Input to **AN ENVIRONMENTAL COMPACT FOR UKRAINE**

A Green Future: Recommendations for Accountability and Recovery

by the **High-Level Working Group on the Environmental Consequences of the War**

Environmental Restoration of Ukraine

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Overview

With the war in Ukraine still ongoing, many details of the already widespread damage to its natural environment remain unknown. Nevertheless, both the overall planning for environmental restoration and faster action in areas where it is possible can and should go ahead. Ideally, restoration would aim to return Ukraine's environment to its pre-war condition. However, it is painfully clear that some of the damage cannot be reversed within a foreseeable time or resource frame, if ever. On the other hand questions are emerging as to whether there may be opportunities to improve on, rather than merely restore, the pre-war environment. Both immediate and longer-term restoration actions will require strong coordination among various domestic and international actors as well as clear and inclusive priorities.

1. The state of nature in Ukraine prior to 2022

Historically, land and nature have been among Ukraine's most important and best-known assets. Fertile *chernozem* (black earth) soil occupies two thirds of Ukraine's territory and dominates its cultivated land. Consequently, Ukraine's agriculture is of global importance, traditionally supplying a significant share of the international market for commodities such as sunflower oil, wheat and corn.[1] At the same time, in part due to intensive agricultural practices, ineffective land-improvement techniques, and the harsh climate in some areas of the country, a considerable proportion of Ukraine's land has long suffered from pollution, erosion, waterlogging and drought.[2]

Ukraine is home to 35% of European biodiversity and one in three species under protection in Europe.[3] Ukraine's wetlands provide habitats for migratory species of European and global significance. Prior to February 2022, protected areas covered almost 7% of Ukraine, with plans drawn up to add new sites as part of the European Emerald Network.[4] Forests account for only 16% of Ukraine's territory, but are a vital economic, environmental and recreational resource. Forest shelter belts protect agricultural land from erosion in the drought-prone south.

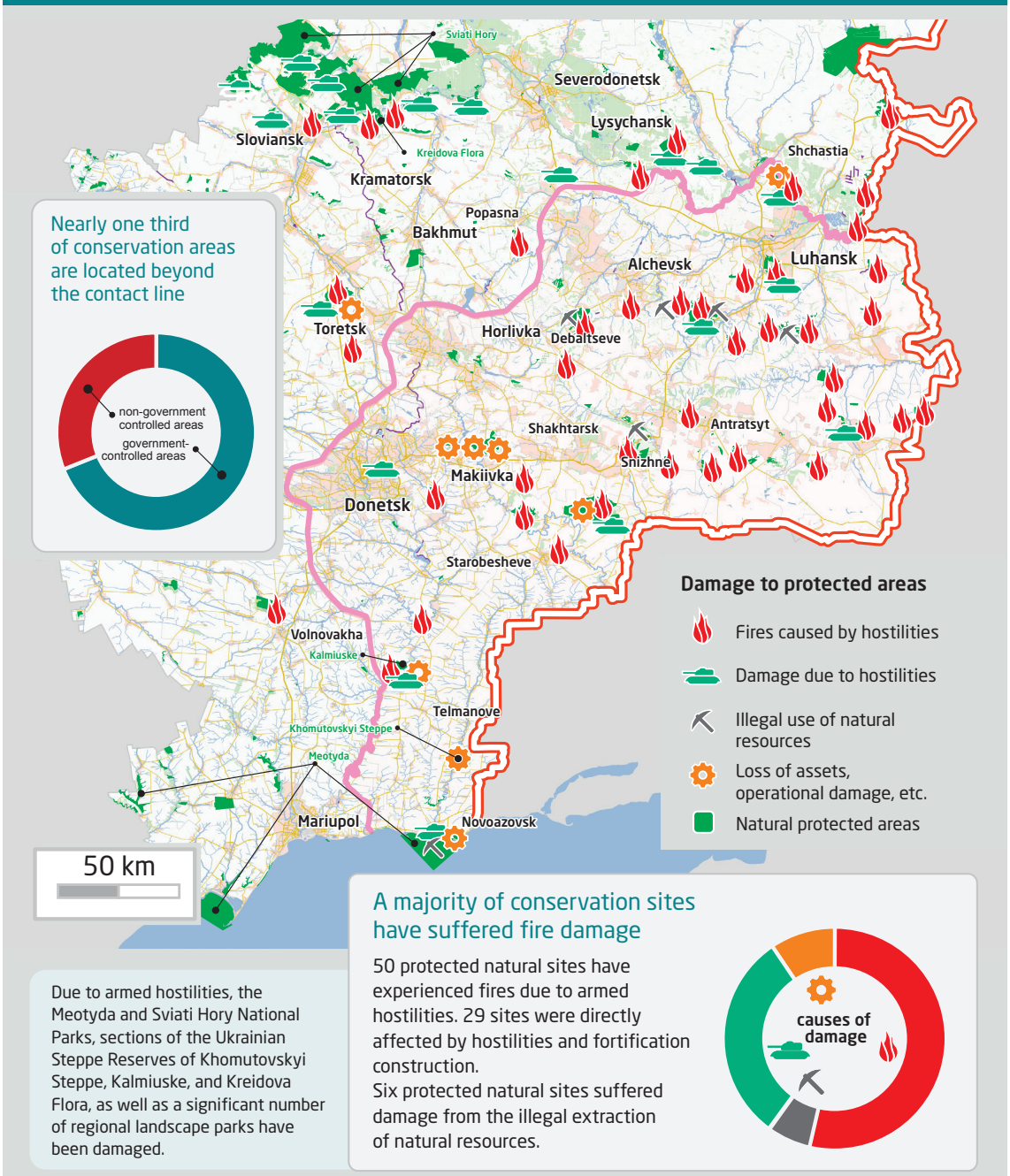
Ukraine's freshwater resources are close to that of an average European country.[5] However, due to industrial, agricultural and municipal pollution, the condition of Ukraine's rivers, lakes and groundwater as well as the Sea of Azov and the Black Sea has long been of concern. There have also been major hydromorphic changes to water bodies, for instance through the construction of multiple dams and reservoirs on the Dnipro and the Dniester rivers. While they generate electricity, supply water, ensure navigation and mitigate floods, such structures have disrupted the natural hydrological regime and self-purification of the affected rivers.

The war in Donbas, which started in 2014 following the Russian annexation of Crimea, significantly affected the region's natural resources, biodiversity and protected areas.

War damage to protected areas in Donbas since 2014

DAMAGE AT PROTECTED NATURAL AREAS

78 nature reserves, wildlife sanctuaries, and landscape parks in the Donetsk and Luhansk oblasts have suffered fire damage due to military operations, fortification construction, the detonation of ammunition, combat vehicle maneuvers, the illegal extraction of natural resources, etc.



Source: Organization for Security and Co-operation in Europe (OSCE), 2019 (https://www.osce.org/project-coordinator-in-ukraine/445366).

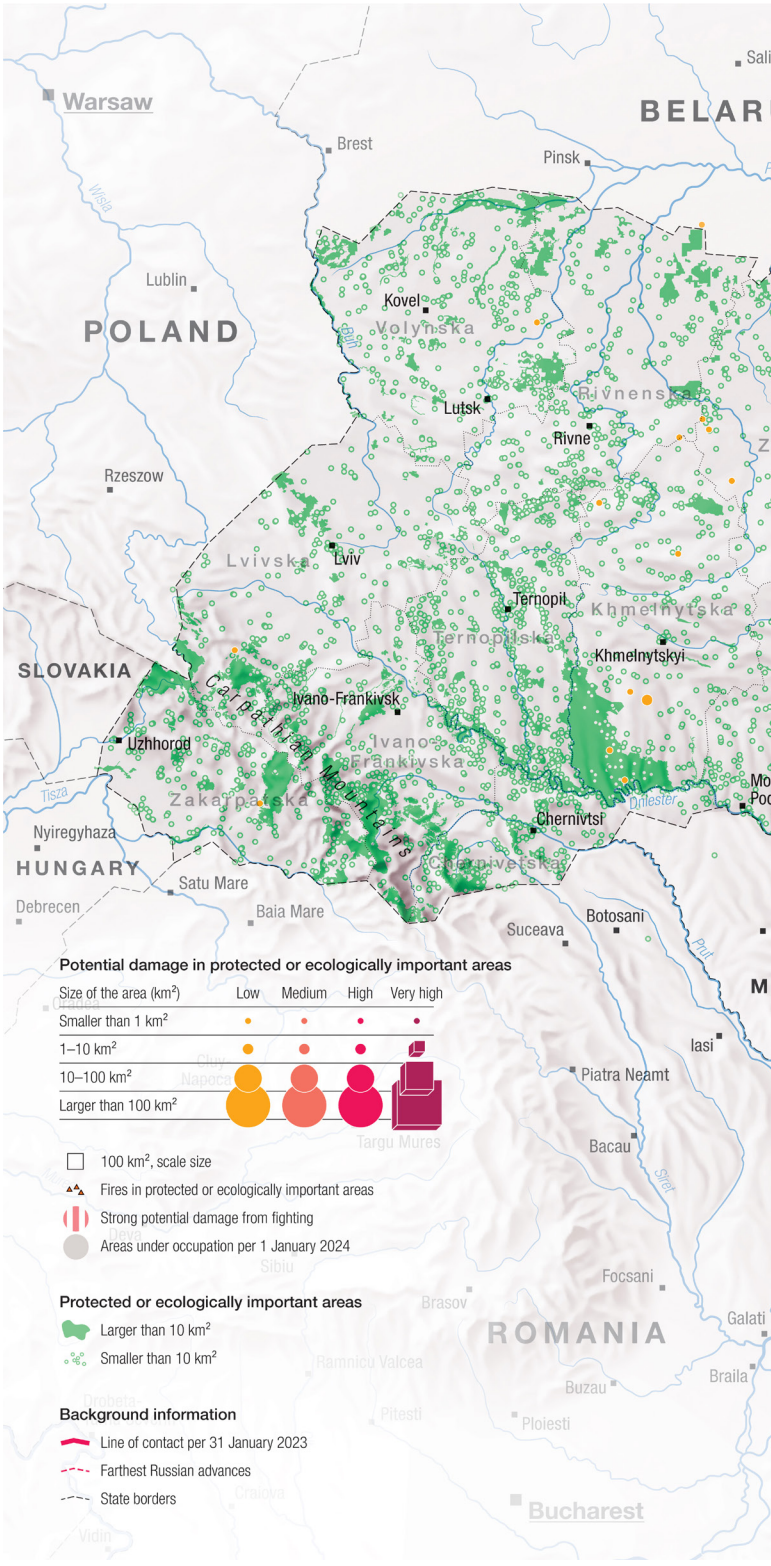
2. Environmental damage since the 2022 full-scale invasion

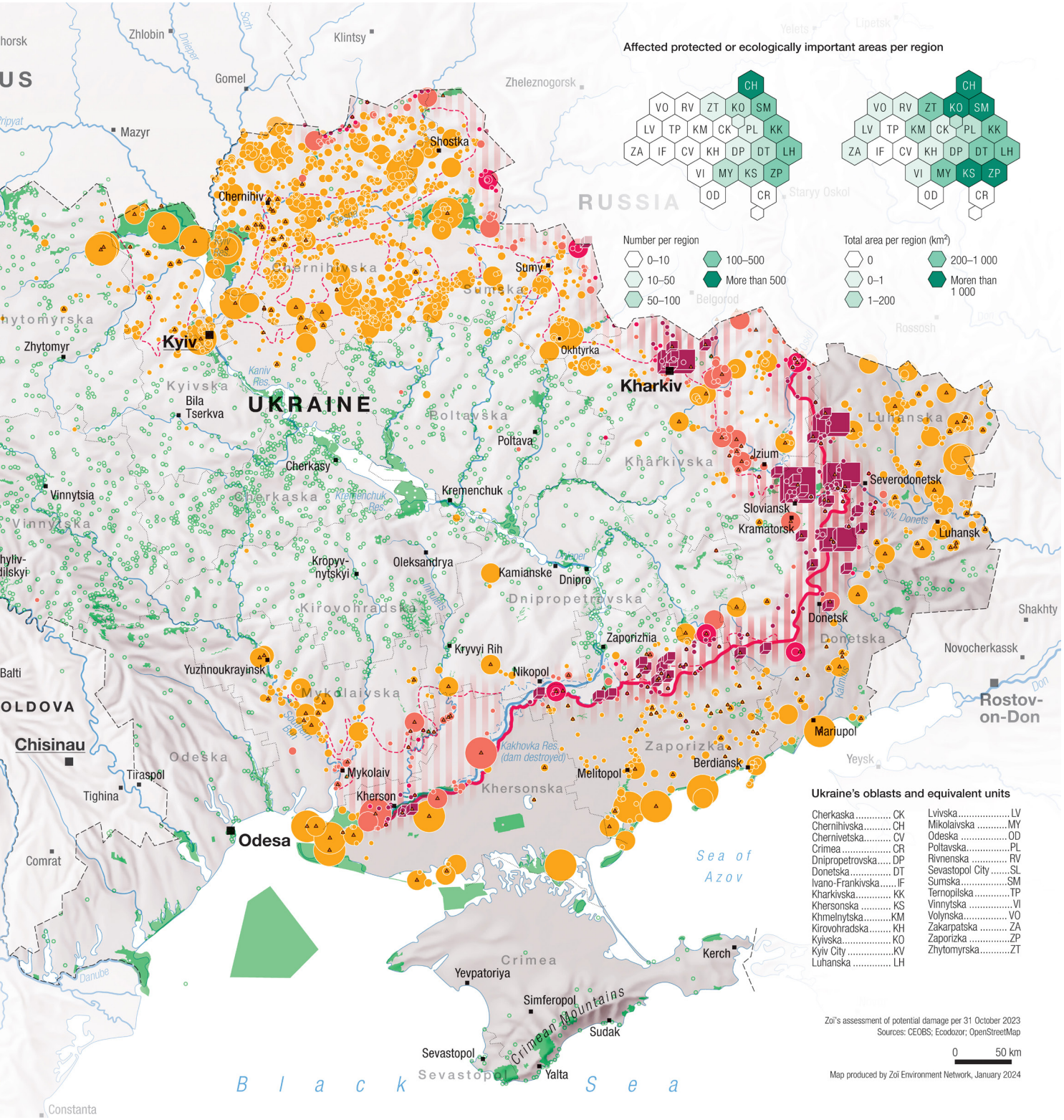
In all armed conflicts, land and nature are among the most immediate casualties. The impacts suffered include those from the movement of mechanised troops; the construction of fortifications and supply routes; impact craters from explosions; chemical pollution from munition, fuel, and military materiel; and long-term contamination with explosive ordnance, land mines, and by-products of their destruction. A comprehensive assessment of such damage requires studies and in situ assessments of large stretches of land, which have so far only been performed in isolated cases.[6] Larger-scale although indirect assessments based on the proximity of land to the front line found that, as of October 2023, a third of Ukraine's land has been within 30 kilometres of the front line at least for a short period of time. Based on a further assessment, moderate to very significant damage can now be expected on about 10% of Ukraine's land.[7]

Coherent with these estimates, as of April 2023, a third of Ukraine was considered to be contaminated with landmines and other explosive ordnance. Ukraine has become the most mined country in Europe. The most heavily mined regions include Donetsk, Luhansk, Kherson, Mykolaiv, Zaporizhzhia, Sumy, Chernihiv, Kyiv, and Kharkiv oblasts.[8] These areas typically also contain explosive ordnance and abandoned military materiel, and the impacts of such multiple contamination are many: from denying access to the affected areas to rescue and emergency response workers, surveillance teams, and eventually citizens; to injuries or lethal damage to people or animals who nonetheless attempt to move through the contaminated land; and a gradual pollution of land and water with leaching chemicals.[9] Furthermore, a lack of maintenance in these areas allows invasive species to spread at the expense of indigenous vegetation.[10] Operations to clear the land also bear environmental risks due to the necessary clearance of vegetation, the partial removal of topsoil, and the disposal of the collected ordnance.[11]

The war has reached biodiversity-rich areas like Polissia in the north, unique steppe landscapes in the south, and internationally important wetlands along the Black and Azov Sea coastlines.[12] In protected natural areas, direct

War impact on nature and protected areas since the 2022 full-scale invasion





Source: Conflict and Environment Observatory and Zoï Environment Network, 2024 (https://ceobs.org/ukraine-conflict-environmental-briefing-nature/)

damage as described above has been exacerbated by the loss or limiting of access to such areas for their proper maintenance. Since the start of the war in Donbas in 2014, almost 40% of Ukraine's protected or ecologically important areas have experienced occupation. While the majority were occupied after February 2022, at the time of writing, the occupied part of Ukraine still includes 19% of the territory of such areas. Based on the proximity to front lines, 7.5% of Ukraine's protected or ecologically important areas can be expected to have suffered moderate to significant damage from the full-scale war.[13]

Since the start of Russia's 2022 invasion, a quarter of Ukraine's protected or ecologically important areas have experienced landscape fires. In all land categories across Ukraine, the fires have affected a total of about 12,000 km^2, 7% of that area being forest. Three quarters of such fires have happened within 30 kilometres of the front line, pointing to war-related events and activities as their likely source.[14] As with access for the management of natural areas, contamination with explosive ordnance often makes fire-fighting impossible, even in already liberated areas.

A particular kind of war damage has been associated with the intentional targeting of water bodies or their use as a means of waging war. Examples include the flooding of the floodplain of the Irpin River during the battle for Kyiv in early 2022;[15] the destruction of the dam of the Oskil Reservoir in Kharkiv Oblast later the same year;[16] and the destruction of the Kakhovka Dam in June 2023. The latter has affected urban, agricultural and natural areas on a massive scale, with the plume of polluted freshwater reaching as far as Odesa in the western Black Sea. Areas upstream of the dam have suffered too, with thousands of people, important industries and agricultural areas, and a number of natural protected areas deprived of reliable water supply.[17]

Unrepaired damage to Ukraine's natural environment will in the long-term have ecological consequences at the European and global scales as well as significant social and economic implications.[18] Nature is also playing an increasing role in climate change adaptation, as well as in mitigating greenhouse gas emissions: Ukrainian forests alone absorbed 15% of the country's pre-war emissions of greenhouse gases[19] and Ukraine's vast grasslands will remain an equally if not a more important carbon sink.

3. The response to date

Despite the widespread and acknowledged environmental impact of the war, there is still a profound lack of precise knowledge about the extent and nature of the damage.[20] Current needs assessments for recovery do include an environmental component, but the same knowledge gaps mean it is usually limited in scope and depth, and lacks the spatial precision needed to drive and guide environmental restoration.[21]

Demining and clearing the land of explosive ordnance have been the most immediate and systematic responses so far. This work is coordinated and partially executed by the Ministry of Defence and the State Emergency Service, and is supported by a variety of both private and not-profit licensed operators. Demining 80% of the contaminated territories and returning them to normal use within 10 years have been among the environmental objectives of the 'Peace Formula' proposed by the President of Ukraine.[22] As of June 2023, 540,000 items of unexploded ordnance had reportedly been cleared.[23] The World Bank estimates that the full demining package over the next 10 years will cost more than USD 37 billion.[24] Understandably, demining prioritises populated places and infrastructure, while agricultural and especially natural areas tend to lag behind and therefore remain inaccessible for longer. This gives rise to a 'grey market' for unlicensed demining operators offering faster services to farmers and other landowners.[25] Since natural areas, including forests, usually lack owners who are able or motivated to buy demining services, such areas may remain contaminated for decades unless dedicated programmes, capacities and resources are put in place to clear them.[26]

As stated above, direct destruction of forests and other vegetation represents a significant part of the environmental damage from the war. During peacetime, afforestation (planting in previously not forested areas) as well as reforestation (re-planting forests that were cut down, burnt, etc.) are routine forest management activities. For most of Ukraine's forests these are the responsibility of the recently created state-owned enterprise Forests of Ukraine, supervised by the State Forest Agency. The long-term framework for this work has been set by the State Forest Management Strategy of Ukraine, which was adopted in 2021 and covers the period through

2035.[27] According to the related presidential programme Green Country, also adopted in 2021, 1 billion trees were to be planted in the course of three years, expanding Ukraine's forested area by 1 million hectares.[28] It is not yet clear how the presidential programme or the wider Forest Management Strategy will be implemented or adjusted to address war damage.

In April 2022, the President of Ukraine established an inter-agency advisory body, the National Council for the Recovery of Ukraine from the War.[29] Among its many working groups was the Working Group on Environmental Safety, which in July 2022 presented draft proposals for inclusion in the national Ukraine Recovery Plan.[30] The proposals included the development of legislation for land, nature and water management; strengthening environmental monitoring; assessing war-related environmental damage; expanding the network of protected areas; and restoring land, nature and water systems damaged by the war. Besides the Ministry of Environmental Protection and Natural Resources , which was expected to lead many of these actions, other responsible organisations included the State Forest Agency, the State Agency for Water Resources, Ukrainian Geological Survey, the State Environmental Inspectorate, the State Emergency Service, the Ministry of Agriculture and Food, the Agency for Melioration and Fisheries, the Ministry of Communities and Territorial Development, and local authorities. The draft also included a variety of actions to address the needs of Ukraine's environmental policy in a much broader sense, not directly related to the environmental consequences of the war. While it is not clear whether or how the plan was updated since its drafting, the 'Re-build clean and safe environment' programme on the national recovery plan portal lists over 70 projects and activities, many of which seem to stem from the 2022 draft.[31]

War-related incidents at hydroengineering facilities (see also the preceding section), have given new momentum to discussions about rebuilding versus rewilding. While returning areas to their natural pre-industrial state is an increasingly mainstream topic globally and in the EU,[32] in pre-war Ukraine this was more the domain of nature protection enthusiasts and internationally-funded projects.[33] However, the cases of the Irpin river, the dam on the Oskil river, and especially the Kakhovka Dam have fuelled debate about whether to fully restore destroyed infrastructure and associated economic activities, or to consider these situations an opportunity to rethink the future of water management, hydropower, irrigation and nature. In the case of the Kakhovka Dam, the early governmental decision to rebuild the structure[34] has not prevented a still-unfolding discussion in the media, academia and civil society. Amid often radically opposing views, proposed compromises have included rebuilding the dam at a smaller scale, isolating a shallower part of the former reservoir and making it available for re-naturalisation.[35]

4. Recommendations

Demine the land

A prerequisite for any environmental restoration is clearing land and natural areas of landmines and other explosive ordnance: without that nothing else can be done. Experience and preliminary assessments indicate that, on the scale required in Ukraine, this work can take decades if not centuries; and given the demining needs in more socially and economically important areas, nature is likely to be the last in line. Consequently, there is a need for a programme with dedicated capacities and resources, both local and international, to focus on forests, protected areas and similar natural environments. Various demining actors present in Ukraine can play a role, but there may also be a need to create specific demining mandates and coordination capacities for 'nature custodians' such as the Ministry of Environmental Protection and Natural Resources and the State Forest Agency. Importantly, environmental safeguarding measures need to be reflected and fully implemented in all demining operations, for example through National Mine Action Standards.

Map the damage

Not knowing how much land and nature are damaged, and in what way, makes it impossible to assess restoration needs and set priorities. Areas where restoration may simply not be possible need to be identified and distinguished from less damaged areas (see also the box below). The damage to nature as well as its impacts on ecosystems, food safety and human health will need to be determined in detail. Much of this work will require full access to the affected areas and thus their complete

demining (see above). In some locations, mine action may need to be planned and executed in a manner that prevents further damage to particularly sensitive or valuable nature. However, even before land has been cleared of explosives, preparations can be made for detailed studies in the field. Modelling based on indirect assessment of the impacts, analysis of high-resolution satellite images, and reconnaissance using drones can all provide information useful for an in-depth assessment. To be comprehensive and systematic, such work will require a well-coordinated consortium of Ukrainian and international actors, supported by resources and working closely with the 'nature custodians' identified above.

Enable the fast track

Some organisational and restoration work can and will need to start as soon as the first natural areas are cleared of risks and made accessible. This will be important to prevent further damage (e.g. from new fires, uncontrolled exploitation of natural resources, and poaching) as well as to restore nature and its services to people and the economy as fast as possible. Another reason to act fast is the fact that pollution tends to disperse over time – for example, from soils into groundwater – thus increasing later remediation costs and the risk that more people and ecosystems will be harmed.

Plan and restore

Once the damage to Ukraine's nature is fully understood and the affected areas become accessible for detailed assessment and action, a multi-year plan will be needed to guide their restoration. Priorities will need to be defined in an inclusive manner (see below with respect to rewilding), taking into account the degree and kind of damage in affected areas; their environmental, social, and economic value; the resource and environmental cost of the required interventions; and the capacities needed to carry them out. Given the number of government entities involved, and their often separate but interrelated areas of responsibility, restoration activities will need to be well coordinated to build broad support, streamline planning, minimise duplication and avert corruption risks. The planning framework will also need to be flexible enough to accommodate new realities and additional damage as the war continues.

Rewild inclusively

Given the importance of Ukraine and its nature at the European and global scales, as well as growing interest in rewilding in Europe and beyond, discussion of opportunities to bring parts of Ukraine back to their natural pre-industrial condition are timely and appropriate. However, rewilding large areas of Ukraine could mean that some important services provided by nature-altering infrastructure such as dams and reservoirs may be lost for good. With the stakes high, workable compromises should ideally be found through informed and inclusive processes that involve and achieve a balance between different environmental, economic and social interests.

Organise and manage

As noted above, different parts of Ukraine's natural environment fall under different institutional jurisdictions. This concerns the various central authorities, as well as the separation of responsibilities among the centre, the regions and the municipalities. Consequently, a well-coordinated approach will be required to address the damage to Ukraine's natural environment, including through restoration. Clear links will need to be established to Ukraine's overall post-war reconstruction programme, where a focused, internationally supported and co-implemented initiative for nature restoration could be included as part of the environmental pillar of the national recovery plan. Since the elements of such a programme are also shaped through Ukraine's discussions with its international partners, it will be important to make sure that environmental restoration finds a permanent place on the agenda of multilateral meetings in support of Ukraine's recovery, including the gathering scheduled to take place in Berlin in June 2024.

Global experience of post-war environmental restoration

Despite the large number of wars in the 20th and 21st centuries, and their coincidence with the rising prominence of environmental issues on the global agenda, Ukraine can draw on only a limited number of historical examples of large-scale restoration in environments heavily damaged in conflict.

One sobering example is the area around Verdun and other towns in northeastern France that was the epicentre of trench warfare during the First World War. A century later, the area is still being cleared of unexploded ordnance, including chemical weapons, with some parts still classified as no-go "red zones" (*zones rouges*). While many areas have been gradually returned to agricultural use, it is accepted that some will never be completely recovered. Permanent environmental damage was also wrought by the Second World War, as seen in the altered geomorphology of many forests and other natural landscapes in countries including Germany, France, Belgium and parts of the former Soviet Union.

There have been specific initiatives to clean up chemical pollution, such as the belated and still ongoing project to remediate 500,000 tons of dioxin-contaminated soil at Bien Hoa Air Base, where the US military stored chemical weapons during the Vietnam War.[37] Localised clean-up operations took place after the wars in the Balkans of the 1990s and following the 1990–1991 Gulf War. In the latter case, a clean-up and restoration programme funded through the United Nations Compensation Commission was carried out in Kuwait, Iran, Jordan and Saudi Arabia, addressing damage to land, groundwater, the marine and coastal environment, and public health.

Relevant experience has also been acquired in Europe and North America during clean-ups of areas decommissioned from military use, although progress has often been slow.[38]

Large-scale tree planting in war-damaged forests has taken place in countries including Colombia and Rwanda, and there have been cases in various African countries of the successful restoration of wildlife in protected areas devastated by conflict. Restoration in the Mesopotamian Marshes in southern Iraq after years of war and uncontrolled development has partly succeeded in revitalising the flow of water, reforesting the area, and helping local communities who had lost much of their livelihoods.

However, little knowledge has been built up on the environmental consequences of warfare that combines relatively stable and highly fortified front lines with high-intensity combat over protracted periods of time: the kind of the war that Ukraine is embroiled in today.

Endnotes

1. Since 2012, Ukraine has been the world's leading exporter of sunflower oil, with a 47% share of global sunflower oil exports in 2021 (https://reliefweb.int/report/ukraine/ukraine-sunflower-oil-production-october-2022).

2. See the national state-of-the-environment reports of Ukraine https://mepr.gov.ua/diyalnist/napryamky/ekologichnyj-monitoryng/natsionalni-dopovidi-pro-stan-navkolyshnogo-pryrodnogo-seredovyshha-v-ukrayini/

3 https://www.cbd.int/countries/profile/?country=ua; https://news.mongabay.com/2023/01/ukrainian-ecologists-say-nature-will-suffer-no-matter-wars-result-commentary/

4. This is still low compared to the EU: today 18.6% of the EU land area is part of the Natura 2000 protected area network, with another 7.4% protected under other national programmes. In line with the recently adopted Kunming-Montreal Global Biodiversity Framework, the EU Biodiversity Strategy sets out a target of protecting at least 30% of EU land by 2030 (https://ceobs.org/mapping-ukraines-ecologically-important-areas/).

5. Ukraine has internal renewable freshwater resources of 1,250 m^3 per capita per year (https://data.worldbank.org). This excludes flows coming into Ukraine from neighbouring countries.

6. For instance, recent research into agricultural land impacted by shelling in Donetsk, Luhansk, Kyiv, Chernihiv, Sumy, Zhytomyr and Odesa oblasts found craters typically 2 to 2.5 metres deep and 6 metres wide. Soil measurements indicated reduced carbon, water and nutrient content, as well as elevated concentrations of unspecified toxic substances (https://doi.org/10.1080/00207233.2023.2177416). OSCE sampling in Donbas in 2017 found no systematic increases in soil contaminants on average, although some other studies of shell craters did indicate soil contamination above background values (https://www.osce.org/project-coordinator-in-ukraine/362566). Concentrations of munition-related pollutants have been found in and around First World War battlefield craters (https://doi.org/10.1111/ejss.13297) as well as in conflict-affected areas of Syria (https://doi.org/10.1039/D2VA00333C).

7. Analysis of Ecodozor.org data per October 2023, corroborated by many other assessments and statements. One third of Ukraine's area is comparable with the total area of Germany.

8. https://www.bbc.com/news/world-europe-65204053; https://visitukraine.today/blog/2369/mine-clearance-in-ukraine-what-new-solutions-has-the-government-proposed. The destruction of the Kakhovka Dam has led to the widespread displacement of mines and explosive ordnance in the affected downstream area (https://reliefweb.int/report/ukraine/kakhovka-dam-floods-amplify-ukraine-mine-emergency).

9. https://www.gichd.org/publications-resources/publications/guide-to-explosive-ordnance-pollution-of-the-environment-1/. According to Olexiy Vasiliuk (personal communication), thus contaminated areas of Ukraine are home to globally significant populations of some 20 plant and several animal species.

10. https://news.mongabay.com/2023/01/ukrainian-ecologists-say-nature-will-suffer-no-matter-wars-result-commentary/

11. https://www.mineactionreview.org/documents-and-reports/mitigating-the-environmental-impacts-of-explosive-ordnance-and-land-release

12. https://news.mongabay.com/2023/01/ukrainian-ecologists-say-nature-will-suffer-no-matter-wars-result-commentary/

13. Analysis of Ecodozor.org data per October 2023, see https://nubip.edu.ua/en/node/9087/2

14. Analysis by the Regional Eastern European Fire Monitoring Centre per October 2023.

15. https://ceobs.org/ukraine-conflict-environmental-briefing-water/

16. https://uncg.org.ua/en/should-the-oskil-reservoir-be-rebuilt-after-the-war/

17. https://ukraine.un.org/en/248860-post-disaster-needs-assessment-report-kakhovka-dam-disaster; https://www.unep.org/resources/report/rapid-environmental-assessment-kakhovka-dam-breach-ukraine-2023

18. In the case of the Kakhovka dam breach, lost ecosystem services may account for almost 60% of long-term economic losses (https://ukraine.un.org/en/248860-post-disaster-needs-assessment-report-kakhovka-dam-disaster).

19. https://ceobs.org/ukraine-conflict-environmental-briefing-the-climate-crisis/

20. See also Assessing Environmental Damage in Ukraine, input by CEOBS and Zoï to Workstream 1 – Damage Assessment of the High-Level Working Group on the Environmental Consequences of the War in Ukraine.

21. See also the World Bank's second needs assessment (https://www.worldbank.org/en/news/press-release/2023/03/23/updated-ukraine-recovery-and-reconstruction-needs-assessment) and the United Nations needs assessment in the aftermath of the Kakhovka Dam breach (https://ukraine.un.org/en/248860-post-disaster-needs-assessment-report-kakhovka-dam-disaster). Since October 2022, regional and local authorities are expected to draw up recovery plans that include an assessment of impacts on the environment and natural resources and an analysis of clean-up needs, including mine action and soil rehabilitation, as well as suggestions for environmental protection and conservation activities. It is not known to what extent these requirements have already been followed.

22. https://www.kmu.gov.ua/en/news/rozminuvannia-ukrainy-za-kilka-rokiv-a-ne-desiatylit-naikrashcha-vidpovid-ahre-soru-iuliia-svyrydenko

23. https://news.un.org/en/story/2023/07/1138477

24. https://www.worldbank.org/en/news/press-release/2023/03/23/updated-ukraine-recovery-and-reconstruction-needs-assessment

25. While speeding up access to land, such disorganised demining may bear additional ecological risks, as it is less likely to follow environmental protocols commonly used by licensed operators.

26. Besides attracting existing demining operators, it may also be important to empower, train and equip actors from the forest and nature management fields. In December 2023, a meeting was organized between the Ministry of Environment Protection and Natural Resources, the State Forest Agency, and the UN to address forest demining needs.

27. https://zakon.rada.gov.ua/laws/show/2697-19#n14

28. https://zelenakraina.gov.ua/. The programme has been criticised as overblown and too focused on the steppe zone of Ukraine rather than on its natural forests (e.g. https://svit.kpi.ua/2021/10/13/%D0%BC%D1%96%D0%BB%D1%8C%D1%8F%D1%80%D0%B4-%D0%B4%D0%B5%D1%80%D0%B5%D0%B2-%D0%B7%D0%B0-%D1%82%D1%80%D0%B8-%D1%80%D0%BE%D0%BA%D0%B8/?fbclid=IwAR0bj_opDxk_jdiYWGNT0n5cOkDuhNIn-g3r6nRz3F02Z2CKSW7vNKj_KkMk; https://life.pravda.com.ua/columns/2023/09/18/256588/; https://uncg.org.ua/wp-content/uploads/2021/12/miliard-derev_print_merged_compressed.pdf; https://life.pravda.com.ua/columns/2021/08/18/245652/).

29. https://www.kmu.gov.ua/en/national-council-recovery-ukraine-war/about-national-council-recovery-ukraine-war

30. https://www.kmu.gov.ua/storage/app/sites/1/recoveryrada/eng/ecosafety-eng.pdf

31. https://recovery.gov.ua/en/project/program/re-build-clean-and-safe-environment

32. Reflected in, for example, the EU Nature Restoration Law, recently adopted by the European Parliament with a thin margin, and the EU Biodiversity strategy 2030.

33. https://rewildingeurope.com/tag/rewilding-ukraine/

34. https://www.kmu.gov.ua/news/uriad-zatverdyv-postanovu-pro-eksperymentalnyi-proekt-z-pochatku-vidbudovy-kakhovskoi-hes-premier-ministr

35. «Побачити дно» documentary, TSN UA (https://www.youtube.com/watch?v=PGG-aa3BGcQ)

36. See https://journals.openedition.org/archeopages/641; https://fr.wikipedia.org/wiki/Zone_rouge_%28s%C3%A9quelles_de_guerre%29.

37. https://www.usaid.gov/vietnam/environmental-remediation

38. https://www.ewg.org/news-insights/news/2021/05/most-contaminated-military-sites-little-no-progress-cleaning-forever; https://www.umweltbundesamt.de/en/topics/soil-land/site-contamination/activities-at-the-federal-level/military-armament-contaminated-sites.