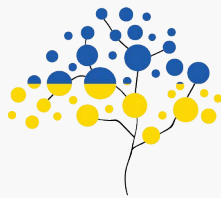




**Forest
Europe** growing life

STATUS QUO REPORT

Supporting the recovery and sustainable management of Ukrainian forests and its forest sector



**Supporting the
Ukrainian forests**

FOREST EUROPE - Liaison Unit Bonn
Rapid Response Mechanism - Emerging Issues
Prepared by Liubov Poliakova and Silvia Abruscato



Preface

This report has been prepared by the Liaison Unit Bonn of Forest Europe (LUBo) with strong support from Liubov Poliakova as contribution to implement the Ministerial Decision (see Annex) endorsed at the High-Level Policy Dialogue on 30 August 2022. The report will be presented at the first workshop of the newly established FOREST EUROPE network Ukraine support for information and further discussion. It is the understanding that at this workshop guidance will be given to LUBo to further develop this report to be as complete as possible. In addition, LUBo will update the information as soon as current information is available.



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Chapter 1: General info status before 24 February 2022

1.1. General description of forest data

The Ukraine has a total area of 10.4 million hectares designated for Sustainable Forest Management (SFM), incl. 9.6 million hectares of forest land, corresponding to a total of 15.9% of land cover.

Forests are distributed very unequally within the country and the highest forest cover is in Polessye (26.8%) and the Ukrainian Carpathians (42%) (see figure 1). Different climatic, geomorphologic conditions and anthropogenic influences have caused a variable forest cover, ranging from 3% to more than 50%, and different ecosystem types. The area of forest lands and its growing stock increase every year. Since 1961, the forest ratio

Fig.1 Forest cover of administrative-territorial units in Ukraine



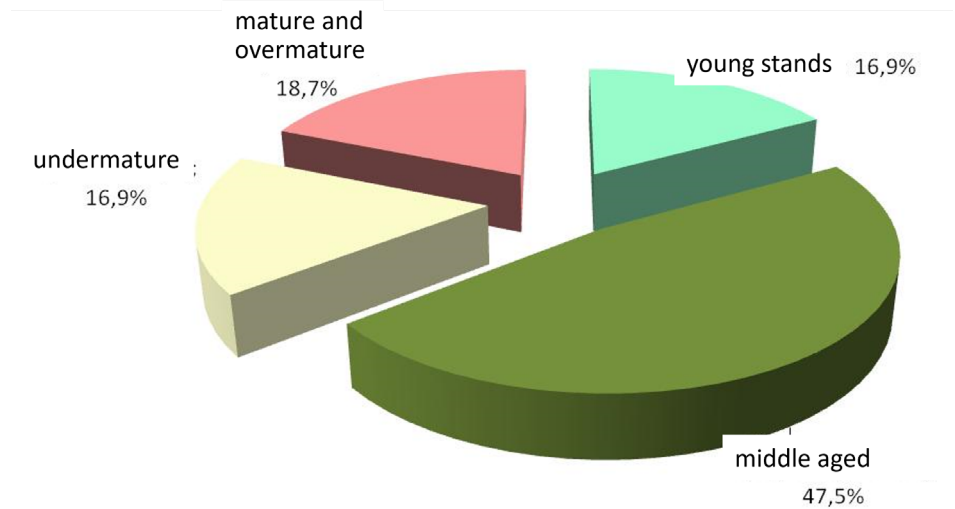
L.Poliakova, 2022, based on State Forest Resources Agency forest survey data in 2011

has increased up to 1.5 times. The growing stock is estimated to be 2.1 billion cubic meters, with an annual increment of around 35 million cubic meters. The gradual increase of growing stock illustrates the significant economic and environmental potential of forests in Ukraine. It should be mentioned that the last national forest survey¹ was conducted in 1996. The State Forest Resource Agency of Ukraine conducted two forests surveys in 2001 and 2011 covering 73% of forest cover in the whole country (see chapter 1.2). The first circle of National Forest Inventory started in 2021 (see chapter 1.4.2).

¹ field data was collected in each region using the same indicators to develop a forest management plan in a centralised system. The Forest Management Planning Institute that unified the data using a specific software and shared the data internationally/nationally.



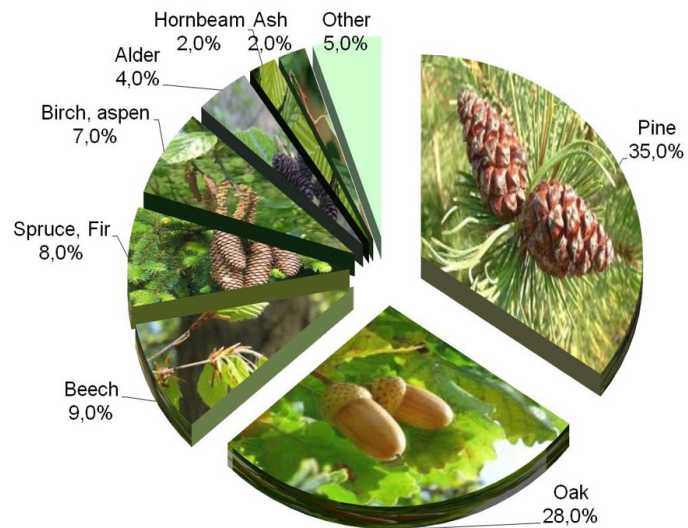
Fig. 2 Distribution of forested lands by age groups



L.Poliakova, 2022, based on State Forest Resources Agency forest survey data in 2011

In Ukraine, the forest age group distribution was strongly influenced by reforestation on large clear-cut areas after the Second World War. As a result, middle aged stands have the largest share in age structure, i.e.

Fig. 3 Species distribution in Ukrainian forest



L.Poliakova, 2022, based on State Forest Resources Agency forest survey data in 2011

² <https://forest.gov.ua/storage/app/sites/8/%D0%BF%D1%83%D0%B1%D0%BB%D1%96%D1%87%D0%BD%D1%96%20%D0%B7%D0%B2%D1%96%D1%82%D0%B8/publicniy-zvit-za-2021.pdf>

³ Booklet “Forestry in Ukraine”, 2021

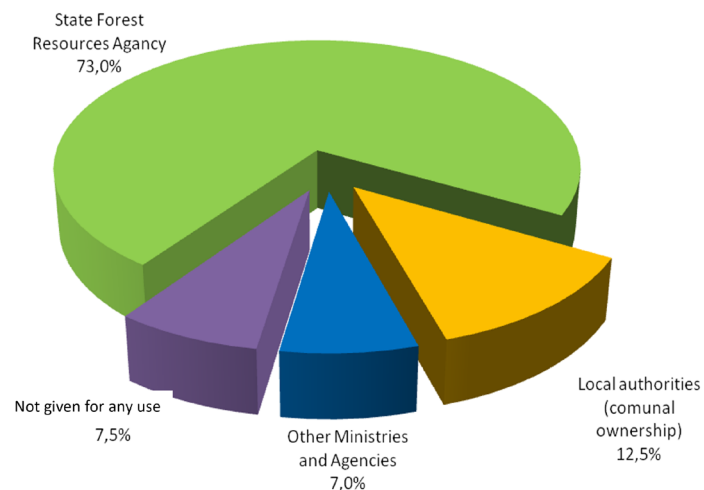


47.5% (see figure 2). The average age of forests is more than 60 years². Ukrainian forests are composed of more than 30 tree species. The prevailing species are pine, oak, beech, spruce, birch, alder, ash, hornbeam, figure 3³. The occurrence of species varies by region.

1.2. Forest ownership and institutional structure

According to the Land Code of Ukraine, forests are characterized by state, communal or private ownership⁴.

Fig.4 Forest ownership structure



L.Poliakova, 2022, based on State Forest Resources Agency forest survey data in 2011

The Forest Code of Ukraine reports that different state authorities supervise SFM implementation in state forests⁵. SFM implementation itself is carried out by state forest enterprises or communal forest enterprises.

87% of the entire national forest area are state-owned.

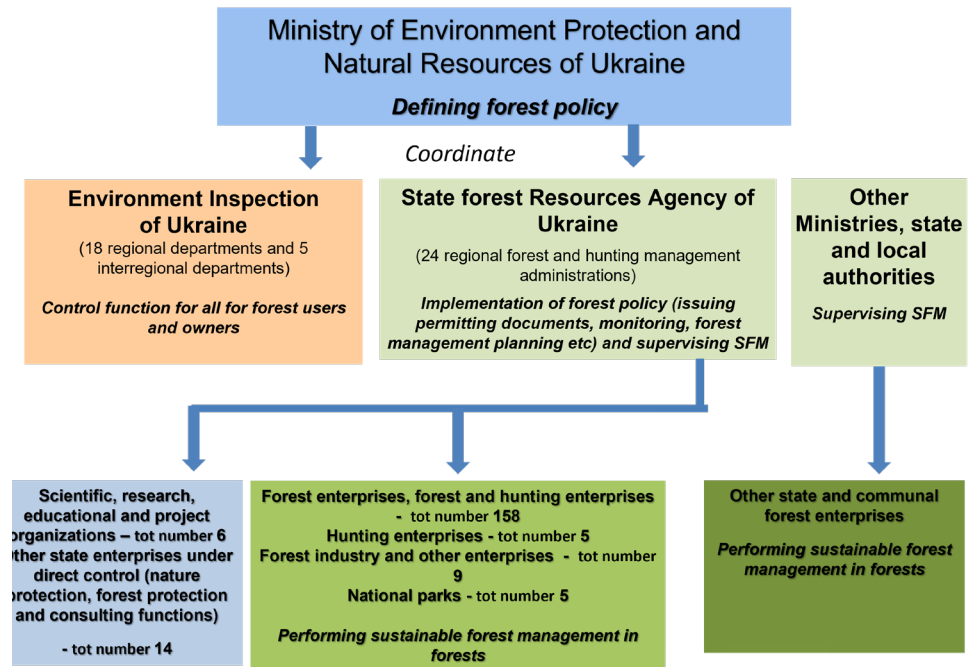
The State Forest Resource Agency is responsible for 7.6 million hectares, (see figure 4). The Ministry of Education and Science, the Ministry of Defense, the Ministry of Environment Protection and Natural Resources, the Ministry of Infrastructure of Ukraine and other state authorities are responsible for 7% (corresponding to 0.7 million hectares) of state forests. Nearly 7.5% (corresponding to 0,8 million ha) of state-owned forest lands are not designated to any specific forest user.

⁴ Article 56 of the Land Code of Ukraine <https://zakon.rada.gov.ua/laws/show/2768-14#Text>

⁵ Article 7 of Forest Code of Ukraine (<https://zakon.rada.gov.ua/laws/show/3852-12#Text>)



Fig. 5 Current institutional structure of Ukrainian forests



L.Poliakova, 2022

Communal ownership represents around 13%, and less than 0,1% of forests are privately owned.

The Ministry of Environment Protection and Natural Resources of Ukraine performs a normative function and is responsible for the preparation of official documents. The Environmental Inspection of Ukraine (independent authority) has a controlling function in all Ukrainian forest. The State Forest Resources Agency of Ukraine is responsible for the implementation of the state forest policy and supervises SFM 73% of Ukrainian forests. The state forest enterprises carry out all forest-related tasks, such as planting, managing, cutting and selling timber. Some state forest enterprises have wood processing facilities.

1.3. Forest Science and Education

The Ukrainian Research Institute of Forestry and Forest Melioration (URIF&FM), named after G.M.Vysotskiy), is the national leading forestry research center in Ukraine, and the Ukrainian Mountain Forestry Research Institute (UMFRI), named after P.S.Pasternak, is the national research center for mountain forest management. These are the two national scientific institutes responsible for forest-related research and are subordinated to the State Forest Resources Agency of Ukraine (see figure 5).

The research network composed by URIF&FM and UMFRI covers natural ecosystems and forest research plots, some of which were identified over



150 years ago. Nowadays, the network is well-balanced and reflects the whole range of aspects related to the natural, economic and social traits of Ukrainian forests with high-level research programs and outputs. Research at URIF&FM and UMFRI focuses on the following priority areas: development and improvement of forest management; reforestation and afforestation; forest protection; forest selection, research and conservation of forest genetic resources and its biodiversity; forest ecology and monitoring of forest ecosystems; agroforestry and forest restoration; forest radiology; hunting; economics, organization and management of forestry; information technology and digitalization in forestry.

Other forest-related research projects are conducted by forest science universities across the country.

In general, in Ukraine, there is a full-fledged multi-level training system for forest specialists of all levels, from forest workers to academics. Educational institutions are located throughout the territory of Ukraine. At the same time, theoretical and practical training largely takes into account the regional features of forests and forestry.

The most common way of vocational training is the involvement of pupils of secondary school in the forest-related work. A total of about 500 so-called forest school's units operates at state forest enterprises throughout Ukraine.

In relation to forest education, there are 50 educational institutions consisting of 23 universities, 22 forest-related colleges and 5 forest training schools⁶ (according to a state register <https://info.edbo.gov.ua/>). 13 educational entities provide master's degree and 24 offer bachelor's degrees. The largest forest faculties are based in Kyiv, Lviv and Kharkiv.

Considerable attention is paid to improving the qualifications of managers and specialists in the forestry sector. Advanced training is carried out at the Ukrainian Center for Training and Advanced Training of Forestry Personnel (Ukrcentrkadrylis) (<http://kadrlis.com.ua>). Every year, about 1.500 managers and specialists undergo trainings in professional programs and occupational safety at Ukrcentrkadrylis. There is also a possibility to improve qualifications at the Carpathian Regional Training Center, which is a branch of Ukrcentrkadrylis. Advanced training of forest workers in the central and south-eastern regions of Ukraine is organized at the Chornolis Forestry School branch of Ukrcentrkadrylis.

⁶ More information about the training schools here <https://info.edbo.gov.ua/>



1.4. Overview of the main 2021 developments and normative changes related to the forest sector

1.4.1. Institutional structure

“The State Strategy of Forest Management in Ukraine up to 2035” (hereafter – State Strategy) was adopted by Governmental Decree 1777-p on 29.12.2021⁷. The State Strategy was elaborated after stakeholder consultations, and it is a comprehensive document which considers a number of actions aiming to improve all three SFM pillars.

The State Strategy has also the goals to improve the institutional structure in forestry, aiming to separate forest-related functions performed by different institutions to guarantee the full implementation of forest policies at the national level.

In 2021, before the State Strategy was adopted, the State Forest Resources Agency of Ukraine started the process of “optimization” (meaning reduction) of the number of state forest enterprises. Before the start of the process 398 forest enterprises, responsible for forest and hunting management, and others forest-related organizations existed conducting forest research, nature and forest protection, forest management planning etc. After the process, the state forest enterprises number was reduced to 211. There are still 28 state forest enterprises in the final stage of reorganization due to the ongoing “optimization” process by the State Forest Resource Agency (01.10.2022).

1.4.2. National Forest Inventory

On 21 April 2021, after a long coordination process with interested ministries the procedure for conducting a National Forest Inventory (NFI) was approved.

The government’s approval created a regulatory basis for the actual preparation for NFI work. Practical training and field work started last year. The NFI cycle was defined as 5 years of field work and 1 year of report preparation. However, first preliminary results were expected after two years, precisely in September 2023.

⁷ <https://zakon.rada.gov.ua/laws/show/1777-2021-%D1%80#Text>



1.4.3. Wood market

In November 2021, the Parliament of Ukraine adopted a draft law “About the timber market⁸”, which will regulate the functioning of the timber market, including the export of raw timber.

Without waiting for its approval, the State Forest Resources Agency of Ukraine introduced some criteria to apply open market instruments. Currently 100% of timber is sold through electronic auctions according to the requirements of the Laws of Ukraine on capital markets and organized commodity markets” and on commodity exchanges in order to avoid any possible corruption. In 2021, only approximately 1 % of round timber was sold outside of electronic auctions, mainly for social purposes (schools, hospitals etc).

Starting from 1 June 2022, all timber processed by state forest enterprises has also been sold through electronic auctions.

The State Forest Resources Agency of Ukraine introduced online tools to check and verify the legality of harvested timber (<http://www.lk.ukrforest.com/>) and to conduct online verification of legality of transported timber (<https://open.ukrforest.com/>). For this verification, the tag number, consignment document and transport number are considered.

1.4.4. Digitization

In order to ensure transparency of activities and access to forest related information, the State Forest Resources Agency of Ukraine introduced the following activities in 2021 and 2022:

- administrative online services (e.g. logging permits, certificates of timber origin)
- advanced GIS technologies aiming to digitize the processes of forest management and the allocation of forest plots.
- the concept of creating a “Ukrainian Forest Fire Protection Network” with the possibility to monitor online the status and development of planted stands.
- Unified Internet Portal, where all services, registers and data are systematized.
- first telegram bot⁹. which can be used by all citizens, for example, to report the exact location of a fire or illegal logging and hunting activities and make requests for urgent interventions to the State Forest Resources Agency of Ukraine.
- remote sensing aiming to obtain information on forest area across the country.

⁸ http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_2?id=&pf3516=4197-%D0%B4&skl=10

⁹ Telegram bot available here https://t.me/ukrforest_bot



1.4.5. Implementation of the presidential campaign “Green Country”

In June 2021 a Presidential Order 228/2021¹⁰ was issued in order to substantially increase forest cover in Ukraine. It is foreseen to plant 3 billion trees within 3 years and 1 more million hectares within the next 10 year. The presidential campaign “Green Country” was developed based on the Presidential Order (see more information at zelenakraina.gov.ua).

State forestry enterprises were obliged to increase the collection of seeds and strengthen the relevant infrastructure (e.g. nurseries, seed centers) to increase the volume of restored land. In 2021, 2 forest seed factories were established to grow planting material with a close root system. It is planned to create 7 new forest seed factories in 2022.

¹⁰ Presidential Order 228/2021 available at <https://www.president.gov.ua/documents/2282021-39089>

¹¹ In accordance with Article 3 of the Law of Ukraine on Nature Reserve Fund (NRF). The NRF includes: 1) natural territories and objects – including: nature reserves, biosphere reserves, national nature parks, regional landscape parks, protected landscapes, monuments of nature, protected tracts. 2) artificially created objects – including botanical gardens, dendrological parks, zoological parks, natural monuments, parks-monuments of horticultural art (available at: <https://zakon.rada.gov.ua/laws/show/2456-12#Text>).



Chapter 2: General description of the protected forested areas



Pulsatilla patens, Polissie national reserve, author Sergiy Kanzurenko

According to a national law all protected territories in Ukraine are included in the Nature Reserve Fund¹¹. The Law of Ukraine on Nature Reserve Fund not only provides definitions of different protected territories and objects but also defines the management regimes in place.

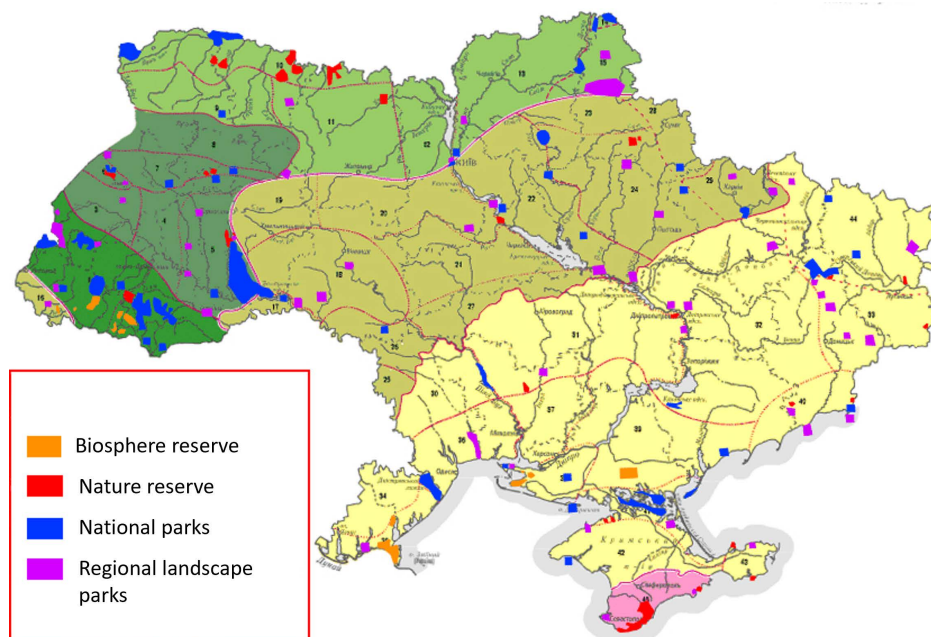
Based on data provided by the Ministry of Environmental Protection and Natural Resources (1st January 2022), the Nature Reserve Fund in Ukraine includes 8.796 different territories of national and local significance with a total area of 4.501 million hectares.

The map below shows the location of 5 biosphere reserves, 19 nature reserves, 53 national parks and 87 regional landscape parks across the country. A high concentration of national parks and biosphere reserves can be observed in the area of the Carpathian Mountains.

¹¹ In accordance with Article 3 of the Law of Ukraine on Nature Reserve Fund (NRF). The NRF includes: 1) natural territories and objects – including: nature reserves, biosphere reserves, national nature parks, regional landscape parks, protected landscapes, monuments of nature, protected tracts. 2) artificially created objects – including botanical gardens, dendrological parks, zoological parks, natural monuments, parks-monuments of horticultural art (available at: <https://zakon.rada.gov.ua/laws/show/2456-12#Text>).



Fig. 6 Map of high-level protected areas¹²



The ratio of the actual area covered by the Nature Reserve Fund is 6.82% of the total state area (“the reserve index”). 60% of the Nature Reserve Fund are forests.

In addition to the areas of the Nature Reserve Fund, there are 377 forest landscapes included in the Emerald network¹³. The actual area consists of 8.1 million hectares, corresponding to the 13,42% of the country’s territory (01.01.2022).

The map below shows the Emerald network areas in Ukraine, both terrestrial and aquatic¹⁴.

¹² https://www.researchgate.net/figure/High-level-protected-areas-on-the-map-of-geobotanical-zoning-of-Ukraine_fig1_310625427

¹³ At the moment the law which determines the normative basis for the definition and protection of the Emerald network is under consideration by the parliament.

¹⁴ data from cadaster map of Ukraine <https://uncg.org.ua/smarahdova-merezha-na-publichnyj-kadastrovij-karti> / <https://map.land.gov.ua/>



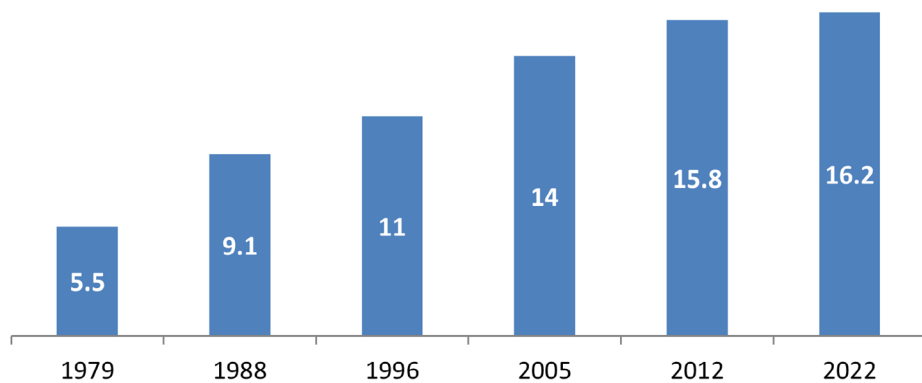
Fig. 7 Map of Emerald network areas listed in cadaster map of Ukraine



Forest protected areas

In general, the National Academy of Science and the Ministry of Environment Protection and Natural Resources are responsible for supervising the most valuable forest protected territories and objects of national significance listed in the Nature Reserve Fund.

Fig. 8 Percent of forest protection territories in forest (State Forest Resources Agency of Ukraine)



L. Poliakova, 2022, State Forest Resources Agency of Ukraine data

The State Forest Resources Agency of Ukraine is responsible for around 1.23 million hectares of protected forests. Since 1979, the number of protected areas in forests has increased more than 3 times (see fig. 9). The process of increasing forest protection in national territories is ongoing. In 2022, several national decrees¹⁵ by the President of Ukraine created new protected areas, expanding the boundaries of existing natural reserves and parks.



Table 1. Categories of forest protection areas under responsibility of State Forest Resources Agency of Ukraine (01.01.2022 without Crimea and occupied territories in Lugansk and Donetsk region)

Type of protected territory	Area, thousand hectares
Biosphere reserve	11.6
National park	364.9
Natural reserve	581.5
Monuments of Nature	26.6
Regional landscape parks	163.6
Dendropark	0.3
Parks-monuments of horticultural art	3.5
Protected landscape	76.9
Total¹⁶	1.228,9

The special conservation value of Ukrainian forests is recognized internationally. The mountain pine forests of the Ukrainian Carpathians and the Crimean sub-Mediterranean forests are included in the list of the global 200 ecoregions of the Worldwide Fund For Nature (WWF). 12 parts of the UNESCO world natural heritage site “Primitive beech forests and ancient forests of the Carpathians and other regions of Europe” are situated in Ukraine, with a total area of almost 29 thousand hectares, as well as a buffer zone of 43 thousand hectares¹⁷. In addition, The International Union for Conservation of Nature (IUCN) recognized the Crimean Mountains as one of the world centers of plants diversity¹⁸. Conservation value of forests located in the flat areas is limited due to intensive exploitation over the past centuries (i.e., almost all lowland forests were clear-cut several times since the First World War.

¹⁵ Relevant national decrees available here: <https://www.president.gov.ua/documents/42022-41113>
<https://www.president.gov.ua/documents/32022-41117> / <https://www.president.gov.ua/documents/22022-41109>
<https://www.president.gov.ua/documents/52022-41129> / <https://www.president.gov.ua/documents/62022-41121>

¹⁶ The total area includes: protected areas with national significance (498.5 thousand ha) and protected areas with regional significance (730.4 thousand ha).

¹⁷ Data of Ministry of Environment Protection and Natural Resources of Ukraine

¹⁸ <https://whc.unesco.org/archive/2001/whc-01-conf205-inf5adde.pdf>



The concept and identification of virgin, quasi-virgin and natural forests

In accordance with the work done in the framework of the Carpathian Convention and under the initiative of WWF in 2017, the concept of virgin, quasi-virgin forest, and natural forests appeared in the Forest Code of Ukraine¹⁹, regulating the identification and protection regime²⁰. The Forest Code defined the environmental limitations for SFM practices in conducting fellings and establishing buffer zones around the core areas where the virgin, quasi-virgin or natural forests are located. In addition, the Law of Ukraine on Nature Reserve Fund was modified with an additional subcategory for primeval natural monuments in 2017²¹.

In Ukraine, the identification of potential virgin, quasi-virgin and natural forests was carried out by WWF and other NGOs in Zakarpattia, Lviv, Ivano-Frankivsk, Chernivtsi, Volyn, Rivne, and Zhytomyr regions, followed by the state authorities' approval. The areas proposed by non-governmental organizations (NGOs) include almost 100,000 forests hectares managed by state forest enterprises, and existing territories included in the Nature Reserve Fund supervised by the Ministry of Environment Protection and Natural Resources. Those forests have been almost untouched by man. In the Carpathians, those are mainly high-altitude forests or forests on steep slope, in Polissia, those forests are mainly situated in swampy areas.

Currently, the approval process of identified areas carried out by the state authorities is still ongoing. 7.3 thousand hectares of virgin and 4.8 thousand hectares of quasi-virgin forests managed by the forest of state forest enterprises have been identified and approved. In addition, 16.1 thousand hectares of virgin forests have been identified and approved in already protected areas in the Carpathian Biosphere Reserve and Uzansk National Park²².

¹⁹ More details available in the Article 1 of the Forest Code of Ukraine (<https://zakon.rada.gov.ua/laws/show/3852-12#Text>)

²⁰ Please check Article 39 prim of the Forest Code of Ukraine for more information (<https://zakon.rada.gov.ua/laws/show/3852-12#Text>)

²¹ <https://zakon.rada.gov.ua/laws/show/2063-19#n47>

²² Data of the Ministry of Environment Protection and Natural Resources of Ukraine

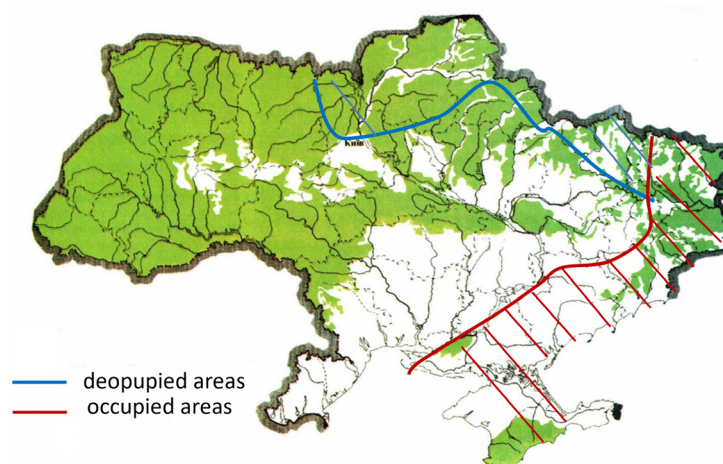


Chapter 3: Implications of war related damages in Ukrainian forest and in the forest sector and main challenges

3.1. General implications

The war in the Ukraine causes threatening conditions to the ecological safety of thousands of people every day. It also creates significant damage to forests and other natural landscapes, compromising the possibility of carrying out forestry activities in the country (see schematic map below). The map shows areas freed from occupation in blue and occupied areas or areas where military activities are taking place in red.

Fig. 9 Schematic position of occupied and deoccupied areas



L.Poliakova, October 2022, based on open Internet sources

Actual damages:

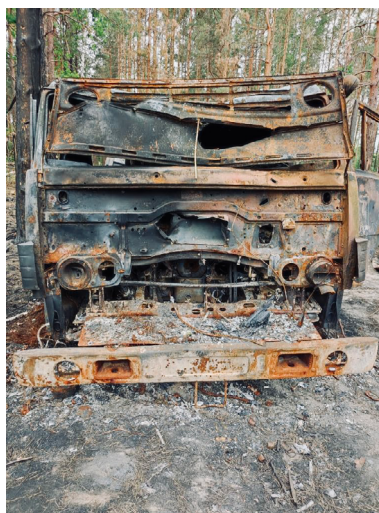
1. Forest area

In total, around 2.9 million hectares of forest are affected by military activities. On 1 October 2022, 450 thousand hectares are still under occupation and/or present active military actions (i.e. 15 forest enterprises, 63 forest units in the South and Southeast of the country). Approximately 2.45 million hectares in the North and Eastern part of the country have been deoccupied. It should be mentioned that deoccupied areas are practically excluded from SFM practices due to mine contamination leading to limited or no access to forests.

It should also be highlighted that in occupied and deoccupied forests



heavy military equipment is moved across forest areas, military units are located in forests and military actions took place or is still ongoing. That means that apart from mine contamination there is heavy disturbance of aboveground ecosystems (such as forests, grassland, scrubland etc), soils (i.e. contamination, removal, tillage etc) and water systems (i.e. water pollution, water bodies disturbances). Forest landscapes are affected by forest product contamination (i.e. due to radionuclides, heavy metals and other released toxic substances). Therefore, the accumulation of solid



Deoccupied area in Kyiv region, author Aurica Malinovska

waste, military equipment (e.g. ammunition), and the bodies of humans and animals is recorded by deoccupied state forest enterprises and will have negative environmental impacts.

2. Forest staff

At the start of the reform mentioned in 1.4.1 there were 42.3 thousand people in forestry, including 7.8 thousand women. On 1 July 2022 numbers had declined to 35.2 thousand employees. The State Forest Resource Agency (09.10.2022) reported that from the start of the war 2.659 people have been mobilized and 2.629 volunteers have been helping to keep the order (every seventh forester is involved in a war activity). Due to the war 41 workers were killed and 64 injured. Furthermore, 1.823 workers have been forced to change their place of residence.

3. Forest fires

Since the beginning of the war and due to intensive military activities, shelling, and mine explosions, the amount of forest fire areas increased by 56 times in comparison with the data available from 2021 (10.10.2022, the State Forest Resource Agency data). The areas of large forest fires are drastically increasing (see table 1) due to the impossibility to access the forests.



The table below shows the most recent figures corresponding to the occurrence of fires in the Ukraine since the beginning of 2022.

Table 2. Occurrence of forest fires in Ukraine (10.10.2022) (Source – State Forest Resources Agency of Ukraine)

Item	2021	2022	Increase rate (%)
Number of forest fires	528	904	171
Area of ground and crown fire (ha)	231	12.948,8	5.605
Only crown fire (ha)	1,4	1.209,5	86.393
Number of big fires (more than 5 ha)	1	132	13.200
Area of big forest fires, ha	6	11.894,0	198.233

The regions where most of the forest fires occurred is Kherson (8.2 thousand hectares of forest area affected), Mykolaiv (2.3 thousand hectares affected) and Kiyv (1.1 thousand hectares affected). Furthermore, due to the bombings and rocket attacks in Chornobyl zone, for example, large-scale forest fires occurred ([Birdlife, 2022](#))

4. Forest contamination by mines and explosive objects

The impact of mines and explosive objects in the forest landscape is quite challenging/drastic. It is recorded that 2.450 million hectares of forests require assessing and demining (State Forest Resource Agency, October 2022). The demining process will take place in cities, settlements and on roads and agricultural fields first, while forests are currently not a priority. The process of demining has started in deoccupied areas but according to experiences in the Chernigiv and Kharkiv region demining in forests is more difficult than in other territories and the speed of demining in forest is around 12 m² per day. According to a national law demining must be conducted by special licensed authorities.



Deoccupied area in Kyiv region, author Aurica Malinovska



Ukraine receives international support for demining (e.g. from the United Nations Development Programme (UNDP), and the State Service of Emergency Situation launched a webpage where citizen could see the contamination areas and the amount of demining work done in the country (<https://dsns.gov.ua/map-demining>).

In order to involve foresters in the demining process in accordance with a national legislation and to raise awareness among foresters regarding the risks of contamination, the government has conducted two types of trainings:

- Lessons on the possible types of mines and safety requirements for forest workers in each enterprise in a deoccupied area.
- Licensed training for 50 foresters to identify mines in forests.

5. Pest and diseases in forests

Data about the sanitary state of Ukrainian forests is unavailable due to the impossibility to conduct pest monitoring. During spring 2022 only one bark beetle outbreak in the Cherkassy region was reported by the State Forest Resources Agency of Ukraine. In 2021, the outbreak of Emerald ash borer in the Lugansk region and of needle-eating insects in the Kherson region could not be reported due to the military occupation of these territories.

6. Damages to properties and equipment

A full picture about infrastructural and propriety damages could be provided after the war. The preliminary estimation provided by state forest enterprises, that were freed from occupation, registered that real estate objects worth \$24.5 million have been destroyed. Furthermore, real estate objects worth \$18.3 million have been damaged. The war has impacted the territory of 110 forest-related enterprises and 603 real estate objects (e.g. building, nurseries, wood processing facilities, garages etc) (State Forest Resources Agency, 2022).



The pictures below show two important examples from across the country. Example 1 shows a building of the Forest Management Planning Association in Irpin, in the Kyiv region. It is the only entity responsible for forest managing planning and national forest inventory in Ukraine.



Building of Forest Management Planning Association, May 2022, author Victor Melnichenko

Example 2 shows the new Forest Seedling Centre in Liman, in the Donetsk region. This centre was set-up in December 2021 to provide planting material with close root system for southeastern enterprises. However, it was completely destroyed and is not functioning anymore.



Forest seedling centre, Liman, Donetsk region, October 2022, author Victor Storozhenko



Table 3. Detailed information on movable property captured, destroyed, damaged and mobilized since 24 February 2022 (State Forest National Agency, September 1, 2022)

Type of property	Captured	Destroyed	Damaged	Mobilized for the Armed Forces
Passenger car with increased cross-country ability	24	2	17	206
Passenger car	5	1	8	10
Cargo-passenger car with increased cross-country ability	26	7	19	51
Pickup truck	2	3	6	25
Timber transport	13	4	46	5
Tractor	27	3	25	1
Passenger minibus, bus	6	1	3	8
Fire truck, tank	25	5	6	6
Excavator	3		4	6
Truck	9	3	6	273
Truck crane	2		2	4
Truck loader	3		1	
Timber trailer	15	2	14	23
Soil processing equipment	25	10	Not applicable	Not applicable
Office computer equipment, furniture	46	12	34	Not applicable
Equipment for wood processing	10	14	10	Not applicable
Chainsaws	38	17	Not applicable	Not applicable
Quadcopters	16	5	Not applicable	1
Generators	12	2	5	1
ATV quad	Not applicable	Not applicable	Not applicable	1



7. Forest certification

According to the international non-profit and non-governmental organization “Forest Stewardship Council” (FSC) Ukraine, 3.83 million hectares of forests were certified (FSC, 08.10.2022²³). Compared to the number of areas of certified forests existing in 2021, the value has increased by 0.11 million hectares. However, it should be highlighted that due to mine contamination some certificates have been suspended.

In 2021 the Programme for the Endorsement of Forest Certification Schemes (PEFC) was introduced in Ukraine. Currently, there are 5 PEFC-certified state forest enterprises with an area of 182 thousand hectares.

Consultations are ongoing concerning the availability of FSC and PEFC certificates for forest areas after the reforming process based on the new Forest Strategy (see 3.4).

8. Illegal logging

According to the State Forest Resources Agency of Ukraine, 2.226 cases of illegal logging with a volume of 14.7 thousand cubic meters were registered in non-occupied areas from January to September 2022. This number is 108% higher than the number in the 9 months of 2021 (being 13.6 thousand cubic meters)²⁴. The largest volumes of illegal logging were found in the following regions: Dnipropetrovsk: 6.416 cubic meters (43,5% of the total volume); Zakarpattia: 2.083 cubic meters (14,1% of the total volume); Kyiv region: 1.665 cubic meters (11,3% of the total volume). More detailed information about illegal logging in deoccupied areas will be available after demining.

In deoccupied areas reachable by the local communities is reported an increased number of illegal loggings for of fire wood uses, recognized by the forest workers after permission to access the more dangerous areas.

9. Damages on forest monitoring processes

It should be mentioned that currently none of the related monitoring processes can be conducted neither in occupied nor in deoccupied areas. This limitation will cause further problems for the forest-related international reporting for Ukraine (e.g. complete absence of reliable data).

²³ <https://ua.fsc.org/ua-uk/fsc-facts-figures-in-ukraine>

²⁴ Information about illegal logging in occupied areas in the Kherson, Lugansk and Donetsk region is not available.



3.2. Consequences for protected areas

According to data of the Ministry of Environment Protection and Natural Resources of Ukraine, 20% of natural conservation areas in Ukraine are affected by the war, which corresponds to almost 1 million hectares, including occupied and deoccupied territories. Some occupied territories that are of international significance are still under threat, such as 17 wetlands, 160 territories of the Emerald Network (2.9 million ha²⁵).

Russian invaders occupied 13 national parks, 8 nature reserves and 2 biosphere reserves across Ukraine (according to data of the Ministry of Environment Protection and Natural Resources, 2022).

Protected forest areas

The reported cases of disturbances and damages in protected forest areas are connected to forest fires due to shelling and bombing of precious relict forests (e.g. in Kingburn Spit 300 hectares of relict forest were destroyed) or movement of enemy equipment that destroyed littoral embankments and damaged national park territories, e.g. in Getmanskyi National Park. After the movement of enemy equipment, the affected areas resulted contaminated with fuel and lubricants, heavy metals and reagents, e.g. in the National Park Biloberezhya Sviatoslava).

Part of the protected territories and objects is still located in the combat zone or in the temporarily occupied territory, where economic activity is suspended and there is no possibility of conducting inspections and providing information about the damage (i.e. in the Donetsk, Luhansk, Zaporizhzhya, Mykolaiv, Kherson, Kharkiv regions). For example, the National Park “Kreminski lisu” in the Lugansk region has currently suspended all its activities²⁶ In the Volyn region, the protected areas were affected by the construction of fortifications. The extent of the damage to protected areas (e.g. in the Zhytomyr, Kyiv, Sumy, Chernihiv, Kharkiv regions) can only be determined after the areas have been demined.

The Ministry of Environment Protection and Natural Resources of Ukraine launched an official web and mobile application “EkoZagroza” (ecozagroza.gov.ua) where everyone is able to find reliable information about the state of air, water, soil and other environmental data.

²⁵ Briefing on the environmental damage caused by the Russia’s war of aggression against Ukraine <https://mepr.gov.ua/en/news/39975.html>

²⁶ More information available at <https://forest.gov.ua/agentstvo/vidkriti-dani/perelik-pidpriyemstv-derzhlisagentstva-yaki-timchasovogo-prizupinili-diyalnist>



3.3. Forest economy

Despite the war and its consequences, the forest sector in Ukraine is continuing to fulfill its obligations to the national economy and society.

In October 2022, 15 state forest enterprises and 63 forest units were under occupation. On 7 October 2022, 24 state forest and forest-related enterprises suspended their activities²⁷.

It is important to highlight again the impossibility to conduct SFM on 20% of Ukrainian forests due to military activities and mine contamination. The following achievements and challenges were reported by the State Forest Resources Agency of Ukraine:

- In 2022, 116.4 million trees were planted but since the beginning of the war, information on locations of planting has not been available to the public anymore (zelenakraina.gov.ua). Despite the war, there is continuing work to establish facilities for growing planting material with close root system. One of them was set-up in September 2022 in the Zhitomyr region. Three more facilities are expected to be established before the end of the year.
- International demand for wood has fallen significantly. For Ukrainian producers the Asian markets are blocked, and the European market is oversaturated with its own products. Furthermore, the Turkish market is filled with cheap wood from Belarus and the Russian Federation. Prices for raw wood have decreased significantly compared to 2021 (by more than 30%) creating a challenging situation for state forest enterprises²⁸.
- Nowadays, the volume of harvested timber is 20% less than in 2021. In deoccupied territories the decrease of the harvested timber is even higher. The Kharkiv region reduced timber harvesting by 58%, the Chernihiv region by 43% and the Kyiv region by 20%. All timber on the domestic market is still sold through electronic auctions, including timber processed by state forest enterprises.

²⁷ <https://forest.gov.ua/agentstvo/vidkriti-dani/perelik-pidpriyemstv-derzhlisagentstva-yaki-timchasovogo-prizupinili-diyalnist>

²⁸ https://m.facebook.com/story.php?story_fbid=pfbid02koGKqxBNB6s3g6T1AmNwsmfqHRzGFHgUxjTtyZJZC7qEPsWnGZsrfh6Q32kYmDFyl&id=100010028957829



Firewood case

The firewood harvesting plays a crucial role as principal energy source due to the energetic crisis. Nowadays, a demand for 5.5 million cubic meters of firewood²⁹ is registered by the Ministry of Environment, while in Ukraine the harvested firewood is 2.4 million cubic meters, (5.10.2022), and the firewood sold is 2.3 million cubic meters in the country.

Aiming to simplify the access to firewood for the society, the State Forest Resources Agency of Ukraine has elaborated a special online tool “Firewood is” (<https://drovae.gov.ua/>). The main purpose of “Firewood is” is to limit the purchase per person to 15 m³ of firewood for each heating season. It is mandatory to use the bank’s user authorization system, being a 3-level administration system to guarantee high level of legality.

In the meantime, the Government has allocated more than half a billion hryvnias (13.5 million euros) to 8 regions to purchase firewood to be distributed to the population in the frontline territories for free (e.g. in the deoccupied communities in Donetsk, Dnipropetrovsk, Chernihiv, Kharkiv, Sumy, Kherson, Mykolaiv and the Zaporizhia region).

According to data from the State Forest Resources Agency of Ukraine, state forest enterprises have handed over firewood (45.6 thousand cubic meters), round wood for building fortifications (115 thousand cubic meters) and processed timber (20.3 thousand cubic meters) to the Army Force since the beginning of the war.

3.4. Governance issues

After the adoption of the State Strategy (see chapter 1.4.1) in December 2021, an action plan was elaborated, focusing on its implementation but the work is still ongoing. In parallel, appropriated ways were considered to reform the institutional structure in the forestry field efficiently (based on the requirements of the State Strategy). After long debates the Government of Ukraine adopted a Decree on 7 September 2022, N1003³⁰. In accordance with this Decree, regional departments of the State Forest Resources Agency of Ukraine are liquidated and interregional departments (new format) are established. In total the number of departments is decreased from 24 to 9. Furthermore, a new state specialized enterprise is established under the responsibility of State Forest Resources Agency of Ukraine while 158 state forest enterprises will be shut down. This work is planned to be completed by the end of 2022.

²⁹ https://m.facebook.com/story.php?story_fbid=pfbid0Bg2xcquaTPvqq7ceAkH6rWi7it1Jg7FDkQ6EUG9uSfXq9scLhw4eFBizDxGE3fnHl&id=100066881323061

³⁰ <https://www.kmu.gov.ua/npas/deiaki-pytannia-reformuvannia-uprav-a1003>



Among other important approved decisions after the war was started, it should be mentioned:

- Law dated 20 June 2022 N2321-IX, provides amendments to several already existing laws, aiming to protect naturally afforested lands (former abandoned agricultural lands)³¹. In Ukraine, according to the estimates of various experts, there are approximately 500,000 hectares of forests that are not officially considered as such. Actually, identification of such areas communication with local authorities aiming to support the changing of the primary purpose of land use from agriculture into forest lands and definition of future management arrangements are ongoing.
- Presidential Order No. 675/2022 according to the decision of the National Security and Defense Council of Ukraine dated 29 September 2022 “on the protection, use and restoration of forests of Ukraine in a specific period”³². Concrete changes in the legislation are expected within the next 6 months aiming to improve ecological stability of forests in the country, and to improve financial stability of forest enterprises.
- Law dated 15 March 2022 N2132-IX suspended the silent period for cuttings from 15 April until 15 June 2022.³³

3.5. Forest research and education

Forest education and research was significantly influenced by the war. The majority of researchers from URIF&FM, situated in Kharkiv, were forced to move to western part of the country or abroad. Due to mine contamination, it is not possible to conduct field work on sample plots that had been designated to research by URIF&FM (such as Kyiv, Sumy, Chernihiv, Kharkiv and other regions).



Reported by Krasnotrostanetz forest scientific station, Sumy region

³¹ <https://zakon.rada.gov.ua/laws/show/2321-20#Text>

³² <https://www.president.gov.ua/documents/6752022-44229>

³³ <https://ips.ligazakon.net/document/T222132?an=1&lang=ua>



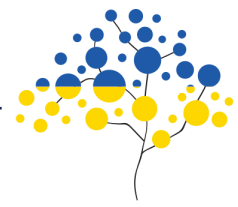
URIF&FM has two subordinated deoccupied facilities: one in the Sumy region which was completely destroyed together with the laboratories (see picture of the Krasnotrostryanetz forest scientific station), and another one in the Kyiv region with damaged forest-related equipment. Additionally, two subordinated entities in Kharkiv and Mariupol are situated on sites where active military actions are still taking place. They reported about partially destroyed buildings and forest-related equipment (based on data from URIF&FM on 27 October 2022)

The UMFRI does not report significant impact on its facilities and its research work due to the war, besides the budget constraints by the Government for conducting research.

Since the beginning of the war, all educational courses were transferred to online formats. Most educational institutions were forced to take a break, except for universities in the Western regions.

The implementation of the educational activities by the institutions, and the possibility of students to visit educational buildings in the occupied regions and/or close to the front lines are still very complicated due to the instability of communication and the danger of attacks. Therefore, students in occupied regions were able to join classes only on irregular basis.

Currently, male students are not subject to mobilization, but a large number of both, male and female students, joined the Armed Forces on a voluntary basis.



Conclusion

The report presents the overall situation and main recent achievements in the Ukrainian forest sector before the war and provides a general overview of the current situation including major war consequences for the sector and environment in the Ukraine. It should be underlined that for the report recent available data from all available sources have been used (mostly from the State Forest Resources Agency of Ukraine and Ministry of Environment Protection and Natural Resources). All data will be amended as soon as more recent data will be available.

The report shows tremendous problems which will have significant long-term consequences for the recovery process for Ukrainian forest sector as well as for the ecological stability of Europe in general. These are mostly connected to:

Exclusion of significant parts of the Ukrainian forest (20%) from SFM due to occupation and ongoing military activities (450 thousand hectares) and contamination by mines and explosive objects in deoccupied areas (2,450 thousand hectares). Demining of forest is a difficult and timely process and currently not a priority for the Government. Keeping in mind recent experience of Serbia and former experience of Germany, demining could take decades or even one hundred years. In a long perspective it could have consequences for all three SFM pillars (loss of biodiversity, timber, firewood, recreation facilities etc) in the affected forests).

Drastic damage and/or destruction of real estate and equipment will further limit the restoration of the forest sector in the long run also due to limited financial means of the government. Furthermore, this situation will slow down any achievements in digitization and strengthening transparency in forestry.

Loss of biodiversity, especially in protected forest areas; some of them are significant and cannot be restored (e.g. the relict forest at Kingburn Spit). There are other important consequences that should be considered, such as loss of the scientific basis for conducting research, the number of enterprises which suspended their activities, the number of citizens forced to change their place of residence, mobilized experts, forest students forced to stop their education.

The provided information is a basis for discussion and, together with the priority list for forest sector recovery provided by the Ministry of Environment Protection and Natural Resources of Ukraine, it is a source for donor countries and relevant organizations considering possible support for recovery and development of sustainable management of Ukraine.



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