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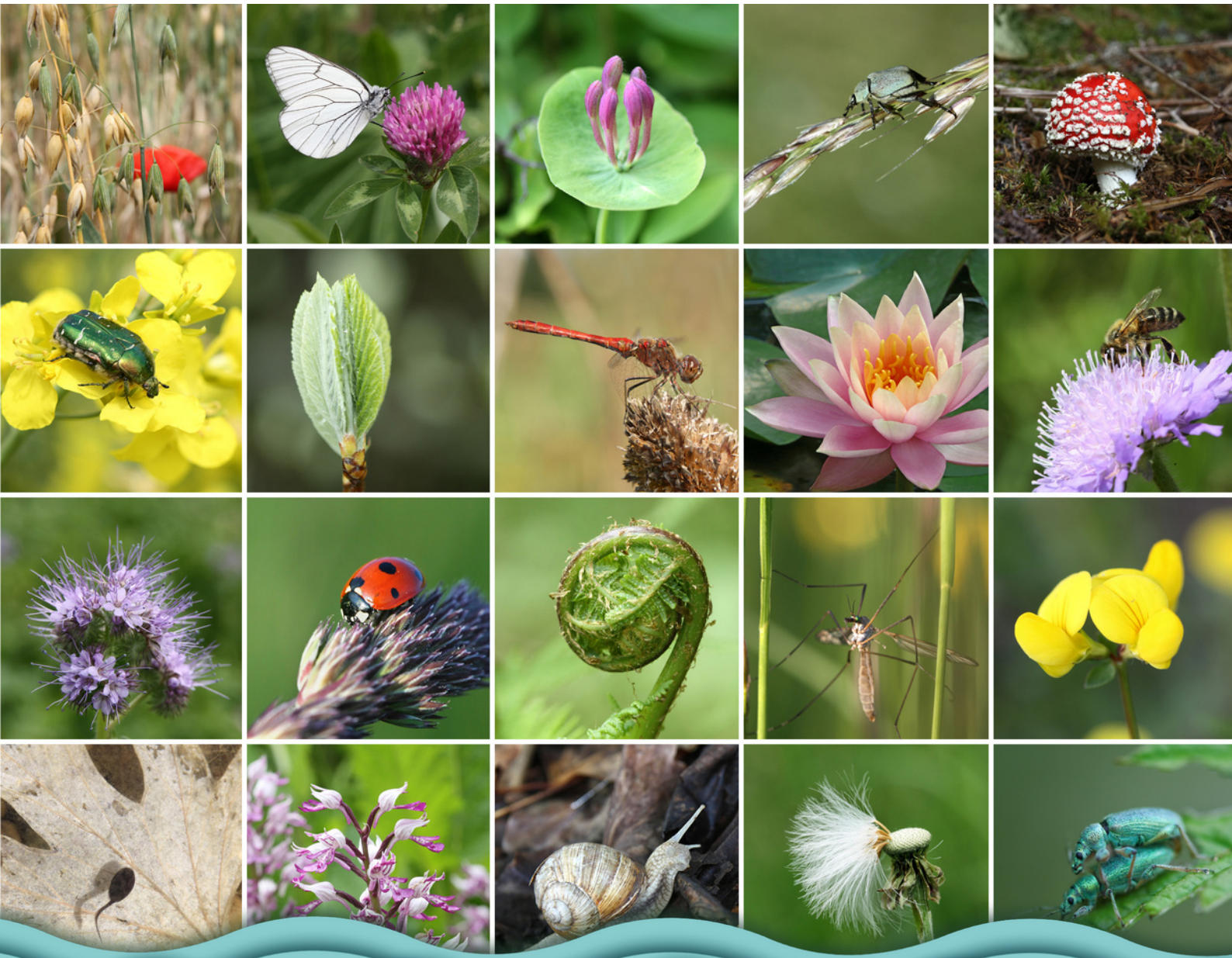
Compliance of the state policy of Ukraine in the area of biodiversity conservation with priorities and targets of the European Green Deal



Compliance of the state policy of Ukraine in the area of biodiversity conservation with priorities and targets of the European Green Deal

This policy paper examines 17 indicators of the Biodiversity Strategy as part of the European Green Deal. It presents materials that reveal what stage our society is at and how much is left to achieve the set targets for the conservation of Ukraine's biodiversity.

Its importance lies in the fact that Ukraine is on the brink of a deep abyss. Thousands of rivers are drying up, losing their natural shores, polluted by sewage from enterprises; birds, bees and animals are dying from pesticides, Red Book marine mammals are entangled and suffocated in fishing nets, thousands of tons of fertilizers destroy the state's natural balance of ecosystems, soils are contaminated and turned into agricultural deserts, and forests are cut down and turned into foresters' plantations. Everyone experiences these changes, breathing polluted air, trying to escape the heat, watching the water bloom, searching for clean water, being wary of nitrates in food, ceasing to see wild animals. Specialists and scientists of the European Union have once again produced recommendations for salvation. Once again, because for the last 100 years, conservationists have been trying to save nature and humanity. Maybe this time the threat and changes are so palpable that we will finally start acting.

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Edited by Olena Kravchenko

The purpose of this document is an analysis of the compliance of Ukraine's public policy in the area of biodiversity conservation with the priorities and targets of the European Green Deal, namely - the EU Biodiversity Strategy; assessment of progress in achieving these targets.

Research methodology

There was performed the analysis of Ukraine's regulatory acts in terms of compliance of public policy with the targets of the European Union's Biodiversity Strategy for 2030, namely the Law of Ukraine "On Basic Principles (Strategy) of State Environmental Policy of Ukraine for 2030"[1], National Economic Strategy for 2030[2],National Action Plan for Environmental Protection of Ukraine[3]. There were used materials provided by the Ministry of Environment and Natural Resources of Ukraine, the State Food and Consumer Service, the European Union Delegation to Ukraine, etc.; the information from official web-sites of public agencies was analyzed.

[1]Law of Ukraine "On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the period up to 2030". Resource access mode:https://zakon.rada.gov.ua/laws/show/2697-19#Text

[2] National Economic Strategy for 2030. Resource access mode: https://zakon.rada.gov.ua/laws/show/179-2021-%D0%BF#n25

[3]On approval of the National Action Plan for Environmental Protection for 2025 | The Cabinet of Ministers of Ukraine. Resource access mode:https://www.kmu.gov.ua/npas/pro-zatverdzhennya-nacionalnogo-planu-dij-z-ohoroni-navkolishnogo-prirodnogo-seredovishcha-na-period-do-2025-roku-i210421-443

There were conducted consultations with experts, some questions from the policy paper were posted on the website of ICO “Environment-People-Law” and on sites in the social media We are very grateful to the experts who provided their comments and filled out the Google questionnaire.

There were studied materials of Vira Nanivska Policy School, in particular standards of democratic governments, standards of policy analysis, reforms technologies and methodologies, materials on de-Sovietization reform, principles of managing changes, political capacity for environmental reforms. The Logical Framework Approach was applied and two LogFrames were created for policy analysis and for comparative analysis.

European Green Deal (EGD)[4] is a key cross-cutting sectoral environmental policy in Europe, aiming to achieve the continent's climate neutrality by 2050 and compliance with the goals of all sectors of the economy[5].

Ukraine has undertaken a number of commitments in the area of combating climate change and environmental protection in accordance with the EU-Ukraine Association Agreement, as well as in taking measures to bring national legislation in line with the targets of the EGD. By the resolution of the Cabinet of Ministers of 24.01.2020 №33[6], an Interdepartmental Working Group on Coordination of Overcoming Climate Change Consequences was established within the framework of the European Commission's European Green Deal initiative, which developed a position paper on Ukraine's involvement in the EGD. In the document, the Government of Ukraine proposed to establish a regular dialogue with the EU on the involvement of the Ukrainian party in the European Green Deal and to develop a joint Roadmap for Ukraine's participation in the EGD. During the meeting of the Group on January 19, 2021, chaired by the Prime Minister of Ukraine D. Shmyhal[7], the issue of formation of the Ukrainian Green Deal on the basis of the EGD was discussed and its priorities in key areas were presented. The Prime Minister noted that Ukraine is making every effort to create a climate-neutral European continent and is an integral part of achieving the targets of the European Green Deal.

On April 14, 2021, the Cabinet of Ministers of Ukraine approved the Program for the Development of Cross-Border Cooperation for 2021-2027[8], in the section “Expected results, effectiveness of the Program” it is stated that the implementation of this Program in the direction of developing the institutional capacity of entities and participants in cross-border cooperation will promote Ukraine's participation in policy formulation and implementation within the European Commission’s Environmental Green Deal initiative. One of the tasks of the State Program for the Development of Cross-Border Cooperation for 2021-2027 is to initiate and deepen a dialogue with the European Union on Ukraine's involvement in policy formulation and implementation within the European Commission's European Green Deal initiative.

On May 12, the Committee on Ukraine's EU Integration heard reports[9] of the Ministry of Environment and Natural Resources of Ukraine, the Ministry of Economy, the Ministry of Energy, the Ministry of Infrastructure, the Ministry of Foreign Affairs and the Ministry of Community and Territorial Development of Ukraine. They reported on the steps taken to implement the Committee's Recommendations following the committee hearings on the European Green Deal on 11 September

[4]European Green Deal. Resource access mode:https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

[5]Delivering the European Green Deal.Available from https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en

[6]On the establishment of an Interdepartmental working group on coordination of overcoming climate change consesquences in the framework of the European Commission's "European Green Deal" initiative. Resource access mode:https://zakon.rada.gov.ua/laws/show/33-2020-%D0%BF#Text

[7]Prime Minister: Ukraine is an integral part of achieving the targets of the European Green Deal. Resource access mode:https://www.kmu.gov.ua/news/premyer-ministr-ukrayina-ye-nevidyemnoyu-chastinoyu-realizaciyi-cilej-yevropejskogo-zelenogo-kursu

[8]On approval of the State Program for the Development of Cross-Border Cooperation for 2021-2027. Resource access mode:https://zakon.rada.gov.ua/laws/show/408-2021-%D0%BF#Text

[9]The Committee heard reports from ministries on measures to implement the Recommendations of the committee hearings on the European Green Deal. Resource access mode:http://comeuroint.rada.gov.ua/news/main_news/73390.html

2020.[10]. During the creation of the Roadmap for Synchronization with the EU towards the European Green Deal, European partners advised Ukraine to focus on implementing energy efficiency initiatives, transforming coal regions, hydrogen energy and developing climate governance infrastructure, finalizing important strategies in various areas.

On May 19, 2021, the first meeting of the Working Group of the Targeted Dialogue between Ukraine and the EU on the European Green Deal and the Green Transition of Ukraine took place in Brussels.

> - Will the issue of the European Green Deal be considered at the Ukraine-EU summit or not?[11]
>
> - Yes, it will be considered. This issue in general is one of the highest priorities in our dialogue. Because ecology is a new economy all over the world, any economic strategies are built through the prism of decarbonization, emission reductions, and the prioritization of green production. That is why Ukraine, realizing that we cannot avoid being in this trend if we do not want to be in isolation, reached an agreement with the EU that we will jointly implement the European Green Deal. This is a political agreement from the last year's summit.
>
> Olha Stefanishina, Deputy Prime Minister for European and Euro-Atlantic Integration of Ukraine

On October 12, 2021, President of Ukraine Volodymyr Zelensky, President of the European Council Charles Michel and President of the European Commission Ursula von der Leyen[12]met in Kyiv for the 23rd EU-Ukraine Summit and approved a statement, one of the points of which is an important quote on the EGD: “We welcomed the launch of the dialogue on the European Green Deal and Ukraine’s green transition. The EU side welcomed Ukraine's desire to approximate its policies and legislation to the European Green Deal and reaffirmed its commitment to support Ukraine in this effort through a wide range of available instruments and in cooperation with international financial institutions. The EU welcomed the approval of Ukraine's updated nationally defined contribution under the Paris Agreement and invited Ukraine to adopt a long-term low-carbon development strategy, including intermediate targets, with the mandatory goal of achieving climate neutrality no later than 2050, and to implement reforms. which will facilitate and accelerate its "green" transition. Ukraine presented its position on the Carbon Border Adjustment Mechanism (CBAM). The EU will continue to support Ukraine in the issue of "green transition", including the development of carbon pricing policy in the context of the proposed EU Carbon Border Adjustment Mechanism (CBAM).

Biodiversity preservation in the EGD. On May 20, 2020, as part of the EGD, the EU Biodiversity Strategy was adopted[13] (Biodiversity Strategy to bring nature back into our lives)[14], stipulating 17 key indicators to be reached by European countries.

1. Legally protect a minimum of 30% of the EU’s land area and 30% of the EU’s sea area and integrate ecological corridors, as part of a true Trans-European Nature Network.
2. Strictly protect at least a third of the EU’s protected areas, including all remaining EU primary and old-growth forests.
3. Effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately.
4. Legally binding EU nature restoration targets to be proposed in 2021, subject to an impact assessment. By 2030, significant areas of degraded and carbon-rich ecosystems are

[10]The Committee on Ukraine's Integration with the European Union held a committee hearing on European Green Deal. Resource access mode:https://www.rada.gov.ua/news/news_kom/197421.html
[11]Deputy Prime Minister Stefanishina on the gas war with Russia, joining NATO, "open sky” and "lobbying the interests of Chinese communists." Resource access mode:https://www.radiosvoboda.org/a/intervyu-vitsepremyerky-olhy-stefanishynoyi/31500049.html
[12]Joint statement following the 23rd Ukraine-European Union Summit. Resource access mode:https://www.president.gov.ua/news/spilna-zayava-za-pidsumkami-23-go-samitu-ukrayina-yevropejsk-71037
[13] Reinforcing Europe's resilience: halting biodiversity loss and building a healthy and sustainable food system. Available from https://ec.europa.eu/commission/presscorner/detail/en/ip_20_884
[14] EU Biodiversity Strategy for 2030 Available from https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380

restored; habitats and species show no deterioration in conservation trends and status; and at least 30% reach favorable conservation status or at least show a positive trend.
5. The decline of pollinators is reversed.
6. The risks and use of chemical pesticides is reduced by 50%, and the use of more hazardous pesticides is reduced by 50%
7. At least 10% of agricultural area is under high-diversity landscape features.
8. . At least 25% of agricultural land is under organic farming management, and the uptake of agro-ecological practices is significantly increased.
9. Three billion additional trees are planted in the EU, in full respect of ecological principles.
10. Significant progress in the remediation of contaminated soil sites.
11. At least 25,000 km of free-flowing rivers are restored by 2030.
12. There is a 50% reduction in the number of Red List species threatened by invasive alien species.
13. The losses of nutrients from fertilisers are reduced by 50%, resulting in the reduction of the use of fertilisers by at least 20%.
14. Cities with at least 20,000 inhabitants have an ambitious Urban Greening Plan.
15. No chemical pesticides are used in sensitive areas such as EU urban green areas.
16. The negative impacts on sensitive species and habitats, including on the seabed through fishing and extraction activities, are substantially reduced to achieve good environmental status.
17. The by-catch of species is eliminated or reduced to a level that allows species recovery and conservation.

The progress of the implementation of these targets can be monitored on a special platform for monitoring the results of the implementation of the Biodiversity Strategy - EU Biodiversity Strategy Dashboard[15]and EU Biodiversity Strategy Actions Tracker[16]. Unfortunately, Ukraine has not yet created a portal dedicated to meeting the goals of the European Green Deal and its strategies. There is a European Green Deal Timeline page[17], which contains references to the main documents of the EGD and their summaries, but it does not track Ukraine's implementation of the tasks of the EGD.

[15]EU Biodiversity Strategy Dashboard.Available from https://dopa.jrc.ec.europa.eu/kcbd/dashboard/#COHERENT%20NETWORK%20OF%20PROTECTED%20AREAS
[16]EU Biodiversity Strategy Actions Tracker.Available from https://dopa.jrc.ec.europa.eu/kcbd/actions-tracker/#EU%20NATURE%20RESTORATION%20PLAN
[17]EU Biodiversity Strategy Actions Tracker.Available from https://dopa.jrc.ec.europa.eu/kcbd/actions-tracker/#EU%20NATURE%20RESTORATION%20PLAN

Assessment of the EU and Ukraine's progress in four areas: regulatory, institutional, budgetary ones, research / education

1.1 Regulatory changes

The Biodiversity Strategy states that, despite a strong legal framework for environmental protection in the EU, field implementation lags far behind, with significant implications for biodiversity and significant economic costs. Therefore, an important task is **full implementation and enforcement of the EU environmental legislation** and ensuring the cooperation of the European Commission with Member States and European networks of environmental agencies, inspectors, auditors, the police, prosecutors and judges, supporting the role of civil society as a monitoring body, improving access to justice in national environmental courts for individuals and NGOs.

A separate important area is infulfillment of the tasks of the Bird and Habitat Directives, namely – completion of the formation of the Natura 2000 network and effective management of all its territories.

Ukraine also has environmental legislation, clear and transparent mechanisms of EIA and SEA, but still modern state environmental control is needed, bylaws on EIA and SEA are in place, a balance is struck between land reform and biodiversity conservation, and EU legislation continues to be implemented (in particular, in accordance with Chapter 6 "Environment" of Title V of the EU-Ukraine Association Agreement, on the one hand, and the European Union, the European Atomic Energy Community and their Member States, on the other hand)[18].

The Ministry of Environment is the development coordinator of Ukraine's Biodiversity Strategy for 2030. The strategy will be developed in accordance with the Regulations of the Cabinet of Ministers of Ukraine approved by the resolution of the Cabinet of Ministers of Ukraine of July 18, 2007. № 950[19],paragraph 57. It must contain a description of the problems that led to its adoption, and regulations in force in the relevant areas; analysis of the current state of affairs, trends and justifications for the need to solve identified problems; strategic goals and indicators of their achievement; tasks aimed at achieving the set goals, stages of their implementation, expected results at each stage, reflecting the planned pace of achieving the targets and the estimated amount of necessary financial, logistical, human and other resources; the procedure for monitoring, evaluating the results of strategy implementation and reporting; operational plan for the implementation of the strategy for a three-year period.

An analogy for Natura 2000 network in Ukraine is the Emerald Network. Its formation as well as protection of flora and fauna species and their habitats, ensuring proper assessment of the impact of planned activities in such areas require approximation of the Habitat and Bird Directives and adoption of the Draft Law of Ukraine "On the Emerald Network". The draft law 4461 was registered in the Verkhovna Rada, considered in the first reading and sent for a second reading. Its purpose is to establish the legal and organizational basis for designation of the territories of the Emerald Network and managing them for the conservation of natural habitats and species of flora and fauna subject to special protection, to establish legal and organizational framework for impact assessment in the Emerald Network in the process of decisions-making on specific economic activity that can have a significant impact on natural complexes.

Territories of the Emerald Network are not territories with a completely protected regime, they are territories with appropriate environmental management, the main task of which is to preserve rare species of flora and fauna and habitats. If the activities carried out in such an area do not harm the specified species and habitats, they are permissible. This requires either an environmental impact assessment procedure or a separate impact assessment on the Emerald Network. EIA may include an impact assessment on the Emerald Network.

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[18] EU-Ukraine Association Agreement, on the one hand, and the European Union, the European Atomic Energy Community and their Member States, on the other hand. Resource access mode:https://zakon.rada.gov.ua/laws/show/984_011#Text

[19]On approval of the Regulations of the Cabinet of Ministers of Ukraine. Resource access mode:https://zakon.rada.gov.ua/laws/show/950-2007-%D0%BF#Text

1.2 Institutional and administrative changes

The EU plans creation of a new comprehensive European system of management, monitoring and supervision of biodiversity and implementation of biodiversity conservation commitments agreed at national, European and international levels.

In Ukraine, such a center is the Ministry of Environment, but its work cannot be properly ensured on the ground, as the reform has abolished regional departments of environmental protection. The management, monitoring and supervision system is not working properly. The nature protection sphere is in an extremely difficult situation. Protected areas are under threat of destruction, environmental legislation is constantly violated, and compliance with international obligations is not monitored. There is an urgent need to restore divisions of the Ministry of Environment in the regions, as well as to reform the monitoring, control and supervision subsystems; create a separate Agency for Protected Areas, or a full-fledged Department to implement the state policy in the area of development and management of territories and objects of the nature reserve fund, territories of the Emerald Network and biodiversity conservation, expand the Reform Support Team by engaging analysts and managers who will deal with the implementation of the EGD in Ukraine.

1.3 Budget changes

The Biodiversity Strategy[20] includes special units dedicated to business issues in the interests of biodiversity, investment, pricing and taxation. In order to build an integrated approach, the following actions are planned.

- Full integration of environmental and social interests into business strategies.
- A new initiative on Sustainable Corporate Governance is to take into account human rights issues and environmental responsibilities in all chains of economic value in proportion to the size of enterprises.
- Revision of corporate reporting obligations under the Non-Financial Reporting Directive in order to improve the quality and scope of disclosure of non-financial information, including on environmental aspects such as the impact on biodiversity.
- Launching the European Business for Biodiversity movement. Stimulating and removing barriers to environmental decision-making.
- Financial support for biodiversity-friendly investments.
- Under the Invest EU program, a special initiative on natural capital and the circular economy will be launched.
- Changes in tax systems.
- Application of the principles of "user pays" and "polluter pays".
- Creation of an international natural capital accounting initiative.
- Ensure compliance with biodiversity provisions in all trade agreements, including through the EU's Chief Trade Enforcement Officer.
- Introduce legislative and other measures to avoid or minimize the appearance on the EU market of products related to deforestation or forest degradation. Encouraging imports and production chains that do not harm forests.
- Take measures to combat the illegal trade in wild animals. Revision of the EU Action Plan against Wildlife Trafficking.
- Revision of the Environmental Crime Directive, including the extension of its scope and the introduction of specific provisions on the types and levels of criminal sanctions.
- Mobilization of the Aid for Trade initiative.

In Ukraine, first of all, it is necessary to increase funding for environmental protection institutions, establish control over the use of environmental protection funds so that they are not used for environmentally harmful projects, and revise funding plans for programs that contain measures that will worsen natural complexes, to ensure adequate funding for research and monitoring programs,

[20] EU Biodiversity Strategy for 2030 Available from https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380

to allocate funds for the training of specialists in the area of environmental protection. It is also necessary to adapt and implement budgetary changes planned in the Biodiversity Strategy.
In order to minimize and avoid negative impacts on natural complexes, reduce conflicts, prevent negative consequences, additional costs and delays at a later stage of project development, it is necessary to conduct strategic planning and strategic environmental assessment, as well as qualitative environmental impact assessment.

1.4 Research and education

The Biodiversity Strategy[21] offers the following steps to improve knowledge, education and skills.

- Investment in research, innovation and knowledge sharing.
- New Skills Agenda.
- Inclusion in Horizon Europe's Missions[22] of the long-term strategic research agenda for biodiversity.
- Establishment of the Knowledge Center for Biodiversity in close cooperation with the European Environment Agency.
- Increase support for Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES)[23].

In the area of nature protection in Ukraine, there is a catastrophic lack of scientific data, technical base, specialists in the field, comprehensive research on land and at sea. This is a base that needs to be revived together with eco-educational and eco awareness raising activities.

In particular, as part of the creation of the Emerald Network, research is needed throughout Ukraine to study the current state of populations of rare species of plants and animals, as well as habitats protected by the Bern Convention. This will enable researchers to detail and update the data and complete the design of the network, and after the adoption of the draft law "On the Territories of the Emerald Network", move on to the next stage - the development of management plans.

The existing network of protected areas in Ukraine, which consists of eight and a half thousand sites, also needs a thorough study of their condition, the development of the necessary management measures and the establishment of a permanent monitoring system.

[21] EU Biodiversity Strategy for 2030 Available from https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380#footnote76
[22]EU Missions in Horizon Europe. Available from https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe_en
[23] Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services. Resource access mode:https://ipbes.net/

Evaluate progress on 17 targets

Target 1 Legally protect at least 30% of the EU's land area and 30% of the EU's sea area and integrate ecological corridors, as part of a true Trans-European Nature Network.

According to the EU Biodiversity Strategy Dashboard[24], as of September 22, 2021 in the EU legally protected land areas are 26% (defined at the national level - 8%), sea areas - 12%. The Commission's Proposals on Criteria and Guidelines for the Identification and Designation of Additional Protected Areas and Appropriate Management Planning have been developed. It was indicated[25] that the management of protected areas with clear objectives and conservation measures, including fisheries management measures, is possible at three levels: strictly protected areas, Natura 2000 sites (Fig. 1) and other protected areas.

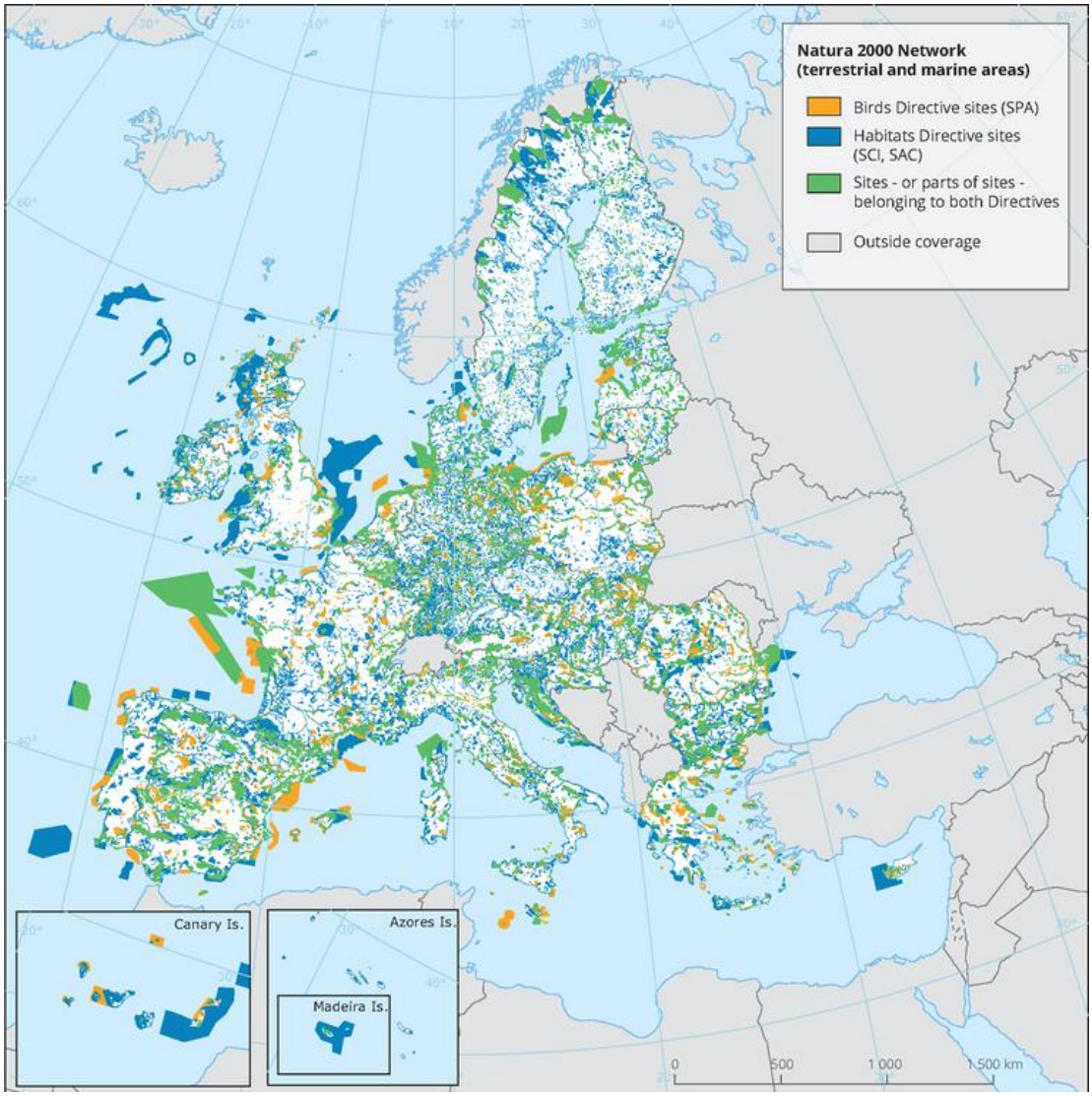

Fig. 1 Natura 2000 Network[26].

[24]EU Biodiversity Strategy Dashboard.Available from https://dopa.jrc.ec.europa.eu/kcbd/dashboard/#COHERENT%20NETWORK%20OF%20PROTECTED%20AREAS

[25]EU Biodiversity Strategy Actions Tracker.Available from https://dopa.jrc.ec.europa.eu/kcbd/actions-tracker/#COHERENT%20NETWORK%20OF%20PROTECTED%20AREAS

[26]The map shows the Natura 2000 sites (version 2018) for EU28 countries. Available from https://www.eea.europa.eu/data-and-maps/figures/natura-2000-network-terrestrail-and

According to the official data of the Ministry of Environment and Natural Resources of Ukraine, as of 01.01.2021, the Nature Reserve Fund (NRF) of Ukraine consists of 8633 territories and objects with an actual area of 4105522.247 ha and 402500.0 ha within the Black Sea . The ratio of the actual area of the NPF to the area of the state (“nature protection indicator”) is 6.8%.

On January 3, 2022, the President of Ukraine signed decrees on the establishment[27] of three new national nature parks in Ukraine "Pushcha Radzivila” (“Radziwill Forest"), "Kuyalnitsky" and “Kholodnyi Yar” ("Cold Yar").

The Emerald Network within Ukraine (Fig. 2) consists of 337 territories with an area of 8098240.9 hectares, which is 13.4% of the total country’s area. However, these areas cannot be completely summed up, as part of the Emerald Network overlaps with the territories of the NPF.

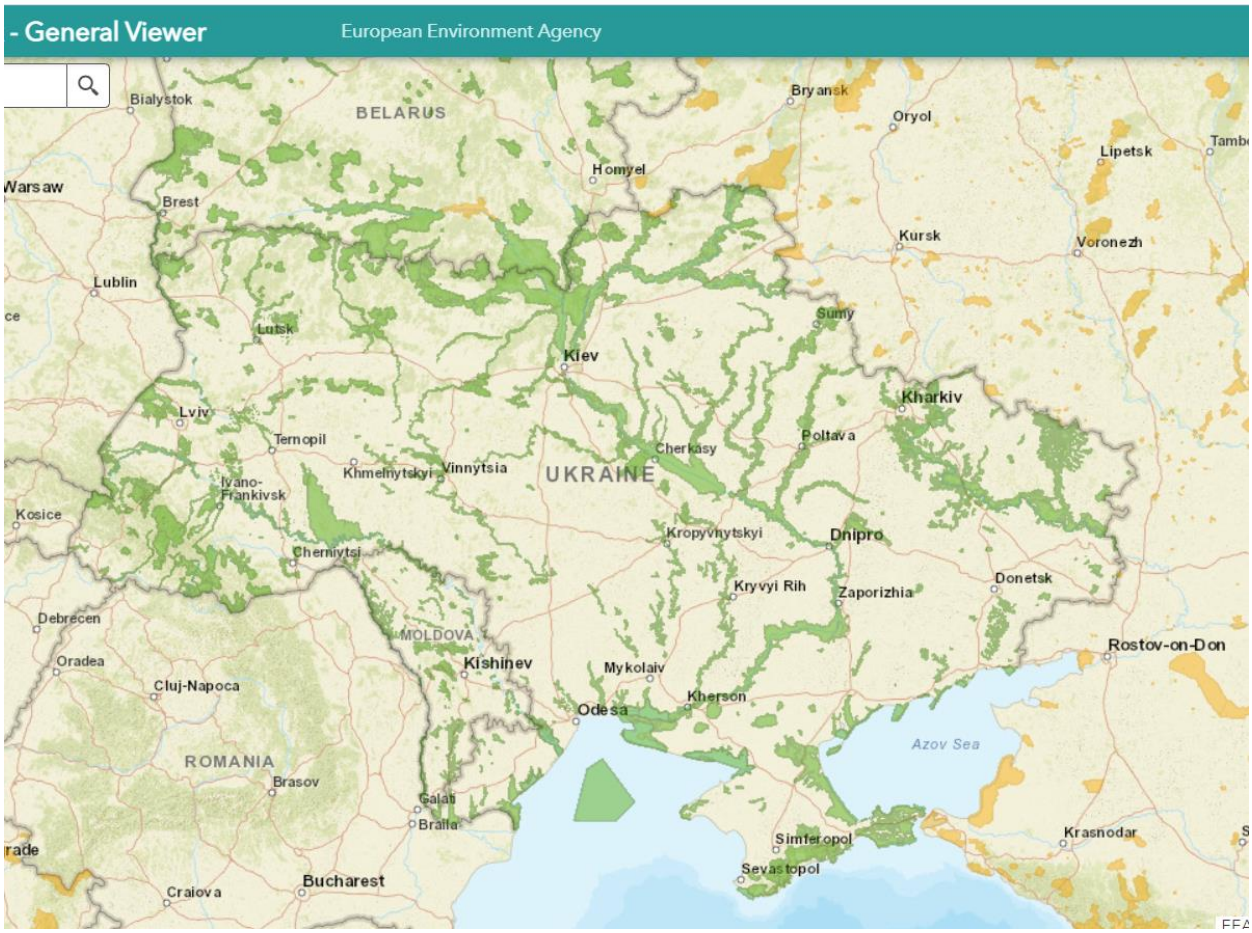

Fig. 2 Emerald Network[28].

To date, Ukraine has identified 50 wetlands of international importance, 8 UNESCO biosphere reserves, 15 parts of the transnational UNESCO World Natural Heritage Site "Beech virgin forests” and old-growth forests of the Carpathians and other regions of Europe."

The State Strategy of Regional Development for 2021-2027, approved by the resolution of the Cabinet of Ministers of Ukraine of August 5, 2020 № 695, provides for the expansion of the NPF area to 15% of the total country’s territory in 2027.

The creation of protected areas is also provided for in other international conventions and agreements that are in force in Ukraine, namely: the Convention on Wetlands of International Importance, Mainly as Habitats (Article 2), the Convention on the Conservation of European Wildlife and Natural Habitats (Article 4), the Convention on the Conservation of Migratory Species of Wild Animals (Article 2), the Convention Concerning the Protection of the World Cultural and Natural

[27]Three new nature parks will appear in Ukraine. Resource access mode:https://www.dw.com/uk/v-ukraini-ziavliatsia-try-novi-pryrodni-parky-a-60320537/a-60320537
[28] The Emerald Network Viewer. Available from https://www.coe.int/en/web/bern-convention/emerald-viewer

Heritage (Article 5), the Framework Convention on the Protection and Sustainable Development of the Carpathians (Article 4), UNESCO Man and the Biosphere Programme.

The area of the national ecological network of Ukraine is 23038.9 thousand hectares, which is 38.17% of the total territory of the country.

According to Article 11 of the Law of Ukraine "On the Ecological network of Ukraine" (hereinafter - the Law), local executive bodies and local governments in charge of formation, preservation and use of the ecological network within their powers ensure the development and implementation of regional and local schemes and programs of ecological network development, conduct the necessary research.

According to Article 15 of the Law, eco-network design is carried out by developing regional schemes of eco-network formation of the Autonomous Republic of Crimea and regions, as well as local schemes of eco-network formation of districts, settlements and other territories of Ukraine. Regional and local schemes of eco-network formation are approved by the relevant councils after their coordination with regional, Kyiv, Sevastopol city state administrations.

The consolidated scheme of formation of the ecological network of Ukraine is an integral part of the General scheme of planning of the territory of Ukraine and is approved by the Verkhovna Rada of Ukraine. The Consolidated scheme of ecological network formation of Ukraine, as well as regional and local schemes of ecological network formation are periodically amended by the bodies responsible for approving these schemes as the opportunities for such network development are expanded, but at least once every ten years.

Paragraph 35 of the National Environmental Action Plan for the period up to 2025, approved by the resolution of the Cabinet of Ministers of April 21, 2021 № 443-r, defines priorities and conceptual solutions for the formation of the national ecological network in the General Plan of Ukraine for the period after 2021. The indicator of implementation is the approved General scheme of planning of the territory of Ukraine for the period after 2021.

At present, the Verkhovna Rada of Ukraine is considering the draft law (Reg. № 3337 of 14.04.2020) "On Amendments to the Law of Ukraine" On Regulation of Urban Development" on the General Scheme of Spatial Planning of Ukraine" (adopted in the first reading on 03.02.2021), which aims to determine the basic principles of spatial planning at the state level, including the formation of a national ecological network, the creation of a legal basis for the development and operation of the General Scheme.

Paragraph 34 of the above-mentioned National Action Plan provides for local executive authorities to ensure the development, renewal and implementation of regional and local programs and schemes of the ecological network formation during 2021-2025.

According to the Ministry of Environment, 15 schemes of ecological network formation at the regional level have been approved, in particular in Vinnytsia, Volyn, Dnipropetrovsk, Donetsk, Zhytomyr, Zakarpattia, Zaporizhzhia, Kyiv, Kirovohrad, Odesa, Sumy, Ternopil, Khmelnytsky, Chernivtsi and Chernihiv regions.

Restoration of territories with degraded and unproductive lands is carried out in accordance with Articles 51, 52 of the Law of Ukraine "On Land Protection" and Articles 172, 166 of the Land Code of Ukraine through conservation and reclamation of such lands.

Due to the lack of a proper system of management, control, supervision and monitoring of protected areas, violations of current legislation are constantly recorded. The presence of environmental status or belonging to an element of the ecological network is not a guarantee of protection and preservation of valuable areas, species and habitats.

Creation of protected areas is blocked by landowners and land users. The economic interests of communities are taken into account more than the protection of nature. Only in exceptional

cases do communities decide to create a protected area themselves. Business sees the creation of ecological networks as an obstacle to resource extraction, agricultural activities, deforestation and thus blocks all steps to create such networks.

Target 2 Strictly protect at least a third of the EU's protected areas, including all remaining primary and old-growth forests.

Currently, only 3% of the land in the EU is under strict protection and less than 1% of marine waters[29].

According to the official data of the Ministry of Environment, if we consider that the term "under strict protection" means restrictions on any activity in a certain area, in Ukraine the area of nature reserves and protected tracts is 302,277 thousand hectares, or 0.5% of the country's territory, 7.4% of the area of the nature reserve fund within Ukraine. In addition, this category includes protected zones of national nature parks, biosphere reserves, regional landscape parks and more. Separate accounting of the areas of such zones is not performed.

In order to achieve this indicator, Ukraine needs to introduce more detailed accounting of areas and objects of nature reserves with proper mapping to ensure the assessment of the current state of protection and develop an action plan to increase the area of such territories and ensure strict protection.

Target 3 Effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately.

The progress towards the EU target can be seen in the EU Biodiversity Strategy Actions Tracker. It is marked as "ongoing". Today its tasks are.

- Agree with Member States on the criteria and guidelines for additional protected areas.
- Complete the designation of Natura 2000 sites, including the necessary designation of marine sites.
- Coordinate with Member States nature protection actions in the framework of the biogeographical regions and regional sea conventions to ensure the EU's implementation by 2030 of the Land and Sea Conservation Objectives (30% of protected areas, including 10% of strictly protected areas).
- Commission guidance on monitoring and reporting on protected areas beyond Natura 2000. Significant progress in the legislative designation of new protected areas and the integration of environmental corridors.
- Commission guidance on defining, mapping and strictly protecting all primary and old-growth forests.
- Promote and support investments in green and blue infrastructure and cooperation among Member States to set up ecological corridors.
- Protect and restore tropical and subtropical marine and terrestrial ecosystems in the EU's Outermost regions, and support biodiversity actions in the Overseas Countries and Territories.

In Ukraine, according to official data from the Ministry of Environment, additional research is needed to assess the effectiveness of management of protected areas. Currently, the Ministry of Environment is studying the possibility of introducing at the national level the methodology for assessing the effectiveness of management of nature reserves (METT та CCPAMETT).

However, nature reserves are already threatened by illegal land use, plowing, tree felling, pollution, poaching, military damage, recreational activities, construction of various objects,

[29] EU Biodiversity Strategy for 2030 Available from https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380#footnote76

construction and impact of wind and hydropower facilities, construction of infrastructure facilities, dissemination of introduced species, jeeping, mining, regulation of river runoff, extinction of species due to pesticide use, arson, forest fires and others. They are under constant threat of destruction. And their status does not save from violations of environmental legislation, which are constantly recorded. Therefore, urgent action is needed in this area.

Target 4 Legally binding EU nature restoration targets to be proposed in 2021, subject to an impact assessment. By 2030, significant areas of degraded and carbon-rich ecosystems are restored. Habitats and species show no deterioration in conservation trends and status; and at least 30% reach favorable conservation status or at least show a positive trend.

The EU has already developed "Guidance on the selection and prioritization of species and habitats for priority actions to ensure that at least 30% of species and habitats that are not currently in favorable conservation status are in that category by 2030, or at least show a strong positive trend "and signed Agreement with the Member States on Guidance on the selection and prioritization of species and habitats for priority actions to ensure that at least 30% of species and habitats that are not currently in favorable status are in that category by 2030, or at least show a strong positive trend". Work is under way to develop proposals for binding EU nature restoration objectives, including an assessment of possible pan-European methodologies for mapping, assessing and achieving the proper status of ecosystems so that they can bring benefit. Also, the guides on mapping and monitoring of restoration measures and ecosystem conditions and services are being developed.

Ukraine has just begun to develop the Biodiversity Strategy until 2030. When the document is ready, the strategic environmental assessment procedure will take place in accordance with the current legislation of Ukraine. In order to restore ecosystems and preserve species, it is necessary to be clearly guided and move towards achievement of the goals set out in this document. Only then is it possible to achieve positive trends.

Long-term reclamation policy has radically changed the natural hydrological conditions of the former wetlands. By 1979, 2.322 million hectares of swamps and wetlands were drained, which accounted for more than 42% of the land and wetland fund of the USSR. Drainage reclamation and agricultural use of drained lands led to violation of the water regime of the territories, decrease of the level of ground water and the area of swamps, critical decrease of moisture in soil, increase of fire hazard. The transformation of natural waters was manifested primarily in changes in the quantitative indicators of water runoff. Micro- and mesoclimatic indicators of territories have changed. As an example can serve the formation of cold islands in arable land among forests in late spring and early autumn due to the slow exchange of air with adjacent forests and overheating of the soil surface in summer and the acceleration of evaporation and transpiration. No less important is the fact that drainage of swamp accelerates climate change by releasing carbon dioxide.

Some of the swamps have disappeared or are gradually disappearing. Due to declining water resources and climate change, these processes are accelerating, the processes of self-recovery of wetlands are too slow with a high risk of overgrowth, which requires urgent action to protect and restore them.

Restoration of wetland landscape complexes will contribute to:

- raising the water level in swamps and streams, groundwater levels in the surrounding areas;
- preventing the overgrowth of swamps;
- improving the microclimate of the territories, as well as contributing to the overall processes of adaptation to climate change through carbon conservation;
- conservation of valuable ecosystems and habitats for rare species of plants and animals;
- improving the condition of forest ecosystems, as low groundwater levels are increasingly affecting the condition of stands and, as a result, their weakening and damage by diseases and pests;
- the existence of additional natural fire-fighting reservoirs will be especially relevant in forestry;
- increasing groundwater reserves will promote individual farming.

All these consequences will have a positive socio-economic effect. According to the results of research, it is necessary to develop and approve a comprehensive program to restore wetlands and increase water content in Ukraine.

Climate change is a consequence of cumulative anthropogenic impact - plowing, deforestation, pollution, runoff regulation, drainage reclamation, fragmentation of habitats, which requires a comprehensive approach to addressing this issue.

Target 5 The decline of pollinators is reversed.

In June 2018, the European Commission adopted the EU Pollinators initiative[30], which is the first basis in the history of the EU for overcoming the decline in wild pollinators. A progress report has been made in the EU as part of implementation of Target 5[31] on the implementation of this initiative, work is underway to implement it. According to the Report[32]in recent decades, the number of wild pollinating insects has declined sharply, many species are on the verge of extinction. The loss of wild pollinators is a major cause for concern. This is due to the fact that about 80% of the species of agricultural and wild flowering plants in the EU depend, at least in part, on animal pollination. About 3.7 billion euros worth of EU annual agricultural production is directly dependent on pollinating insects.

However, despite all efforts, experts note the existence of significant gaps in data and information on the number of pollinating insects, the reasons for their decline and the consequences for nature and human well-being. In 2018, UNEP (United Nations Environment Program) adopted a document to protect natural pollinators entitled Conservation and sustainable use of pollinators.[33]

In Ukraine and around the world, the number of insects-pollinators is declining sharply, some species have disappeared. According to scientists[34], the main reasons for this are the loss of habitats - a sharp decrease in areas with natural vegetation suitable for nesting and feeding wild bees; intensive rural household; use of pesticides; fragmentation of natural areas; spring and autumn burning of dry vegetation on the borders of fields, forest strips and roads, denes and ravines. This leads to the death of bees, their nests in the dry stems of plants, death of fertilized female bumblebees who hid for the winter or spent winter in a dry plant litter.

In order to increase the number of species and preserve natural pollinators, as well as increase yields, the following steps need to be implemented: creation of protected areas and "islands of biodiversity among agricultural lands; ban on the use of hazardous pesticides; installation of artificial nests; creation of areas with natural vegetation; preventing the burning of dry grass.

Because everything in nature is interconnected, achieving most of the goals of the Biodiversity Strategy will improve the situation with natural pollinators.

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[30] EU Pollinators Initiative. Available from https://ec.europa.eu/environment/nature/conservation/species/pollinators/policy_en.htm

[31] Progress in the implementation of the EU Pollinators Initiative. Available from https://ec.europa.eu/environment/pdf/nature/conservation/species/pollinators/Progress_in_the_implementation_of_the_EU_Pollinators_Initiative.pdf

[32] Progress in the implementation of the EU Pollinators Initiative. Available from https://ec.europa.eu/environment/pdf/nature/conservation/species/pollinators/Progress_in_the_implementation_of_the_EU_Pollinators_Initiative.pdf

[33] Conservation and sustainable all of pollinators. Available from https://www.cbd.int/doc/c/ca37/8073/bcc8bf627c0d00bdb6f4ab9a/sbstta-22-10-en.pdf

[34]Conservation of wild pollinators: solutions. Resource access mode:https://www.syngenta.ua/news/novini-kompaniyi/zberezhennya-dikih-zapilyuvachiv-shlyahi-virishennya

Target 6 The risk and use of chemical pesticides is reduced by 50% and the use of more hazardous pesticides is reduced by 50%.

The EU Biodiversity Strategy Actions Tracker states that the EU is working to achieve this target, in particular in line with the Farm-to-Fork Strategy - improving integrated pest management (IPM) and promoting safer alternatives of protecting crops from pests and diseases such as crop rotation and mechanical weeding, reduction of hazardous pesticides and dependence on them in general. The Directive 2009/128 / EC on the Sustainable Use of Pesticides Directive[35]) is currently under revision.

According to the State Food and Consumer Service, in Ukraine the issue of economic activity in the field of pesticides and agrochemicals is regulated by the laws "On Pesticides and Agrochemicals", "On Plant Protection", "On Sanitary and Epidemiological Well-being", State Sanitary Rule on transportation, preservation and use of pesticides in people's economy" "DSanPIN 8.8.1.2.001-98 and other regulations.

The Verkhovna Rada of Ukraine registered the draft Law on Plant Protection dated 16.01.2021 № 4600. The draft law was developed for the purpose of systematic and comprehensive revision of state regulation, which currently takes place in the area of plant protection, circulation and use of plant protection products and state control and other official measures in these areas.

In accordance with the Association Agreement, Ukraine is also implementing measures to implement Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a legal basis for Community action to achieve the environmentally sustainable use of pesticides.

During consultations with specialists, the following recommendations were developed that can bring Ukraine closer to achieving this target.

1. **Amend the Law of Ukraine "On Pesticides and Agrochemicals" and the Resolution of the Cabinet of Ministers of Ukraine of November 2, 1995 № 881 "On Approval of the Procedure for State Accounting for the Availability and Use of Pesticides and Agrochemicals" to ensure permanent monitoring and control over the use of pesticides.**
2. **The State Food and Consumer Service of Ukraine and the State Environmental Inspectorate of Ukraine are supposed to ensure control over the use of pesticides (active substances) that are included into the list of permitted pesticides in Ukraine and to ensure proper control over the use of pesticides.**
3. **Amend the Law of Ukraine "On Basic Principles of State Supervision (Control) in the Sphere of Economic Activity", namely to include the State Environmental Inspectorate of Ukraine and the State Food and Consumer Service of Ukraine and their territorial subdivisions into the list of CEBs not covered by this law in terms of control over use of pesticides and agrochemicals.**
4. **The Ministry of Environment should cancel state registration of pesticides that are recognized as toxic and are banned in Europe.**
5. **Encourage organic farming and the use of biological products to control pests by introducing tax holidays for businesses.**

Target 7 At least 10% of agricultural area is under high-diversity landscape features.

In the EU, achievement of this target is planned, in particular, through the instruments of the Common Agricultural Policy (CAP) and strategic plans, in accordance with the Farm to Fork Strategy and the implementation of the Habitat Directive.

Before the advent of man in Ukraine, 100% of its area was covered with natural ecosystems: coniferous and deciduous forests, forest-steppes, steppes, mountain landscapes, river valleys, swamps and lakes. About 40,000 years ago, humans appeared on the territory of Ukraine.

[35]Sustainable use of pesticides.Available from https://ec.europa.eu/food/plants/pesticides/sustainable-use-pesticides_en

As of today, about 17% of forests remain, most of which are secondary, artificial plantations for growing wood by foresters. There are about 4% of steppes, about 1.6% of swamps, about 4% of waters. Agricultural lands occupy more than 70%, of which arable land - 53.3%, buildings - about 5%. Over the last 30 years, more than 10,000 small rivers have disappeared in Ukraine, lakes and swamps are drying up, habitats are disappearing, droughts are likely to intensify and spread, and areas of land prone to desertification are increasing. The natural balance is extremely disturbed. All this affects the state of natural complexes, temperature, humidity, soil, water, air, flora and fauna, and climate.

Unfortunately, we did not find information from official sources (including the website of the Ministry of Agrarian Policy and Food of Ukraine) regarding the creation of biodiversity islands among agricultural lands and the implementation of biodiversity protection measures.

It is also important to protect and preserve existing natural areas, water protection strips, forest belts, steppes, slope complexes, protected areas, to foster compliance with current legislation of Ukraine and public understanding of the importance of ensuring balance in ecosystems.

During public consultations, proposals were received to develop a draft law on the reallocation of 10% of arable land owned by landowners for gropwing a mixture of perennial grasses. Such measures can be started from those who own land with an area of more than 5 hectares. It is possible to establish monetary incentives for owners of arable land if they transfer it on a permanent basis into the category of fallow land, pastures, meadows. We also propose to increase the amount of penalties for plowing water protection strips and plowing all natural areas.

Target 8 At least 25% of agricultural land is under organic farming management, and the uptake of agro-ecological practices is significantly increased.

The figure for EU countries today is 8%, the Action Plan on organic farming for 2021-2026[36] has been developed. Work is under way to ensure that the Common Agricultural Policy (CAP) Strategic Plans of the EU Member States set explicit national values for the relevant targets of the Biodiversity and Farm-to-Fork Strategies, supported in particular by CAP instruments and the implementation of the Habitat Directives.

In Ukraine, according to data of the monitoring conducted by the Ministry of Economy[37], in 2019 the total area of agricultural land with organic status and transition period amounted to 467,980 ha (1.1% of the total area of agricultural land in Ukraine). The Law of Ukraine "On Basic Principles and Requirements for Organic Production, Circulation and Labeling of Organic Products"[38] has been in force.

During 9 years it is necessary to increase the % of lands with organic farming by 24.9%. This will help green Ukraine's agriculture and reduce the pressure on natural complexes.

It is also profitable from an economic point of view. Ukrainian organic products are mostly bought by EU countries. In 2020, Ukraine rated the 4th [39] among 124 countries in terms of imports of organic products to the EU. During 2020, 2.79 million tons of organic agri-food products were imported into the EU, 7.8% of which were Ukrainian (217.2 thousand tons). The largest countries consuming domestic organic products are the Netherlands, the United States, Germany, Lithuania, Austria, Great Britain, Poland, Canada, Italy and Switzerland. Ukrainian producers also export to Australia and some Asian countries, including China, Vietnam, India and Japan, as well as the first deliveries

[36]Organic action plan.Available from https://ec.europa.eu/info/food-farming-fisheries/farming/organic-farming/organic-action-plan_en
[37]Organic production in Ukraine. Resource access mode:https://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=ed6463ce-f338-4ef0-a8a8-e778d3d0ffd1&title=OrganichneVirobnitstvoVUkraini
[38]Law of Ukraine "On Basic Principles and Requirements for Organic Production, Circulation and Labeling of Organic Products". Resource access mode:https://zakon.rada.gov.ua/laws/show/2496-19#Text
[39]EU imports of organic agri-food products.Available from https://ec.europa.eu/info/sites/default/files/food-farming-fisheries/farming/documents/agri-market-brief-18-organic-imports_en.pdf

of organic products to the Republic of Korea and Myanmar. The main export products[40] are cereals, oils, honey, eggs, vegetables and fruits. Sunflower meal, flour, sunflower oil, sunflower meal, apple concentrate and birch sap are also exported.

On March 3, 2021, the Cabinet of Ministers of Ukraine approved the Resolution "On approval of the National Economic Strategy until 2030"[41], which officially sets a target for land under organic production. According to the indicators of the Strategy, it is planned to reach the indicator of the area of lands with organic status up to at least 3% of the total area of agricultural lands of Ukraine, which is about 1.3 million hectares.

Therefore, as of now, Ukraine does not intend to reach the 25% target.

Target 9 Three billion additional trees are planted in the EU, in full respect of ecological principles.

The EU has developed a "New EU Forest Strategy" in this area[42] and "Roadmap for planting at least 3 billion additional trees in the EU by 2030 in full respect of ecological principles"[43]. Work continues on the development of "Guidelines on biodiversity-friendly afforestation and reforestation and closer-to-nature forestry practices", increasing support for agroforestry, further development of the Forest Information System for Europe (FISE), cooperation with EU Member States to provide sufficient equipment to prevent and respond to large forest fires.

Planting three billion trees[44]in order to increase the number of forests and improve their health and sustainability, will take place in the 27 EU member states for 10 years. This will help increase the area of forests in the EU, increase their resilience and role in reducing biodiversity loss, and mitigate climate change.

Between 2010 and 2015, 300 million trees were planted in the EU. If we double this figure to reach 600 million trees a year, by 2030 additional 3 billion trees will be planted. Trees in forests, agroforests, rural and urban areas should be planted and grown in accordance with environmental principles, it is not recommended to plant trees in areas of high natural value, such as swamps and meadows, it is forbidden to plant invasive species. Trees can be planted by any interested citizen. Landowners, associations, companies and government agencies are encouraged to take part in the initiative. The European Commission will count and monitor the progress. It will provide political and technical support, communication and labeling and will work with the European Environment Agency on a convenient counting and monitoring platform called Map My Tree. The Commission's website also stated that this task will not solve the climate crisis on its own and will not overcome the loss of biodiversity, it is only a supplement to broader environmental measures. Measures to improve the quality and quantity of EU forests are published in the EU's new forestry strategy. The roadmap includes tasks related to the publication of guidelines on afforestation and reforestation, consideration of agroforestry and trees in cities, participation in planting, dissemination of information and branding, development of a monitoring platform, tree counter.

On June 7, 2021, the President of Ukraine Volodymyr Zelensky signed the Decree "On some measures for the preservation and reproduction of forests"[45], according to which the Large-scale afforestation of Ukraine environmental initiative was launched in Ukraine. Ukraine will implement the Green Country project [46] for nature and the environment. The goal of the project is to increase the

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[40]Exports of organic products from Ukraine in 2020 - more than 200 million US dollars. Resource access mode:https://organicinfo.ua/news/ukrainian-organic-export-2020/

[41]3% of land under organic production - the goal of Ukraine 2030. Mode of access to the resource:https://organicinfo.ua/news/3percent-under-organic-production-2030/?fbclid=IwAR2RefDLlQbxat4X1A0-pytLDslPfMsSGWUS8VwkGyGJoBTZ1rDJNTeHOvo

[42]New EU forest strategy for 2030. Available from https://ec.europa.eu/environment/strategy/forest-strategy_en

[43]New EU forest strategy for 2030. Annex.Available from https://ec.europa.eu/environment/pdf/forests/new_EU_forest_strategy_2030_annex.pdf

[44]3 Billion Trees Pledge.Available from https://ec.europa.eu/environment/3-billion-trees_en

[45] The President's Decree "On some measures for the preservation and reproduction of forests. Regime of access to the resource https://www.president.gov.ua/documents/2282021-39089

[46] Let's create forests together. Regime of access to the resource : https://zelenakraina.gov.ua/

area of forests by one million hectares over 10 years. To do this, one billion trees need to be planted in Ukraine in the next three years. Progress in planting trees can be seen on the project website[47]. As of January 18, 2022, 59,614,761 trees have been planted.

However, the approach to planting a billion trees in Ukraine does not fully comply with environmental principles, and sometimes violates them and harms natural ecosystems. Forests should not be planted in steppes as the steppes are valuable natural complexes that need to be preserved, not destroyed. This program should not cover the planting of alien tree species, and the need to reconsider afforestation work when thousands of seedlings are planted, but it is unknown how many of them will survive and how many will be cut down by care cuttings. In addition, planting a billion trees and then cutting them down when they reach maturity is more like forestry development than saving the planet.

Target 10 Significant progress in the remediation of contaminated soil sites.

The EU is working to adopt sustainable soil management practices, including as part of the Common Agricultural Policy. The Thematic Strategy for Soil Protection is being revised. Actions are being taken to identify areas with contaminated soils and restore degraded soils, determine conditions for their good ecological status, introduce goals to restore and improve soil quality monitoring, solve problems of soil compaction and restoration of contaminated soils in the Strategy for a Sustainable Built Environment, make decisions on restoring soil health and function as part of Horizon Europe's soil protection and nutrition mission.

According to the data of the European Commission[48], soil degradation is a serious problem in Europe, in particular due to disruption of soil functions and ecosystem services, loss of fertility and soil biodiversity, reduced water retention, disruption of nutrient cycles. This is due to or exacerbated by improper management of agriculture, forestry, industry, tourism, urban planning. Soil degradation has a direct impact on water and air quality, biodiversity and climate change. It can also damage health of European citizens and threaten food and feed safety.

Approximately 115 million hectares, or 12% of Europe's land area, are subject to water erosion, and 42 million hectares are subject to wind erosion. Approximately 45% of European soils are low in organic matter, mainly in southern Europe, but also in France, the United Kingdom and Germany. The number of potentially polluted sites in the EU-25 is estimated at around 3.5 million. Climate change through rising temperatures and extreme weather events exacerbates both greenhouse gas emissions and threats such as erosion, landslides, salinisation and depletion of organic matter. All this suggests that soil degradation in Europe may continue at a faster pace.

In Ukraine, according to the State Protection Service, more than 17 million hectares of agricultural land were surveyed as part of the 10th round of agrochemical certification of agricultural land for pesticide residues (HCG, DDT, 2,4-D). In general, the area with the content of these pollutants, exceeding the maximum allowable concentrations (MAC) is 0.06%. Areas that are contaminated with DDT only amount to 0.21 thousand hectares including 0.1 thousand ha in the Zhytomyr region, 0.11 thousand hectares in the Transcarpathian region. In the steppe zone, in Zaporizhzhia region territories of excessive levels of HCH (0.05 thousand hectares) and of DDT (0.36 thousand hectares) have been recorded. A slightly larger area of contamination as a result of exceeded MAC of HCH, DDT and 2,4-D was recorded in the forest-steppe zone and is 2.5 thousand hectares, 6.12 thousand hectares and 2.5 thousand hectares, due to the intensification of agriculture in this soil-climatic zone. Insignificant areas with exceeding the MAC of organochlorine pesticides were also found.

To prevent environmental pollution and the entry of pesticide residues into food chains, special attention should be paid to soils that can be introduced into general land use, identify and isolate

[47] Let's create forests together. Regime of access to the resource : https://zelenakraina.gov.ua/
[48] Thematic Strategy for Soil Protection. Available from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52006DC0231

areas contaminated with persistent pesticides, such as sanitary zones of agrochemical warehouses, air fields for agricultural for agricultural aviation, polygons etc.

Target 11 At least 25,000 km of free-flowing rivers are restored.

The EU with support of Member States is continuing to develop technical guidelines on locating and assisting in raising funding for the restoration of 25,000 km of free-flowing rivers, as well as measures to review water abstraction permits and restore ecological flows.

There is no a single inventory database in the EU on the number of existing dams and reservoirs. The total number of dams as of 2008 was estimated at 0.6 - 1.8 million[49]. There is also no single database of rivers with restored flow. According to various data, 4,000-5,000 dams have been dismantled in the EU, but more than 1 million obstacles remain on rivers[50].

According to the State Agency of Water Resources of Ukraine, the Water Code of Ukraine and other normative legal acts of Ukraine in the field of water resources management do not provide for a register of the number of rivers in Ukraine on which natural flow has been restored.

In order to improve the ecological, sanitary and hydrological condition of water bodies, the State Water Agency is taking measures to restore springs, to clear and regulate riverbeds and reservoirs. In 2020, within the budget program 2707070 "Protection from the harmful effects of water from rural settlements and agricultural lands, including in the basin of the Tisza River in the Transcarpathian region", 1.41 km of the Cheremosh Riverin Snyatynskyi district -Ivano-Frankivsk region were cleared.

In 2020, thanks to close cooperation of local authorities, the public, the Basin water resource management of the Black Sea and Lower Danube rivers, with support of Odessa Regional State Administration, the State Water Agency, in the framework of the GEF / UNDP / OSCE / UNECE project "Promoting Cross-Border Cooperation and integrated water resources management in the Dniester river basin ", a project on ecological restoration of the Yahorlyk river has been implemented. The project provided for the restoration of the natural flow of the river by eliminating unauthorized obstacles (dams, embankments), the creation of a culvert in the dam of the highway, in the area from the village Artyrivka to the village Illia, clearing the riverbed of siltation materials. After such works on the part of the Yahorlyk riverbed from the village of Dovzhanka to the village of Rozivka, over 8 km long, the flow was restored and now the river and meadow are back on the site where a swamp used to be. This has improved the visual and sanitary-epidemiological condition of the surrounding area, as the unpleasant odor due to hydrogen sulfide has disappeared.

A large-scale project to restore the Velykyi Kuyalnyk River has also been launched in Odesa Oblast. In September 2020, the Department of Environment and Natural Resources of the Odessa Regional State Administration signed an agreement to develop project documentation for the feasibility study of the Velykyi Kuyalnyk riverbed with reconstruction (liquidation) of part of hydraulic structures in Lymanskyi, Ivanivskyi, Shyryaevskiy, Berezivskyi, Anannyivskyi, Podilskyi districts of Odesa region.

At the same time, in order to achieve good ecological status of the waters, the preparation of river basin management plans (hereinafter - RBMP) is underway, in accordance with the requirements of the EU Water Framework Directive. The structure of the RBMP provides for the development of a complete list of programs (plans) for each river basin district or sub-basin, including measures aimed

[49] Dam Removal Europe Report 2018 Available from https://damremoval.eu/wp-content/uploads/2018/07/Dam-Removal-Europe-Report-2018-DEF-1.pdf
[50] Dam Removal Europe Map. Available from https://damremoval.eu/dam-removal-map-europe/

at improving or restoring the hydrological regime and morphological indicators in case of disturbance of rivers, hydraulic connection between riverbeds and floodplains, hydrological changes, modifications of river morphology.

Ensuring the preservation of natural regimes on the rivers of Ukraine and in their floodplains, increasing the area of protected areas in river valleys and their basins is extremely important and priority. Also, important are development and implementation of local programs for the restoration of previously drained swamps and peatlands, restoration and maintenance in the natural state of water protection zones and coastal protection strips.

In river basins it is important to increase the area of forest natural complexes, limit economic and sanitary felling in forests that perform the function of water protection, water regulation and shore protection; greening of agriculture: establishing control over the use of pesticides and chemical fertilizers, reducing their use and transition to environmental technologies; reduction of uncontrolled irrigation; restoration and maintenance of protective and roadside afforestation.

Also, as a result of consultations with experts, there were received recommendations on restoration of natural state of rivers – it is advisable to begin doing this in protected areas, in particular in regional landscape parks.

Target **12 There is a 50% reduction in the number of Red List species threatened by invasive alien species.**

Work is under way in the EU to implement the EU IAS Regulation and other relevant legislation and international agreements to minimize and, where possible, eliminate the introduction and spread of alien species.

According to Regulation (EU) № 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and control of the introduction and spread of invasive alien species, some 12,000 species in the Union environment and in other European countries are alien, with about 10-15% of them are considered invasive[51]. In accordance with the above decision, a list of invasive alien species for EU countries (Regulation (EU) 2016/1141) has been adopted. In the context of approximation of Ukrainian legislation to EU legislation, the adoption and implementation by Ukraine of a strategy and action plan for the management of invasive and alien species will serve to harmonize efforts to counter their spread in a transboundary context. The Biodiversity Strategy states that of the 1,872 species currently considered vulnerable in Europe, 354 are threatened with extinction due to invasive alien species.

According to the Ministry of Environment of Ukraine, the task of preventing the spread of invasive species and controlling the emergence and spread of such species in natural ecosystems, including marine, is defined by goal 4 of the Basic Principles (strategy) of state environmental policy of Ukraine until 2030, approved by the Law of Ukraine of 28 February 2019 № 2697- VIII.

The National Action Plan for Environmental Protection until 2025, approved by the Cabinet of Ministers of Ukraine on April 25, 2021 № 443, includes measures to develop an action plan to combat invasive species, to develop a list and criteria for identifying alien species that threaten natural ecosystems and biodiversity of Ukraine.

In 2019, at the request of the Ministry of Environment, the Institute of Evolutionary Ecology of the National Academy of Sciences of Ukraine performed research on organizational, legal and methodological principles of risk assessment, control of invasive alien species that threaten natural ecosystems and biodiversity of Ukraine, analyzing the structure of information about them in an open electronic database. As part of this research, scientists have prepared a preliminary list of invasive

[51]Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species. Available from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:JOL_2014_317_R_0003

alien species in Ukraine, scientifically sound criteria for classifying species as invasive alien species, risk assessment and levels of their impact on biodiversity, ecosystems, public health and economic activity, etc.

Implementation of this strategy will be ensured by implementing the action plan, the development of which is envisaged within six months after its approval by the relevant Decree of the President of Ukraine.

This action plan, which will contain a list of specific measures, deadlines and responsible executors, will be developed with the participation of interested central executive bodies, as well as scientific and civil society organizations.

By a letter dated September 7, 2021, the Cabinet of Ministers of Ukraine submitted a draft Decree of the President of Ukraine on the decision of the National Security and Defense Council "On Strategy of Biosafety and Biological Protection" for consideration at a meeting of the National Security and Defense Council (NSDC).

Pursuant to the Decree of the President of Ukraine of September 14, 2020 № 392 “On the Decision of the National Security and Defense Council of Ukraine of September 14, 2020” On the National Security Strategy of Ukraine“, the Ministry of Environment and other interested central executive bodies developed a draft Strategy of Biosafety and Biological Protection. One of the main tasks of this Strategy is to prevent penetration, control the spread, remove and mitigate (minimize) the adverse effects of invasive alien species on natural ecosystems, economic activities and human health by improving public policy, regulatory framework and institutional capabilities, raising awareness and scientific and methodological support, development and implementation of relevant practical measures.

It is not yet known exactly how many protected species suffer from invasive species. This issue, as well as the development and implementation of measures to minimize / eliminate such harmful effects will be addressed during the development of the draft plan for the implementation of the Strategy.

In 2019, the Ministry of Environment has developed a "National Strategy for the Management of Invasive Alien Species of Flora and Fauna in Ukraine until 2030."[52]. The Strategy provides for the development and approval of the National Action Plan for the implementation of the Strategy and relevant action plans at the local level. The strategy has not been adopted. Issues of invasive and alien species management are included in the Biosafety and Biosecurity Strategy, the objectives of which will be achieved in two stages: the first in 2021-2025, the second in 2026-2030.

Target 13 The losses of nutrients from fertilizers are reduced by 50%, resulting in the reduction of the use of fertilizers by at least 20%.

The EU has developed a “Zero Pollution Action Plan for Air, Water and Soil, including a set of indicators for the progressive reduction of pollution and the establishment of baselines” and a new “EU Chemicals Strategy for Sustainability”. There are currently being developed the actions to foster achievement of the goal of zero pollution by reducing nutrient losses from nitrogen and phosphorus fertilizers to safe amounts within the planet.

According to the Institute of Soil Protection of Ukraine, in modern conditions in order to increase soil fertility and achieve a stable high yield, the fertilizer application system needs to be improved to eliminate the deficit of all nutrients. The most accessible control over soil fertility is the study of nutrient balance, which allows to determine how the application of nutrients with fertilizers covers their costs with the yield of crops.

[52]The Ministry of Environment has developed a National Strategy for the Management of Invasive Alien Species of Flora and Fauna in Ukraine until 2030. Resource access mode:https://mepr.gov.ua/news/33369.html

Calculations of nutrient balance are the scientific basis of agricultural technologies aimed at protecting and reproducing soil fertility, obtaining high quality agricultural products.

The calculation of the balance of nutrients in the soils of Ukraine shows that the country has an unfavorable regime of mineral nutrition of plants, which is a consequence of insufficient compensation for the amount of nutrients removed from the soil by crops.

Farming by agricultural enterprises of Ukraine on average in 2016-2019 in the soils formed a negative balance of nutrients, which is minus 76.1 kg / ha, or minus 1253.8 thousand tons. Under this condition, during this period, the average yield was 463.5 kg / ha of nutrients, and removal - 705.5 kg / ha. The intensity of the balance was only 65.7%.

The lowest balance was in 2017 and 2018, where the figure was minus 67.8 and minus 69.7 kg / ha, respectively. The most negative balance of nutrients was observed in 2019 - 83.8 kg / ha.

Fertilizers have an undeniable effect on soil fertility, increase crop yields and improve their quality. It is proved that mineral fertilizers increase the yield of agricultural crops by 30-40% and more. But they can provide such an increase in yield only if they are used correctly and in the required amounts. After all, scientifically grounded use of fertilizers allows to obtain biologically valuable plant products with high and sustainable yields.

According to statistical reports from 2011 to 2020, agricultural enterprises of Ukraine annually applied an average of 1,750 thousand tons of nutrients with mineral fertilizers, including: nitrogen - 1201.3, phosphorus - 297.2, potassium - 251.5 thousand tons. The most nutrients of mineral fertilizers were applied in 2020 - 2483.9 thousand tons, and the least in 2011 - 1362.4 thousand tons.

Over the past 10 years, the norm of application of mineral fertilizers has increased from 68 kg / ha to 140 kg / ha of sown area, of which nitrogen - from 48 kg / ha to 97 kg / ha, phosphorus - from 11 kg / ha to 24 kg / ha and potassium - from 9 kg / ha to 19 kg / ha. The application of mineral fertilizers per 1 ha of sown area during this period increased by 2 times. But still the main share of mineral fertilizers is nitrogen (about 70%).

"Analyzing the dynamics of the use of mineral fertilizers by agricultural enterprises over the past 10 years, we can conclude that the reduction of fertilizers is not expected."- the Institute stated in the official letter.

Target 14 Cities with at least 20,000 inhabitants have an ambitious Urban Greening Plan.

In the EU More than 50 cities have already signed the Green City Accord[53]. The agreement stipulates that local authorities are committed to achieving ambitious environmental targets by 2030 for air, water, nature and biodiversity, the circular economy, waste and noise.

Work is under way to establish Technical Guidelines for Urban Greening and Assistance to mobilize funding and build the capacity of Member States, local and regional authorities, including the development of Urban Greening Plans. Creating an EU Urban Greening Platform under the new Green City Agreement. Development of Urban Greening Plans.

In **Ukraine**, this issue falls within the competence of the Ministry of Housing and Communal Services of Ukraine. Landscaping of settlements[54] is a set of works on engineering protection, clearing, drainage and greening, as well as socio-economic, organizational, legal and environmental measures to improve the microclimate, sanitation, noise reduction, etc., carried out in a settlement for its rational use , proper maintenance and protection, creating conditions for the protection and

[53]Green City Accord: ceremony for signatories.Available from https://ec.europa.eu/environment/news/green-city-accord-ceremony-signatories-2021-07-22_en

[54]Law of Ukraine "On Lanscaping of Settlements". Resource access mode:https://zakon.rada.gov.ua/laws/show/2807-15#n21

restoration of a favorable environment for human life. Greening of settlements[55] is a set of works on the creation and use of greenery in settlements, or otherwise, a system of greenery in settlements.

The Law of Ukraine "On Landscaping of Settlements" entrusts the organization of development and maintenance of green areas in settlements to local governments. The law stipulates: "Decisions of local executive bodies and local self-government bodies on landscaping of a certain settlement are obligatory for implementation by enterprises, institutions, organizations and citizens living in this territory." Based on this, local authorities designate an authorized body and/or responsible persons who would be responsible for development and control in the area of green economy. The authorized body or designated persons analyze the general plan of the settlement development, inventory materials, reports, etc. and prepare decisions of the executive bodies on development of the program of preservation and further development of green zones of this settlement. Architects who developed the general plan, greening specialists, scientists and other should be involved experts should be involved in the development of such a program. The program provides for the increase of the area under green plantations based on the standards provided by building norms, namely: territories for construction of new enterprises, institutions, organizations, creation of new parks, squares in accordance with the general plan, reconstruction of existing green areas and more.

A separate section of the program should be the maintenance of green areas, for which the entire territory of the settlement is studied, the owners or users of these territories responsible for their maintenance are established, taking into account the adjacent areas. Territories with no owners are maintained at the expense of local governments. The program is widely discussed in the press and with the public of the settlement, after which it is approved by local governments. The program is mandatory for all enterprises, organizations, institutions, citizens mentioned in it. Such a program is updated annually to take into account the issues of the settlement development.

A number of Ukrainian cities have Greening Plans, in particular the city of Kyiv. However, taking the example of Kyiv key tendencies in this area can be established and they are not positive. Green areas of Kyiv are constantly destroyed, given over to development, are subject to various anthropogenic impacts (littering, sewage disposal, snow storage, damage and felling of trees, excessive recreation, damage to soil and vegetation during jeeping and motocross, burning of vegetation, excessive use of salt in winter, barbaric pruning of trees, which leads to their death, asphalting of places where trees used to grow along roads, etc.), which is a violation of current environmental legislation of Ukraine. All types of impact listed above were recorded by our organization during a survey of Kyiv green areas as well as water bodies. Members of non-governmental organizations that protect green areas have been threatened, attacked, beaten, and even killed, their property was destroyed.

The situation is extremely difficult. According to the development plans, there are already projects to destroy green areas in Osokorky meadows, Gorbachykha tract, Holosiivskyi National Nature Park, areas around Pyrohovo, along Mykilsko-Slobidska Street, Lake Vyrlytsia. Small rivers of Kyiv and green areas along them as well as protected areas in the city are in a difficult situation. It is necessary to conduct investigations into the approval and implementation of projects and planned activities by structural units of the Kyiv City State Administration, in particular regarding providing conclusions on the admissibility of planned activities in the framework of the environmental impact assessment procedure.

Target 15 No chemical pesticides are used in sensitive areas such as EU urban green spaces.

In the **EU**, this commitment will be seen as part of Target 6, namely within revision of the Sustainable Use of Pesticides Directive.[56]), including improving its provisions on integrated pest management and stepping up efforts to ensure that chemical pesticides are not used in sensitive areas such as urban areas.

[55]About the statement of Rules of the maintenance of green plantings in settlements of Ukraine. Resource access mode:https://zakon.rada.gov.ua/rada/show/z0880-06#Text
[56]Sustainable use of pesticides.Available from https://ec.europa.eu/food/plants/pesticides/sustainable-use-pesticides_en

In **Ukraine**, the State Sanitary Rules "Transportation, storage and use of pesticides in the national economy" DSanPIN 8.8.1.2.001-98"[57] determine that the use of pesticides in cities and other settlements for the protection of greenery is allowed only in cases where forestry, biological, physical-mechanical and quarantine measures do not give the desired effect. There is a ban on the use of pesticides to protect greenery in medical preventive and children's institutions, sports grounds, food industry enterprises, as well as within densely populated residential areas. These rules are part of the sanitary legislation and are obligatory for observance by all enterprises, establishments and organizations, private farms and persons carrying out any actions with pesticides.

Also, Article 33 of the Law of Ukraine "On Local Self-Government in Ukraine" defines the powers in the area of regulation of land relations and environmental protection, which states that relevant powers of executive bodies of village, town, city councils include:

- preparation and submission for approval by the council of projects of local environmental protection programs, participation in the preparation of national and regional environmental protection programs;
- preparation and submission to the council of proposals for decisions on the organization of territories and objects of the nature reserve fund of local significance and other territories subject to special protection;
- - making proposals to the relevant state bodies on designation of natural and other objects of ecological, historical, cultural or scientific value, natural, historical or cultural monuments protected by law; preparation and submission to the council of proposals for decision-making on announcing in the places of mass reproduction and rearing of offspring wild animals "silence season" with restrictions on economic activity and animal hunting;
- - control over the observance by legal entities and individuals of the requirements in the area of household and industrial waste management and consideration of cases on administrative offenses.

According to the Regulation on the Ministry of Environment and Natural Resources of Ukraine, approved by the Resolution of the Cabinet of Ministers of Ukraine of 25.06.2020 № 614, one of the main tasks of the Ministry is to ensure the formation and implementation of public policy in the area of environmental protection, environmental safety and within stipulated by law powers regarding biological and genetic safety, as well as ensuring the formation of public policy in the area of pesticides and agrochemicals.

It can be concluded that the use of pesticides in green areas of cities is partially banned in Ukraine, but a complete ban has not yet been imposed, so it is necessary to amend existing regulations, in particular, the State Sanitary Rules "Transportation, storage and use of pesticides in the national economy "DSanPIN 8.8.1.2.001-98.

As a result of consultations with experts, we received a recommendation that the rules for the use of pesticides and agrochemicals should be revised and amended to take into account modern technologies. It is necessary to strengthen liability for violations of current legislation, and set clear limits on application of various measures in accordance with agro-technical passports.

Target 16 The negative impacts on sensitive species and habitats, including on the seabed, through fishing and extraction activities, are substantially reduced to achieve good environmental status.

The EU continues to work on the following tasks:

- Fishing mortality is maintained or reduced at MSY or below;
- A new action plan for the conservation of fishery resources and the protection of marine ecosystems

[57]Transportation, storage and use of pesticides in the national economy. State sanitary rules of chipboard 8.8.1.2.001-98. Resource access mode:https://zakon.rada.gov.ua/rada/show/v0001282-98#Text

- Ensure that national maritime spatial plans to be submitted by Member States are consistent with the objectives of this strategy and that they apply an ecosystem approach to management to reduce the negative impact of fishing, extraction and other human activities on sensitive species and habitats
- Establish fisheries management measures in all marine protected areas in accordance with clearly defined conservation objectives and based on the best available scientific advice.

Under the International Ocean Governance Agenda, by the end of 2020, the EU will support an ambitious legally binding agreement on marine biological diversity of areas beyond national jurisdiction (BBNJ). Clear global procedures need to be established for the identification, definition and effective management of environmentally representative marine protected areas in international waters. It should be ratified and implemented as soon as possible.

The EU must also use all its diplomatic leverage and wide-ranging information coverage to help conclude an agreement on the recognition of three large marine protected areas in the Southern Ocean, two of which (East Antarctica and Weddell Sea) have been proposed in cooperation with the EU. If the Agreement is adopted, it will be one of the greatest acts in history of assigning a protective status to a natural object.

The work will continue with partner countries and regional organizations to implement measures for the protection and sustainable use of vulnerable marine ecosystems and species (including in areas outside national jurisdiction) with a focus on marine biodiversity hotspots. The EU should continue to support small developing island countries and other relevant partner countries by encouraging them to participate in meetings of regional and global organizations and bodies, as well as to comply with relevant international commitments and regulations.

The EU will apply the principle of zero tolerance for illegal, unreported and unregulated (IUU) fishing and will fight overfishing, including through the World Trade Organization (WTO) negotiations on a Global Compact to eliminate certain harmful subsidies in fisheries.

In international negotiations, the EU must ensure that marine minerals in the international seabed area cannot be used until the impact of deep-sea extraction on the marine environment, biodiversity and human activities is sufficiently assessed, the risks are clear, and technologies and operational practices do not cause serious damage to the environment in accordance with the precautionary principle and taking into account the requirements of the European Parliament. In parallel, the EU will continue to fund research into the impact of seabed extraction and environmentally friendly technologies. The EU must also demand greater transparency in international bodies such as the International Seabed Authority (ISA).

The Ministry of Environment of Ukraine regulates the impact of fisheries activities within its competence when considering draft regulations in the area of fisheries, including draft regimes and rules of fisheries, limits and forecasts of permissible use of aquatic bioresources of national importance, approved by the State Fisheries Agency.

Thus, fishing regimes establish for the appropriate period a set of requirements, conditions and measures for the volume of work for reproduction of aquatic bioresources according to their age and species characteristics, fishing time, types and quantities of tools and means of fishing, withdrawal volumes, regulation of recreational and sport fishing, economical use of aquatic bioresources of a fishery water body (or its part).

The issue of the impact of extraction nactivities on sensitive species and natural habitats, including on the deep seabed, is resolved during the environmental impact assessment of planned activities in accordance with the Law of Ukraine "On Environmental Impact Assessment". The Order of the Ministry of Environment of March 15, 2021 № 193 approved the General guidelines on the content and procedure of compiling a report on environmental impact assessment. To date, the Ministry of

Environment has prepared draft guidelines for the preparation of an environmental impact assessment report for extraction activities[58].

Target 17 The by-catch of species is eliminated or reduced to a level that allows species recovery and conservation.

The EU is continuing to support the transition to more selective and less harmful fishing practices through EMFAF, setting seabed integrity thresholds, ensuring that Member States monitor by-catch and, in accordance with the DCF, intensifying the collection of data on incidental catch of sensitive species and taking the necessary measures to eliminate or, where that is not possible, minimize by-catch.

In Ukraine, the fact is that a large number of cetaceans, in particular Black Sea Harbor Porpoise, die accidentally every year in fishing gear. The vast majority of by-catch cases are related to bottom gill nets, which are officially set for fishing flounder-turbot and stingray, as well as spiny dogfish, the fishing of which has been suspended in Ukraine for the last 10 years. In addition, by-catch of Black Sea Harbor Porpoise is increased by use of unsafe three-walled barbed nets (barbed nets), which have historically been used to catch sturgeon and are now used to catch so-iuy mullet with by-catch of other species or in river vanguards for so-called particle fish (catfish, carp, etc.). For some populations, in particular Black Sea Harbor Porpoise in the Sea of Azov, by-catch is one of the most important causes of death, leading to population decline in the medium term: according to demographic estimates and population structure modeling, this population has halved in 12 years and the maximum life expectancy has fallen from 20 to 12 years. However, there are currently no direct estimates of the death of cetaceans from fishing gear in Ukrainian waters due to the complete lack of a system of notifications from fishermen about accidental by-catch of marine mammals.

Under current law, a fisherman who finds a dead cetacean in fishing nets is subject to administrative and criminal liability. Therefore, the fishermen do not want to inform the relevant authorities because of the threat of being brought to justice. Catching of endangered species must also be stopped or reduced to a level that ensures full recovery. This should also apply to species that are in poor conservation status or do not have proper environmental status. In addition, accidental by-catch of other species must be eliminated or, where this is not possible, minimized so as not to endanger the conservation status of populations. This requires intensification of collecting data on accidental by-catch of all vulnerable fish and other marine species. In addition, managerial actions in the fisheries must be performed in all marine nature protection areas in accordance to clearly set protection goals and based on the best available scientific recommendations.

The legislation sets the amount of compensation to the state for illegal extraction, destruction of cetacean Red Book species - 100,000 hryvnias for one exterminated individual of each of the three Black Sea cetacean species. In addition, there is no procedure for obtaining information on cetacean by-catch by marine ecosystem research institutions.

It is likely that the risk of being prosecuted prevents fishermen from timely notification about such by-catch. A notification system is needed to gather information on the intensity of by-catch in fishing gear and to take measures to reduce and prevent accidental deaths of cetaceans. Among other things, the lack of trust among fishermen does not contribute to the possibility of experimental application of new devices and technologies to reduce by-catch. The problem is complicated by the fact that in addition to official fishing, illegal fishing (poaching) is widespread in the waters of Ukraine, the volume and impact of which on cetaceans is difficult to estimate. It can be argued that illegal fishing gear, which is aimed primarily at valuable marine resources, is the most dangerous in terms of accidental by-catch of cetaceans.

One way to address accidental by-catch is using acoustic deterrents for cetaceans, such as pingers, which periodically emit sound signals (including high-frequency ones) in the water that scare away dolphins. Examples of such signals used in practice are the sounds of killer whales, which in the wild hunt small dolphins and Black Sea Harbor Porpoise. Pingers in the form of floats cling to fishing nets, their duration depends on the manufacturer and the time

[58] Discussion of the draft "Guidelines for the preparation of an environmental impact assessment report for extraction activities" has begun. Resource access mode: https://mepr.gov.ua/news/37911.html

spent in water. The devices start working as soon as water gets on a special sensor. These technologies must be scientifically tested in the Black and Azov Seas to assess their effectiveness, select the best signals and modes of operation, and assess the habituation of cetaceans to their action.

According to the Ministry of Environment, the Fishing regimes for the Black and Azov Seas in 2021, approved by the orders of the Ministry of Environment of February 8, 2021 № 87 and March 2, 2021 № 161 determined that by-catch of prohibited aquatic bioresources and aquatic bioresources in the period of spawning as well as animals that do not belong to aquatic bioresources (amphibians, reptiles, birds and mammals) should be returned to the natural environment immediately, regardless of their condition. In the case of by-catch of living cetaceans, the user of aquatic bioresources is obliged to release the animals as soon as possible. If necessary, assistance to marine mammals is provided on site with their subsequent return to the natural environment. In addition, the issues of restrictions on catching and by-catching valuable species of aquatic bioresources, for example Black Sea turbot, are regulated.

According to the second part of Article 19 of the Constitution of Ukraine, state authorities and local governments, their officials are obliged to act only on the basis, within the powers and in the manner prescribed by the Constitution and laws of Ukraine.

According to the Regulation on the Ministry of Environment and Natural Resources of Ukraine approved by the resolution of the Cabinet of Ministers of Ukraine on June 25, 2020 № 614, the Ministry of Environment is the main body in the system of central executive bodies, which ensures the formation and implementation of public policy in the area of environmental protection, environmental safety and legally stipulated aspects of biological and genetic safety.

According to the Regulation on the State Agency for Land Reclamation and Fisheries of Ukraine, approved by resolution of the Cabinet of Ministers of Ukraine of September 30, 2015 № 895, the State Fisheries Agency is the central executive body directed and coordinated by the Cabinet of Ministers of Ukraine through the Minister of Agrarian Policy and Food who among others implements public policy in the area of fisheries, protection, use and reproduction of aquatic bioresources, fisheries regulation.

According to the results of a consultation with an employee of the I.I. Schmalhausen Institute of Zoology of the National Academy of Sciences of Ukraine and the Ukrainian Research Center for Marine Ecology, we concluded that it is extremely important to support the persistent recommendation of the ACCOBAMS Scientific Committee to be considered at the Meeting of Parties, regarding by-catch of the Black Sea cetaceans and to support its implementation in the form of by-catch monitoring, research and introduction of by-catch reduction means.

Together with scientists from the Institute of Zoology of the Ukrainian Research Center for Marine Ecology and Environmental Law Alliance Worldwide in the framework of producing EPL's policy paper "Protection of marine mammals in Ukraine"[59] , recommendations for the protection of marine mammals in the wild have been developed. They include recommendations for reducing cetacean by-catch.

1. **Take appropriate measures to train and educate fishermen on how to prevent cetaceans from falling into nets and other tools for catching marine bioresources, take measures to release cetaceans caught in such tools at sea, protect cetacean habitats, promote reporting by-catch etc .;**
2. **Take measures to finance the regular monitoring of cetaceans in national marine waters, take measures to cooperate in the implementation of such monitoring with foreign countries.**
3. **Develop a procedure for informing about accidental by-catch of cetaceans, a procedure for actions in case of accidental catching of live and dead animals, conditions for reporting such by-catch and release of live animals into the natural**

[59]Analytical document "Protection of marine mammals in Ukraine". Resource access mode:http://epl.org.ua/eco-analytics/zahyst-morskyh-ssavtsiv-na-terytoriyi-ukrayiny/

environment, or transfer of dead animals to scientific institutions for research. Make appropriate changes to the Code of Administrative Offenses and the Criminal Code: in particular, establish liability for intentional by-catch, ie determine that accidental by-catch is not a violation of the law provided notification and animal remnants are transferred to relevant authorities and scientific organizations.

4. **Take measures to promote marine fisheries that do not harm cetaceans (rapana catching, etc.) and the development of aquaculture.**
5. **Amend the Criminal Code of Ukraine to establish criminal liability for intentional removal of living cetaceans from the Black and Azov Seas.**
6. **Develop and approve a methodology for assessing the environmental impact of planned activities that may have a negative impact on cetaceans, including fishing, marine exploration and exploitation of minerals, marine sports, tourism and cetacean monitoring, and provide a recommended list of environmental conditions for such activities.**
7. **Supplement the Rules of Industrial Fishing in the Black Sea Basin and the Rules of Fisheries in the Azov Sea Basin with a ban on keeping on board or using for fishing one or more floating nets, individual or total length of which exceeds 2.5 kilometers, as well as with the obligation to involve a scientific observer of certain types of fishing activities.**

We dream that Ukraine will achieve these goals and we will be able to save the Nature.

EPL team

Polonyna Borzhava, the territory of the Emerald Network, which we protect.

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