.

⁸ <https://www.cia.gov/library/publications/the-world-factbook/geos/up.html>

⁹ Hordiichuk A. Regulation of changes in the structure of agricultural land: the institutional principles // Economist, №9. - 2015.

Sinitsky S.L. etc. Agricultural land use in the Kirovograd region and their fertility // Scientific works of the Kirovograd regional state design and technological center for the protection of soil fertility and product quality. Volume 81. Issue 68. - P.8-11.

¹⁰ Synytskyi S.L. and others. Agricultural land use in the Kirovograd region and its fertility // Scientific works of the Kirovograd regional state design and technological center for the protection of soil fertility and product quality. Volume 81. Issue 68. - P.8-11.

Natural and semi-natural landscapes make up no more than 30% of the country's area. During the past 500 years, Ukraine has lost more than 2/3 of its forests and now occupies the second last place in Europe. The total area of the forest fund of Ukraine is 10,800,000 ha, the forest cover of the territory is 15.7%¹¹. However, this area includes all clearings and young plantations that do not really play the full role of forests for the environment, as ecosystems. At the same time, almost all natural ecosystems are classified as forest or agricultural land. Thus, the majority of natural terrestrial ecosystems are located in Ukraine in the categories of land in which they face daily human activity. Timber harvesting continues in the forests, planting trees continues in the steppe areas, landfills or ponds are created in ravines and gorges, peat is mined in the marshes, and hydroelectric power stations are built on mountain rivers.

In addition, the fragmentation of natural ecosystems and landscapes occurs due to the development of infrastructure of various sectors of economics - construction of roads, pipelines, reservoirs, various irrigation structures. For example, steppe biotopes, currently not more than 3% of the area of Ukraine, are fragmented into more than 20,000 individual lots, the degradation of which is accelerating due to the loss of communication with other lots and the separation of small fragments¹².

A threat to biodiversity is the expansion of increasing quantity of alien species in Ukraine. These types of plants now make up 16% of the total flora of the country¹³. There are about 60 invasive species in the Black and Azov Seas. Alien species cause significant economic damage. In that way, the appearance of the tamarisk-mnemiopsis in the Black Sea, which is a competitor to many species of commercial fish and eats their caviar, caused multimillion-dollar losses to fisheries because of the significant decrease in fish catches.

All of the above means that the current situation does not guarantee the preservation of biodiversity in Ukraine, but it obviously leads to irretrievable loss of ecosystems and species.

Consequences of biodiversity loss for humans

Due to the cumulative effect of negative anthropogenic factors, more and more animal and plant species in Ukraine are endangered. The extinction of these species, in turn, directly affects the life and welfare of the population and the development of the state.

In particular, the production of large amount of products depends on pollinators (bees, flies, butterflies, other types of insects and certain species of vertebrates - birds, bats), namely 75% of the leading food crops worldwide. Some of these crops — especially vegetables and fruits — form the basis of the human diet. Healthy populations of wild pollinators affect crop yields in both large-scale intensive cultivation and small farming. The economic dimension of pollination is such that it annually helps crop producers to save \$ 235-577 billion and leads to lower prices for consumers due to regular supply of products¹⁴.

Another example is the value of soil biodiversity, which affects the structure, physical and chemical composition of soils. Soil organisms are necessary to support and regulate the most important processes in the ecosystem, such as carbon sequestration, greenhouse gas absorption and nutrient absorption by plants. They are a potential resource for medical use, as well as for new biological control of pathogens and pests¹⁵.

¹¹ <http://green-tour.org.ua/page/problema-vtrati-bioriznomanitya>

¹² Vasyliuk A. The problems of inventory of steppe biotopes in Ukraine // Biotopes (habitats) of Ukraine: scientific principles of their research and practical results of inventory. (Workshop materials. Kyiv, March 21-22, 2012.) / Edited by Ya.P. Didukh, A.A. Kahal, B.H. Prots. - Kyiv-Lviv, 2012. – p. 56-61.

¹³ Kostyshyn V.A., Hubar S.I., Domashlinets V.H. The Development Strategy for Monitoring Biological Diversity in Ukraine. - Kyiv, 2009. - 60 p.

¹⁴ http://awsassets.panda.org/downloads/zhyyva_planeta2018.pdf

¹⁵ http://awsassets.panda.org/downloads/zhyyva_planeta2018.pdf

Indirectly, preserving the ecosystem stability is a guarantee of survival for ourselves too, because we definitely can not live without water, air and soil, especially without soil, which is an ecosystem by itself. Actions aimed at preserving nature are preserving the habitat for the humanity itself.

2. Section 2. The social activity for the preservation of biodiversity

In response to global threats, the United Nations Environment Program (UNEP) initiated the preparation of the Convention on Biological Diversity¹⁶, which since 1992 was signed by 168 states, including Ukraine¹⁷. At the same time, two UN framework conventions on combating desertification¹⁸ and on climate change¹⁹ were prepared. All three conventions are closely intertwined: climate change accelerates the loss of biodiversity (plants, soil-forming organisms), causes loss of soil cover, which leads to desertification; and desertification is becoming a powerful factor in influencing global climate changes. Unfortunately, nowadays all these processes are easy to see on the example of Ukraine. Major plowing and deforestation of the area led to the degradation of about 30% of arable land. Every year, humanity continues to lose 12 million hectares of land and 75 billion tons of fertile soil, of which 20 million tons of grain could be obtained. About 1,500,000,000 people directly suffer from desertification, land degradation and drought, and about 40% suffer from water scarcity. According to the UNCCD, every minute in the world 10 hectares of soil are degrading; 23 hectares of land face desertification; carbon emissions increase by 6,150 tons; 16 people die of starvation, 12 of them are children²⁰. Given the current climatic conditions, the restoration of the fertility of the most fertile lands (chernozem and dark chestnut soils of the steppe zone) is no longer possible and there is a rapid desertification now, annually increasing the area of barren land.²¹ In 2002, at the conference of the parties to the Biodiversity Convention (the Hague), as well as at the World Summit on Sustainable Development (Johannesburg, 2002), it was decided to achieve a significant reduction in the rate of biodiversity loss at the global level by 2010²². Biodiversity targets had not been achieved by 2010 at the global level, that is, none of the countries in the world was able not stop the loss of biodiversity on its territory.

In 2016, at a meeting of the Parties to the Biodiversity Convention (Cancun, Mexico), a declaration²³ was adopted, which determined that the protection of biodiversity is inseparable from resisting global climate changes.

The diversity of genes, species and ecosystems continues to decrease, as the pressure on biodiversity remains constant or increases, mainly due to the human factor. The growth of the population of the Earth and, accordingly, the increase in the proportion of the population living below the poverty line, does not allow it to participate actively in the protection of biodiversity,

¹⁶ According to the definition of the Convention, "biological diversity" is "the variability of living organisms from all sources, including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes which include them; this term includes diversity within a species, between species, and ecosystem diversity." Thus, despite the popular perception of this term, it means much more than just the diversity of species of living organisms.

¹⁷ Convention on Biological Diversity of 1992 - http://zakon3.rada.gov.ua/laws/show/995_030

¹⁸ UN Convention to combat desertification in those countries that suffer from severe drought and / or desertification, especially in Africa dated 06.17.1994 - http://zakon2.rada.gov.ua/laws/show/995_120

¹⁹ United Nations Framework Convention on Climate Changes dated 05/09/1992 – http://zakon3.rada.gov.ua/laws/show/995_044

²⁰ Zero Net Land Degradation. A Sustainable Development Goal for Rio+20. To secure the contribution of our planet's land and soil to sustainable development, including food security and poverty eradication // UNCCD Secretariat policy brief. May 2012. - Ediouro Grafica e Editora, Brazil. - 32 p.

http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/UNCCD_PolicyBrief_ZeroNetLandDegradation.pdf

²¹ Kolmaz U.T., Rakoid A.A., Protsenko L.D., Lehka A.V. Assessment of land degradation and desertification processes: global and domestic experience // Agroecological Journal, 2015, No. 1. - p. 8-20.

²² Kostyshyn V.A., Hubar S.I., Domashlinets V.G. The Development Strategy for Monitoring Biological Diversity in Ukraine. - K: NECU, 2009. - 68 p.

²³ <https://www.cbd.int/cop/cop-13/hls/in-session/cancun-declarationdraft-dec-03-2016-pm-ru.pdf>

because the number one issue remains life support. Life support itself is often realized at the expense of natural resources. The scientific community predicts further habitat loss and high rates of species extinction in this century, if current trends continue, with negative consequences for society. Unless urgent actions are taken to counteract existing trends, a wide range of services provided by ecosystems that rely on biodiversity can be quickly lost. On the other hand, decisive action to assess and protect biodiversity will provide many benefits, including through improved health, improved food security and poverty reduction. It will also help slow climate change by increasing the capacity of ecosystems to store and absorb more carbon, which in turn will help people adapt to climate change, adding the resilience to ecosystems and making them less vulnerable. Thus, protecting biodiversity is a reasonable and cost-effective investment in reducing risks for the global community.

Biodiversity conservation, as a natural mechanism for maintaining the living conditions of the humanity, lies at the heart of the possibilities for sustainable development and the economics in the future.

3. Section 3. Establishment of a nature protected fund is the main tool for preserving biodiversity

In 2010, concerned about the lack of success in stopping the loss of biodiversity under preliminary purposes, the Parties to the Convention adopted the Strategic Plan for the Conservation and Sustainable Use of Biodiversity for 2011-2020. The plan is designed for 10 years and provides that all countries and process owners will take measures to conserve biodiversity and the benefits they provide to people. Within the framework of the Strategic Plan, 20 ambitious but attainable targets were adopted, known as the Aichi Biodiversity Targets²⁴. From the moment of its coming into effect, this Strategic Plan became the main document in the field of the protection of life on Earth, which humanity must fulfill until 2020.

The most effective mechanism for the protection of biodiversity is the preservation of species and ecosystems in the places of their natural habitat. The creation of protected areas is a globally recognized tool for biodiversity protection. Targets No. 11 and No. 14 of the Strategic Plan are devoted to the creation of such areas:

Target No. 11. *By 2020, at least 17% of terrestrial and inland water ecosystems and 10% of coastal and marine areas, especially areas valuable for biodiversity and ecosystem services, are saved due to the establishment of an ecologically representative and well-combined system of protected areas and other conservation measures, and integrated into wide sea and terrain landscapes.*

Target No. 14. *By 2020, ecosystems that provide basic services, including water-related services, and contribute to health, well-being and welfare, will be restored and protected, taking into consideration the needs of women, indigenous and local communities, poor and vulnerable people.*

The implementation of these ambitious, but crucial for humanity, tasks in Ukraine is possible only through the creation of areas of the nature protected fund (NPF). After adoption of the Law of Ukraine "On the Nature Protected Fund of Ukraine"²⁵ in 1992, the creation of such areas became the main mechanism for the protection of biodiversity in Ukraine. The mechanisms for the protection of species listed in the Red Data Book of Ukraine, the implementation of the tasks of other international agreements on nature protection (Bern, Ramsar Conventions and others) are confined to the creation of the NPF, because it is this mechanism that provides the ability to provide conservation status and certain management for specific areas important for nature conservation.

As of Jan.1, 2017, the nature protected fund of Ukraine had 8,245 areas and objects with a total area of 4,318,000 hectares within the territory of Ukraine (the actual area is 3,985,000 hectares) and 4,02500.0 hectares within the Black Sea. The ratio of the actual area of the nature protected fund to the area of the state ("reserve index") is 6.6%²⁶ (Fig. 2).

²⁴ <https://www.cbd.int/undb/media/factsheets/undb-factsheet-sp-ru.pdf>

²⁵ <http://zakon0.rada.gov.ua/laws/show/2456-12>

²⁶ http://menr.gov.ua/images/blog/news/27_04_2015/Forma_4_DKPZF.xlsx

Figure 2.**The NPF of Ukraine on the dry land, 2017**

The NPF of Ukraine on the dry land, %

The areas, which are not reserved, %

The NPF in the territorial seas, 2017

The NPF in the territorial seas, %

The water area, which is not reserved, %

The figure is prepared on the basis of the MENRU data. Source link: http://menr.gov.ua/images/blog/news/27_04_2015/Forma_4_DKNPF.xlsx

The quality composition of the NPF is very diverse, because at different times (since 1919), the NPF included areas with no special natural value - artificial typical forests, plantations of agricultural crops; some National Nature Parks included localities and agricultural land²⁷. In particular, in the NNP "Podilski Tovtry" unnatural areas account for 85%²⁸. According to preliminary expert estimations, the real share of natural areas covered by the NPF is about 6% of the area of Ukraine. Therefore, achievement of the Aichi targets is still far away.

Within the EU, the present-day nature protection is based on the Natura 2000 network, which is the network of nature protected areas (including almost all national nature protected areas existing in countries), where management plans have been implemented for the conservation of species of plants, animals and habitats protected within the EU. The creation and operation of the network is obligatory for all EU countries. According to official information, the EU countries spend about 5.8 billion euros in total annually to support the operation of Natura 2000, whereas the network itself generates ecosystem services amounting to 200-300 billion euros²⁹. The management plans are funded by the state and are constantly updated to ensure adequate and reliable protection of valuable natural facilities. Before the introduction of the EU environmental legislation, the implementation of environmental measures in Ukraine is possible only in the areas of the nature protected fund (NPF), as provided for by the law of Ukraine. Generally, the nature protected areas of the national categories cover 21% of the area of the EU countries (100,181 areas)³⁰, Natura 2000 areas, which require management plans, make up 18% of the EU area (27,393 areas), and this is three times more than the NPF

²⁷ Unfortunately, in many cases, the creation of the NPF was to fulfill the formal instructions of the higher state authorities. Most of the NPFs were established in 1968, 1979, 1983, and 1994, when orders were sent to the regions to increase the area of the NPF. In most cases, the creation of the NPF was not accompanied by the research work, but on the contrary, it looked like a quick search of land not suitable for commercial use in order to fulfill the orders in a rather formal way. Fortunately, the areas which are of low commercial interest are really usually valuable from the point of environmental protection.

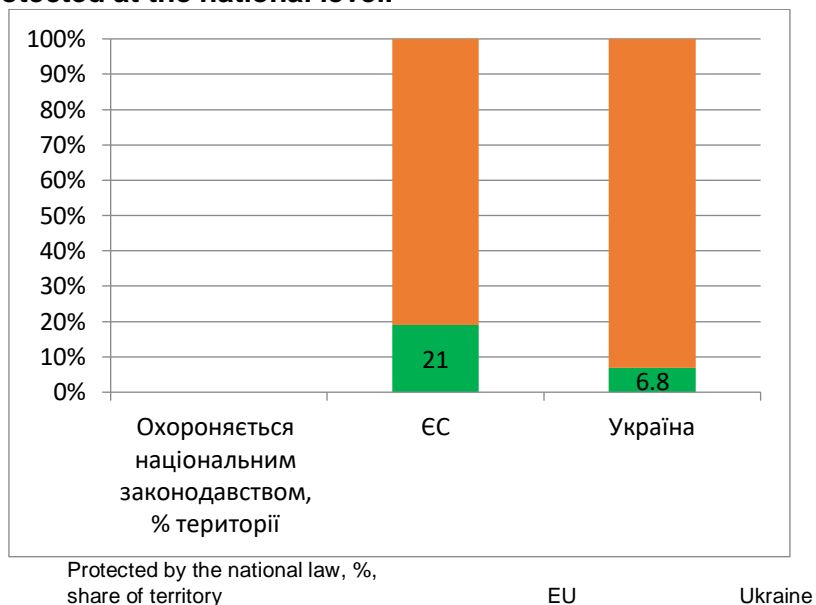
²⁸ Vasyliuk O., Kolomytsev H., Shyriaieva D. On the inclusion of anthropogenic areas into the nature protected fund // Proceedings of the International Research and Practical Conference "Nature Study Researches on Podilia", dedicated to the 10th anniversary of the Nature Studies Faculty of Kamianets-Podilskyi Ivan Ohienko National University. - Kamianets-Podilskyi: "Printing house Ruta" LLC, 2014. - p.95-97.

²⁹ http://ec.europa.eu/environment/nature/natura2000/financing/index_en.htm

³⁰ Protected areas in Europe - an overview. EEA Report No 5/2012.EEA, Copenhagen, 2012/ - 136 p. - <https://www.eea.europa.eu/publications/protected-areas-in-europe-2012>

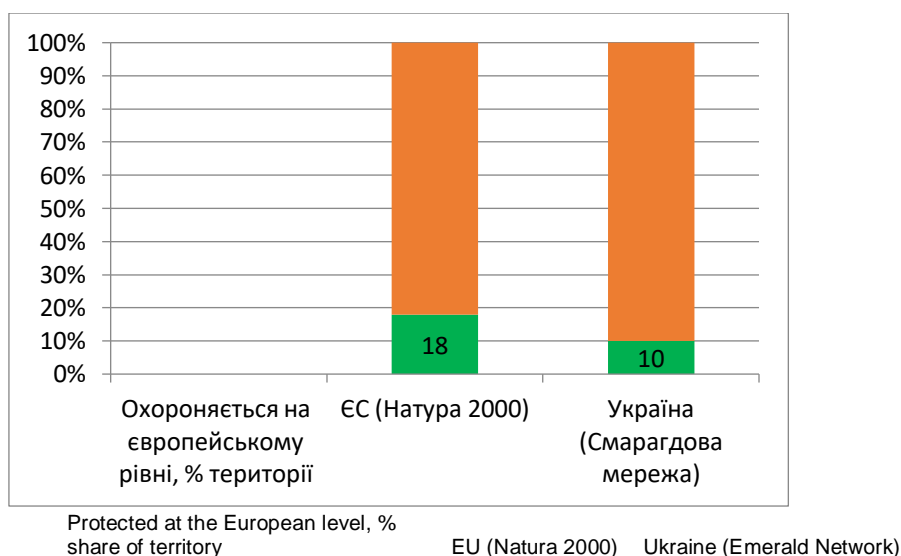
in Ukraine (see Fig. 3 and Fig. 4). In general, as of 2017, there are 127574 nature protected areas of all types in the EU, which is 25.6% of the EU area³¹. Therefore, the activity of Ukraine in this direction is the part of the pan-European process and the indicator of our country's development along with the neighboring countries.

Figure 3. The volume of nature protected areas in Ukraine and the EU, which are protected at the national level.



The figure is prepared by authors on the basis of European Environment Agency (EEA) information.
Source link: <https://bit.ly/2DX9IOW>

Figure 4. The volume of nature protected areas in Ukraine and the EU, which are protected internationally.



The figure is prepared by authors on the basis of European Environment Agency (EEA) information.
Source link: <https://bit.ly/2DX9IOW>

³¹ <https://www.eea.europa.eu/themes/biodiversity/protected-areas/facts-and-figures/number-and-size-of-protected-areas-1/number-and-size-of-protected-areas>

Ukraine declares intentions to increase the area of the NPF. The State Regional Development Strategy of Ukraine until 2020, approved in 2014, provides for an increase the share of the NPF areas from 6.05% of the area of Ukraine (in 2013) to 15% in 2017 and 17% in 2021. Such indicators were approved in order to promote the processes of European integration and achieve a share of nature protected areas close to the average for EU countries (15.8%).

In Ukraine, the nature protected fund is now only partially an effective tool for the conservation of biodiversity. On one hand, establishment of the NPF is the only mechanism that allows Ukraine to grant protected status to the areas valuable of preserving biodiversity. In the areas of NPF there is usually no longer any threat of building up, the formation of landfills, mining and other nature-destructive economic activities. On the other hand, the hindrances described below do not allow to create reliably a NPF where it is necessary for the protection of biodiversity, as well as after creation - they do not guarantee control over erratic violations of environmental legislation: grass burning, hunting, uncontrolled recreation, etc. Therefore, the NPF of Ukraine does not fully fulfill the tasks of biodiversity protection set for humanity.

Ukraine does not provide protection of a sufficient number of areas, therefore, does not guarantee the fulfillment of biodiversity conservation targets and safe environment for human life and health. Therefore, the nature protected fund only partially fulfills the functions of biodiversity protection tool assigned to it. In developed countries, the creation of nature protected areas is the most common mechanism for nature protection³². Due to a number of problems in Ukraine, the effectiveness of nature protected areas is much less than in Western countries.

Let us discuss these problems one after another.

1. It is difficult to create the NPF areas where it is really needed for biodiversity protection.

New areas of the NPF are being created to protect biodiversity. But this simple task is significantly complicated (in most cases - impossible) by the procedure provided in the legislation. According to Articles 51-53 of the Law of Ukraine "On the Nature Protected Fund of Ukraine", it is impossible to create a reserved object without obtaining prior approval of the land user. Ukrainian legislation provides for three types of land ownership - private, state and municipal. Land users of natural areas in Ukraine are mainly state-owned enterprises and institutions (for example, forestry agencies), as well as local self-government bodies³³. The status of the NPF imposes a number of restrictions on resource use and land use on the area, and new responsibilities - on land users (there are no mechanisms that would compensate for such restrictions). Therefore, from an objective point of view, the vast majority of land users are not interested in creating NPF areas on these lands. At the same time, this concerns not only land of private property, but also land of state and municipal property. In particular, perspective for reservation lands of the forest fund are in the use of forestry enterprises, the business purpose of which is to grow and harvest wood. Whereas, what concerns perspective for reservation lands of agricultural use, their land managers (the State Geocadastre and local self-government bodies) would rather prefer to assign these lands for the agricultural purposes than in the reserve. Therefore, the prospect of fulfilling new obligations to replace commercially attractive continuation of the resource usage of appears to land users as an obviously disadvantageous proposition. As a result, they refuse to provide endorsements for the creation of new areas of the NPF, because the land user is not obliged to agree, and that is why there is no reason for a land user to take commercially unprofitable decisions.

³² Kukurudza M. National Park Management: study guide / M. Kukurudza. - Lviv: Ivan Franko LNU Publishing Center, 2000. - 124 p.

³³ In this document, we review only state-owned land, as it covers the vast majority of all ecosystems in Ukraine.

At the same time, it is inefficient to create an NPF simply where land users will not object to this. Biodiversity needs special protection precisely where important ecosystems and populations of rare species are naturally preserved.

If valuable natural areas do not receive protection status, the following negative consequences appear:

- the loss of natural ecosystems in valuable natural areas that do not receive NPF status in time, as well as of unique, endemic species, leads to irretrievable loss of biodiversity at the global level;
- the inability of Ukraine to ensure the protection of nature according to the requirements of international agreements and EU directives, the implementation of which is in accordance with the requirements of the EU-Ukraine Association Agreement is a bad indicator for Ukraine on the path of European integration. The NPF is the only (although not fully) working mechanism for the natural areas protection in Ukraine; therefore, the implementation of all agreements, as well as the implementation of EU legislation, takes place on the basis of the NPF. If (currently) there is no creation of the NPF in the places of expansion of species and habitats protected at the international level, this leads to failure in implementation of international agreements on biodiversity protection in Ukraine;
- the loss of irrecoverable natural and recreational resources for the population: sources of clean drinking water; recreationally attractive places and resources necessary for health promotion; soil, etc.
- the necessity to incur great budget expenses on the remediation of secondary ecosystems in the place of transformed natural areas in the future;
 - financial losses due to the unstable climate and the failure of ecosystem services — loss of plant pollinators, loss of underground water and deterioration of ground water, reduction of eco-tourism potential, etc.

2. Creating a NPF does not guarantee that biodiversity will be preserved.

As to practical measures for the protection and management, the NPF of Ukraine is divided into two groups: objects having a special administration that manages the object (natural reserves, biosphere reserves, national nature parks, regional landscape parks, botanical gardens, arboreturns and zoos) and those which have no administration (sanctuaries, reserved stows and nature monuments), and therefore their protection is entrusted to the land users. By the size, sanctuaries, NNPs and RLPs dominate almost equally in Ukraine: each of these categories occupies about a quarter of the total area of the NPF of Ukraine. At the same time, by the number of objects, precisely those categories with no administration dominate. Sanctuaries make up 39% of the total number of the NPF, nature monuments - 41% and reserved stows - 9%. Therefore, 91% of all areas of the NPF in Ukraine do not have administrations. This imbalance significantly affects the management of the NPF in Ukraine.

The legislation on the NPF was largely inherited from Soviet times, when all land belonged to the state, and the NPFs (except for reserves) were created for economic purposes for a period of a certain number of years. The research of biodiversity on each of the areas of the NPF and the planning of measures to protect each of the species in them were not carried out. Nowadays the situation has not greatly changed: for all NPFs without administrations, management plans are not developed. This means that although the NPF object was created de jure, no one manages it de facto in order to preserve biodiversity.

Let us mention the main shortcomings of the organization of nature conservation management in the Ukrainian NPF (this should be an indicator of their effectiveness):

- *The regulations on the areas and the NPF objects do not determine the management measures required for their preservation. There are no detailed management plans of the NPF areas with measures for their preservation. Moreover, there is no relevant and qualified information for almost all the NPF objects about their biodiversity, which could be the basis for developing an effective management plan.*

After the decision to create an NPF object is taken, the Ministry of Ecology and Natural Resources (for objects of national significance) or environmental departments of regional state authorities develop and approve the Regulation on the object containing a list of restrictions on economic and other activities on its territory - protection regime, non-observance of which will lead to harm caused to biodiversity. After that, the land users of the site receive a protection obligation, that also contains a protection regime.

The development of the protection regime is not regulated by any regulatory act. Therefore, the practice of a formal approach to the protection regime is provided. Each time, enacting the Regulation on the new object of NPF, they use a standard set of restrictions, which is contained in the regulations of most of the existing objects (prohibition of littering the area, burning of vegetation, building, irrigation and drainage activities, etc.) All such prohibitions are contained in the Law "On the Nature Protected Fund of Ukraine" and in the Administrative Offense Code of Ukraine, which means they do not require inclusion into individual regulations. Moreover, regulations are always only a set of declarative restrictions and never contain lists of activities that land users are actually obliged to carry out in order to support a specific area of the NPF and that would take into account the specific features of the appropriate NPF object.

In the NPF objects that do not have a staff of research fellows, the development of the Regulations does not take into account the needs of species and habitats present on the area, the dynamics of ecosystems, seasonal features and the necessity to monitor the state of the object. Therefore, the initial data on the condition of the NPF protection objects are mostly absent. And this makes it impossible their effective protection and further monitoring. A number of categories of the NPF can have a large area and, as applicable, include the most diverse areas for which a different approach of protection is needed. Regulations impose unified restrictions on the entire area. Also, the same category of the NPF may differ depending on which ecosystem it is located in (for example, a high-mountain beech forest, a swamp of Polissia, a steppe gully, a sea areamay bea sanctuary, etc.). Therefore, there can not be one group of restrictions even for one category, never mind the fact that the area in the middle of an object is also divided into different types of ecosystems, habitats, requiring different management. In addition, some areas may require active management, and others - full "reserve", that is, non-interference in natural processes.

In most cases, when re-issuing the Regulations and security obligations, the NPF objects, their flora and fauna, etc. are not surveyed. There are no regular surveys of their area in order to clarify and improve the regime. This means that it is impossible for such NPF objects to develop an appropriate management plan that will take into account measures to support the species which are protected on their area.

We can suggest the reason for this situation. According to the procedure for the creation of the NPF, after announcing of the object, the responsible state body prepares the Regulation on this object and the protection obligation. These documents contain the "protection regime" section of identical content. However, the procedure requires the coordination of such a protection regime with the land user. Accordingly, the user may not agree on such a regime that does not suit him (for example, if it is commercially unprofitable, and even more so if it requires money that are not provided for in the user's budget, as it is usually the case). For this reason, almost all the existing Regulations on the NPF objects contain identical protection regimes consisting of general requirements, the violation of which is regulated outside the law "On the Nature Protected Fund", in particular, liability for which is stipulated by the Administrative Offense Code of Ukraine.

- Regardless of whether the NPF object is an institution, there are no mechanisms that ensure the implementation of management plans when the land user or the NPF institution are not interested. In cases of disinterest the controlling bodies usually do not find out about violation of the regime, and therefore there is no possibility to detain the offender.

Depending on the category of the NPF, it either has a special administration and is a state institution, or vice versa - consists of areas included in the NPF without being removed from users (sanctuaries, reserved stows, nature monuments, landscape art monuments). In addition, part of the area of the NPF areas, which have special administrations and are

institutions, is also included in their structure without confiscation from the local authorities. The protection functions of such objects are usually assigned to land users or local self-government bodies (usually village councils), state or municipal enterprises (state forestry agencies, former collective farms). The overwhelming majority of them do not have the technical, financial, human resources to carry out monitoring of the object regime observance and development of appropriate management plans prepared by qualified specialists that would determine the system of measures necessary to maintain the regime declared in the Regulations. In addition, in the overwhelming majority of cases land users do not have the motivation to engage in the protection of the NPF object, as well as the awareness of importance of such protection.

Regardless of whether the NPF has a special administration, there are no mechanisms that ensure the implementation of management plans on lands without exemption, if the land user is not interested. The activities of all land users are aimed at the use of natural resources, that is directly opposite to the objectives of the NPF establishment. This becomes the cause of extremely low quality observance of the protection regime of the NPF: land users either simply do not perform a security function or carry out illegal land use.

At the same time, there are no objective criteria for assessing the effectiveness of the institution's administration work in carrying out the main functions of the nature protected area — preservation of specific species and habitats, development of ecological tourism, etc. As a result, most administrations of the NPF institutions (not to mention the ordinary land users whose lands are included in the NPF) potentially do not have an incentive to perform protection and management functions. Funding of the NPF institutions having administrations is performed within the budgeting process (though, there is substantial underfunding). At the same time, the calculation of costs is usually carried out in terms of the part of the area of the NPF, which is included into their structure with withdrawal from users. Therefore, such institutions can not provide a significant part of the costs that would be necessary for the implementation of management plans, within the existing budget programmes. There are only singular cases when the NPF institutions look for grants by themselves and are involved in international programmes and other sources of financing, and so on.

The areas of the NPF, which do not have special administrations and such NPFs are now the overwhelming majority, do not have any funding at all, including for the installation of special signposts, information plaques, warning signs, etc.

Comparing the financing of nature protected areas in Ukraine and the EU countries, we see that what concerns 1 hectare of the area, in the EU countries, the funding is 6.7 times higher. Thus, in Ukraine, 3.7 euros are spent per hectare of the NPF area per annum (in 2017 - 14 million euros)³⁴, and in the EU countries - more than 25 euros (in 2017 - 10,914,500,000 euros)³⁵. At the same time, in the EU countries, the share of protected areas is 18% of the total area of the states³⁶ (only 6.8% in Ukraine). In addition, there is a budget of the European Union, 9% of which consists of measures to maintain biodiversity and nature protected areas³⁷.

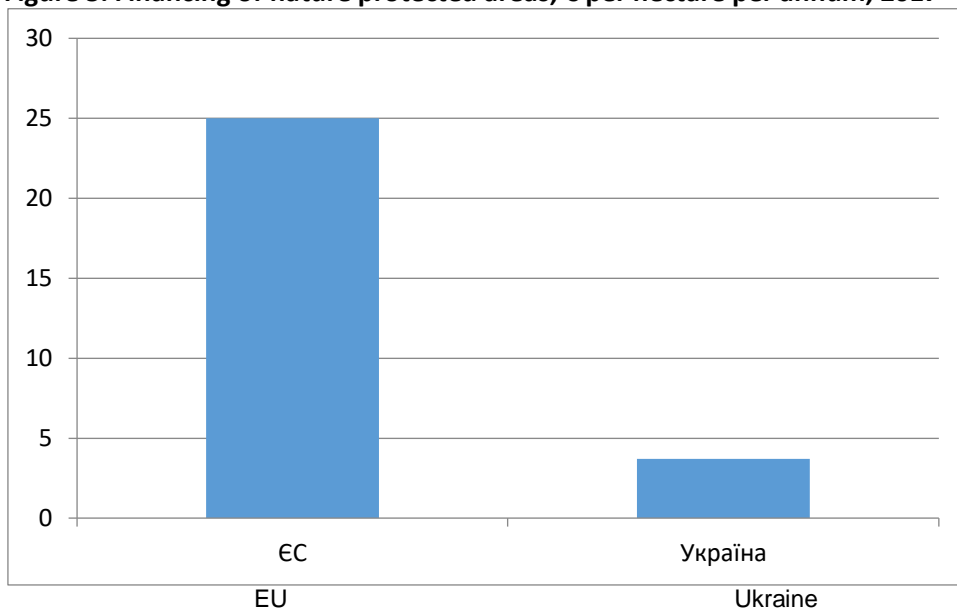
³⁴<http://www.treasury.gov.ua/main/uk/doccatalog/list?currDir=353931>

³⁵<https://goo.gl/khjwXE>

³⁶http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env_bio1&lang=en

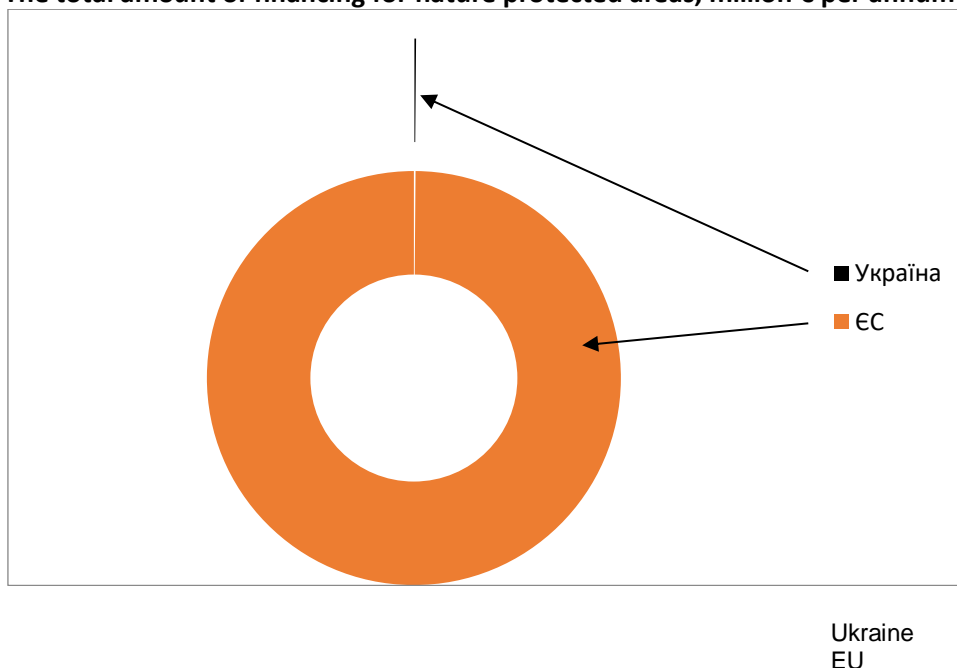
³⁷<http://ec.europa.eu/environment/nature/biodiversity/pdf/Study%20on%20biodiversity%20financing%20and%20tracking%20biodiversity-related%20expenditures%20in%20the%20EU%20budget%202017.pdf>

Figure 5. Financing of nature protected areas, € per hectare per annum, 2017



The figure is prepared by authors on the basis of Eurostat data. Source link: <https://goo.gl/khfwXE>

The total amount of financing for nature protected areas, million € per annum



In conclusion, it is almost impossible to create areas and objects of the NPF timely, where it is really needed, and wherever such areas and objects are created, the measures necessary to preserve the species and habitats within them are still not implemented.

Section 4. Resolution.

We have prepared a comprehensive vision of the ways to solve the problems selected in this document, that should simplify the procedure of creating the NPF, provide nature protected areas with real protection and management. Such resolution is proposed for the

benefit of all humanity, because it is humanity that is in fact a key stakeholder in the implementation of the new policy. Mental features and a low standard of living of a significant part of the population of the Earth leads to the fact that most people are not aware of the connection between destruction of biodiversity and decrease in the standard of living. Consequently, poverty and ignorance of the population of the planet result in the fact that the most representatives of the actual stakeholder are not active participants in advocacy of their interests, and often vice versa - are the subjects of negative impact on biodiversity.

For this reason, the proposed solution to the problems described in this document lies only in the domain of making correct and timely decisions of the Government, and does not apply to individual business entities and other stakeholders' actions. Also, the proposed solution requires administrative and budgetary measures only for the development of legislation and advocacy.

In addition, in the future, the implementation of the proposed decisions will lead to budget savings by simplifying the procedures and the workload of civil servants (bodies responsible for creating the NPF, controlling bodies), as well as increasing revenues to the budget by collecting funds from violators as a result of increase of effectiveness in monitoring the regime on the NPF areas.

Problem Solution 1. According to the preamble of the Law of Ukraine "On the Nature Protected Fund of Ukraine", the nature protected fund objects are the national treasure. In accordance with Article 39 of the Law of Ukraine "On the Environmental Protection", all natural objects and resources that may be objects of the reserve, are classified as natural resources of national significance. Thus, the resolution of the NPF issues should be at the state level.

Only legislative changes are necessary to resolve this issue. It is necessary to make amendments to the Law of Ukraine "On the Nature Protected Fund of Ukraine", withdraw articles 52-54 and amend article 51 as follows:

"Article 5. The procedure for the creation and change to the boundaries of the areas and objects of the nature protected fund

Decisions on the creation of natural reserves, national nature parks, as well as other areas and objects of the nature protected fund of national significance are adopted by the President of Ukraine.

A decision to create biosphere reserves is taken in compliance with the requirements of international treaties and programs to which Ukraine is a party.

A decision on the organization or declaration of areas and objects of the nature protected fund of local significance and the establishment of protection zones of areas and objects of the nature protected fund is adopted by the Verkhovna Rada of the Autonomous Republic of Crimea, regional, Kyiv and Sevastopol city councils.

The procedure for the creation and change to the boundaries of areas and objects of the nature protected fund is approved by the Cabinet of Ministers of Ukraine."

According to the new version of the aforementioned Law, it is necessary to develop and get approved the Resolution of the Cabinet of Ministers of Ukraine "On the Procedure for Creation and Change to Boundaries of Objects of the Nature Protected Fund", which will contain a new approach to the creation of the NPF. In particular, such a new approach will include the following procedure for creating new areas of the NPF, or changing boundaries of existing ones:

- 1) a petition for the creation of the NPF is filed to the MENRU of Ukraine. Such a petition can be developed by order of state or non-governmental organizations, or on the own initiative of research institutions, enterprises, institutions of the NPF, other legal entities and individuals;
- 2) The MENRU shall review the petition within one month. If such a petition meets the established requirements, the MENRU shall endorse it and

send it to the territorial body responsible for the creation of the NPF in the regions (or in Kyiv and Sevastopol)

3) the territorial authority gets the petition endorsed by land users and prepares the design for the creation of an object. The order of the design development is approved by the Cabinet of Ministers of Ukraine;

4) the design is submitted for consideration to the territorial body for making a decision on the establishment (announcement) of the specified NPF object;

5) the decision on the establishment of natural reserves, national nature parks, as well as other areas and objects of the nature protected fund of national significance is approved by the President of Ukraine;

6) the decision to declare the areas and objects of the nature protected fund of local significance and establish protection zones of the areas and objects of the nature protected fund is made by the Verkhovna Rada of the Autonomous Republic of Crimea, regional councils, Kyiv and Sevastopol city councils, Donetsk and Lugansk regional military-civil administrations. If, during 6 months, the territorial authority has failed to get endorsements for the establishment of the NPF with the users and owners of land lots, the petition will be returned to the MENRU with a justification of the reasons for disagreement. In this case, endorsement is carried out by the MENRU;

7) If, during 6 months, the MENRU has failed to get endorsements for the establishment of the NPF by obtaining consent of users and owners of land lots, the MENRU prepares the establishment design for that part of the land within the projected NPF object, which belongs to the state, without such endorsement. In this case the establishment design is submitted for the announcement of the NPF - to the Administration of the President of Ukraine; If, during 6 months, the MENRU has failed to get endorsements for the establishment of the NPF by obtaining consent from the owners of land lots (except state and municipal property), the land lots are the subject to compulsory alienation because of public necessity according to the procedure established by law³⁸.

Problem Solution 2. To make the management of the NPF areas effective, it is necessary to introduce legislative and budgetary changes:

Develop a Procedure for the development and approval of management plans for areas and objects of the NPF and approve it with an appropriate decree of the Cabinet of Ministers.

Within the framework of this Procedure, to stipulate:

1) introduction of a management plan for the protection of NPF the object, which is a part of the Regulation on it, instead of the regulation and protective obligations for the areas of the NPF, which do not have the administration;

2) when developing a protection regime and a management plan for nature protected areas belonging to the NPF, it should be considered:

a) natural peculiarities of ecosystems present in the area (including their season changes and transformation)

b) the structure of the flora and fauna species protected by the Red Data Book of Ukraine, regional protection lists and international biodiversity agreements;

c) individual needs of the specified species (including seasonal peculiarities);

d) plant groups, protected by the Green Data Book of Ukraine and habitats protected at the European level, e) ecosystem dynamics and forecasted changes, e) presence of introduced species, e) presence of negative impacts (including in the areas adjacent to the NPF);

3) for the NPF, represented by artificially created objects and landscapes, it should be considered:

a) preservation of the original objects of protection;

³⁸<http://zakon.rada.gov.ua/laws/show/1559-17>

- b) dynamics of changes and forecasted changes;
- c) presence of species and habitats that require protection in accordance with the law (see p. 3.1.2)

4) regular monitoring of the objects (once every 5 years), in the framework of which:

- a) re-specify information on pp.3.1.2.-3.1.3.;
- b) accumulate updated information in the form of a database on biodiversity of the NPF areas;
- c) make recommendations on the revision of management plans and protection regimes;
- 5) as a part of the decentralization processes, it should be provided for financing of works on the implementation of management plans and ensuring protection regimes for areas and objects of the NPF at the expense of the environmental funds of the local self-government bodies, and at the expense of the State Budget of Ukraine. Objectively, such funds will be needed only once every few years and not in large amounts. At the same time, environmental tax funds will be used for real environmental conservation.

For the allocation of funds in all regions of Ukraine, it is worthwhile to approve, by a resolution of the regional councils, regional target programmes for the conservation activity, which would provide the annual allocation of funds for the development and implementation of management plans to administer the NPF objects (except for categories that have administrations and are managed in accordance with the designs of the area arrangement). These issues can be resolved in case of allocation of targeted financing from eco-funds for the implementation of the management plans of the NPF areas that do not have administrations and are subordinate to land users, as well as on the areas that are a part of the NPF institutions without withdrawing from the users. In 2017, the documents were adopted in a number of regions, in their tasks they detail at the regional level the State Regional Development Strategy in terms of nature conservation and the nature protected fund. For example, in Kyiv region the regional target program "Kyiv region reserved" was adopted for 2017-2020, that provides the allocation of 20 million UAH for the creation of new reserved areas and registration of land documentation for the already established sanctuaries and nature monuments³⁹. The main objectives of the Programme are to increase the area of the NPF of the region to 15.7% of regional territory; identification of areas that are perspective for creating the NPF objects of various ranks in order to ensure the maximum level of representativeness; inventory of biodiversity of the existing and perspective NPF of the region and justification of the optimal preservation regimes of biotic representativeness at the objects of the nature protected fund⁴⁰. Such programme and other similar documents approved in other regions can be amended, which will be caused by the legislative necessity to finance the management plans of the NPF areas. In the regions that do not have appropriate programmes, it would be worthwhile to approve a typical program to fund such activities.

Coordinating the use of funds, necessary for the implementation of the management plans of the NPF (or their parts) that were included in the NPF without withdrawal from land users, will be carried out by employees of the departments of environment and natural resources of regional state administrations. For this purpose, it is necessary to amend the Regulations on the departments and the job descriptions of employees, whose engagement will be reduced due to the simplification of the procedure of creating the NPF.

6) to introduce an audit of the progress status of the NPF management plans, carried out for each object of the NPF at least once every three years. If the information about the violation or negative natural or man-made processes on the NPF areas is received - an extraordinary audit will be carried out. The procedure of auditing the nature protected fund is approved by the Cabinet of Ministers of Ukraine;

7) to introduce changes that will ensure the annual allocation of the money from eco-funds for the implementation of the NPF management plans.

³⁹ www.koda.gov.ua/wp-content/uploads/2017/04/209_2017.doc

⁴⁰ <http://epl.org.ua/environment/na-kyivshhyni-zatverdily-programu-rozvytku-zapovidnoyi-spravy/>

The implementation of the activity will contribute to the inflow of funds from penalties into the budget, which will arise as a result of the specification of the protection regime of the NPF objects (management measures).

8) to promote such economic activities on the areas of the nature protected fund that comply with the management plan of the NPF area and contributes to the fulfillment of the functions of the NPF area. Examples of such activities are controlled grazing and limited mowing in steppe and meadow areas, cutting of invasive and alien trees, regeneration of primary tree stands in forests and so on;

9) to make appropriate amendments to the Budget Code and other by-laws that would allow financing of the NPF institutions of national significance not only from the state budget, but also from local budgets.

The level of environmental awareness of the population and the quality of environmental monitoring also directly affect the creation of the NPF objects and compliance with environmental standards for their protection. That is why, in addition to the above-mentioned solutions, it is necessary to introduce measures to improve the environmental awareness of the population and create a pro-European system of environmental control⁴¹.

The result of the implementation of changes will be the opportunity to make timely the necessary contribution of Ukraine to the preservation of Life on Earth.

This great goal will be achieved by expanding the nature protected fund to the indicators generally acknowledged in the world and providing its management necessary to preserve the existing biodiversity, as well as to maintain stable human living conditions. The preservation of nature will work out for Ukrainian people with the reduction of natural disasters, safe healthy environment, the maintenance of recreative resources, as well as funds saved on the future recreation of natural areas. Among other things, the accomplishment of the objectives of this document will not be in conflict with the interests of the population, since the proposed solutions relate exclusively to the land of state-owned property.

⁴¹Detailed information about these changes can be found at the source link: <http://epl.org.ua/ekoanalitika/>.