



Food and Agriculture Organization
of the United Nations

Healthy soils in Ukraine: 2019

Integrated Natural Resources Management in Degraded Landscapes
in the Forest-Steppe and Steppe Zones of Ukraine

Overview of the project activities



PROJECT DESCRIPTION

The project is a joint initiative of the Food and Agriculture Organization of the United Nations (FAO) and Global Environment Facility (GEF) to promote restoration of degraded landscapes in the steppe and forest-steppe zones of Ukraine. The project is led by the Ministry of Energy and Environmental Protection with support from the Ministry of Economic Development, Trade and Agriculture of Ukraine.

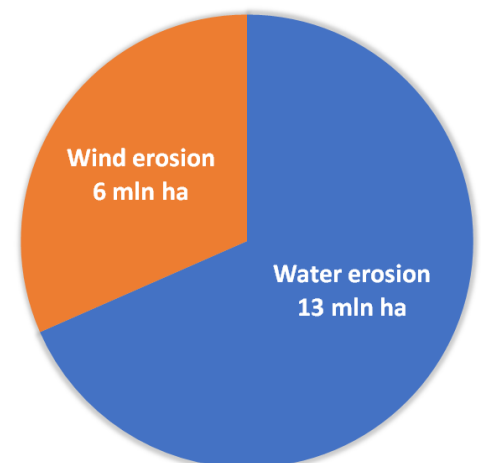
The main objectives of the project aim to assist in leading state authorities with developing environmental monitoring and achieving neutral soil degradation in the forest-steppe and steppe zones. Implementation of the project is focused on raising awareness of the problem of sustainable natural resource management.

Ukraine's famously fertile and extensive black soils are suffering from serious erosion and deterioration after many years of intensive production. They have become acidic, saline, or alkaline due to unsustainable agricultural practices, such as excessive use of mineral fertilizers and outdated technologies. Over 13 million ha of land has been damaged by water erosion and 6 million by wind erosion. The eroded area is estimated to have increased by 70 000 to 100 000 ha per year during the last decade. Moreover, irrigated land has decreased by approximately 15 percent over the past 15 years, and water losses have increased due to inefficient management.

Activities under this project relate to the broader global efforts and contribute to achieving Sustainable Development Goal 15 (SDG 15) "life on land".

“Healthy food is conditioned by the soils' health. Through the FAO project, Ukrainian farmers will be able to improve integrated natural resources management as well as to ensure sustainable food production.”

Leonid Tsentylo, focal point on climate-smart agriculture practices in Kyiv oblast



Source: FAO, 2019

PROJECT COMPONENTS

- 1 Enabling environment for Integrated Natural Resources Management
- 2 Restoration of productivity and resilience of production landscapes
- 3 Monitoring, evaluation and adaptive management

Project focuses in 2019:

- Enabling environment for Integrated Natural Resources Management through the Ukrainian Soil Partnership establishment;
- Strengthening the institutional, legal and policy conditions through capacity building of leading national actors;
- Demonstrating the conservation and climate-smart agriculture practices on the pilot sites in Kharkiv oblast (90 ha) and Kherson oblast (20 ha);
- Conducting the Farmer Field School for the land users from four oblasts of Ukraine;
- Upscaling of sustainable land management on the 30 000 ha of arable land in the forest-steppe and steppe zone.



ENABLING ENVIRONMENT FOR INTEGRATED NATURAL RESOURCES MANAGEMENT

NATIONAL SOIL PARTNERSHIP

The National Soil Partnership has been established by eight leading state soil scientific institutions under the umbrella of Global Soil Partnership in collaboration with FAO. The partnership will act as a national platform to facilitate dialogue and cooperation among ministries, leading institutions, existing research schools and laboratories on land resources, and relevant stakeholders. It will support the formation of a monitoring base of land cover, land productivity and carbon stocks. Besides, the platform will play a major role in advocating for and coordinating initiatives to achieve neutral land degradation by 2030.

ANNUAL STEERING COMMITTEE MEETING

Project Steering Committee was established, and the first meeting held in May 2019. The main objective of the Steering Committee meeting is to provide annual oversight of the execution of the Project and ensure that all activities agreed upon under the project working plan, adequately prepared and carried out.

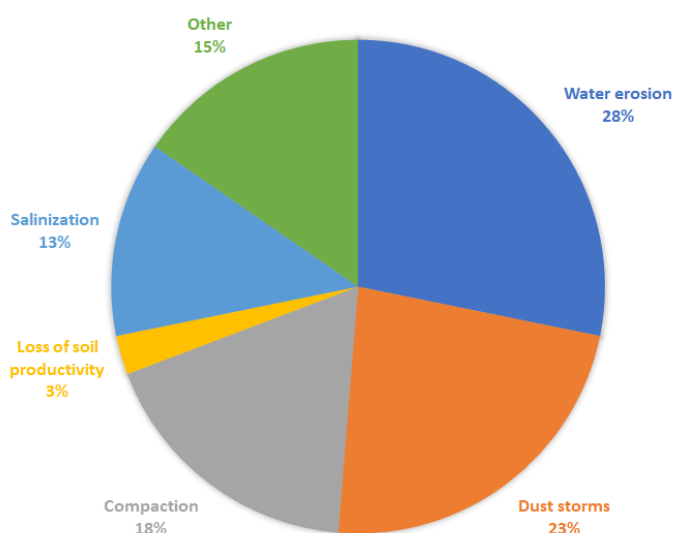
STRENGTHENED INSTITUTIONAL, LEGAL AND POLICY ENABLING CONDITIONS FOR INRM

With an aim to Strengthening of the Coordinating Council to combat land degradation and desertification to support intersectoral coordination for INRM, national and subnational level leading national scientists and relevant governmental actors were supported to attend international events exchanging the knowledge and experience in collaboration with Global Soil Partnership.

LIST OF SOIL MONITORING INDICATORS

Ministry of Energy and Environmental Protection requested for technical assistance in terms of formulation and implementing the soil monitoring indicators and shelterbelt inventory that matches with the main purpose of the project for the establishment of a Land Degradation Neutrality (LDN) monitoring system. A matrix of national soil monitoring indicators has been developed based on the collected recommendations from all the participating organizations.

Percentage of the land area suffering from different degradation causes, specified by the respondents

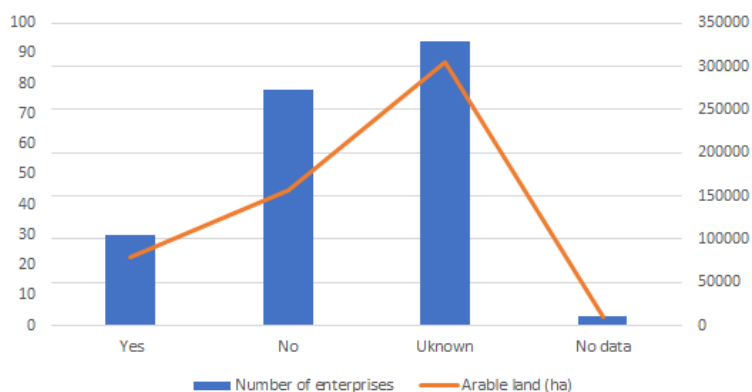


500
practicing farmers



1M ha
of arable land

Results of observation for land degradation in the fields



Source: FAO, 2019

AGRICULTURAL PRODUCERS SURVEY

Database including 500 practicing farmers covering more than 1 000 000 ha of arable land in steppe and forest-steppe zones has been created. To be able to understand the actual situation with the land degradation on the ground, the project facilitated the conduction of the Approach to Farming Assessment based on the surveying of 305 practicing farmers over Ukraine: in the Steppe zone, Forest-Steppe zone and Forest zone of Ukraine. The result of the survey demonstrated both the high interest in the implementation of sustainable agriculture practices and the lack of knowledge for their application.

RESTORATION OF PRODUCTIVITY AND RESILIENCE OF PRODUCTION LANDSCAPES

FARMER FIELD SCHOOL

The Farmer Field School (FFS) is a training program, which consists of ten theoretical and practical lessons that are organized based on the operational farms and run through the entire agricultural production season. The training courses devoted to spring sowing campaign, biodiversity, irrigation, soil cultivation methods, rehabilitation of shelterbelts, and economic aspects of the conservation agriculture technologies. As an intermediate result, around 160 unique participants, representing farms that are cultivating around 220 000 ha of arable land, have been trained about conservation agriculture technologies.



The practical part of the Farmer Field School.



7 training



160 unique participants



220 000 ha of arable land

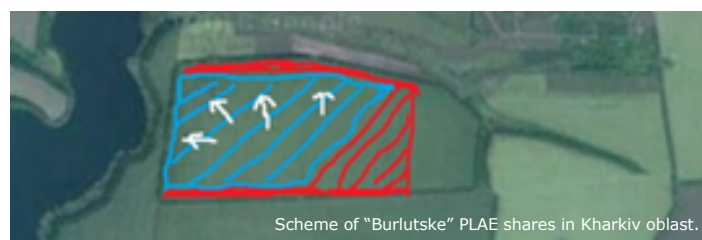
Source: FAO, 2019

GENDER-RELATED PROGRESS

FAO has developed and presented a report on preliminary gender analysis of risks related to integrated natural resource management, specifically environmental risks in degraded land, the effect of climate change on agriculture and access to finances based on available secondary data. The next step will be the conduction of the survey to test the set of hypotheses indicated in the report. Furthermore, the support will be provided to sensitization on the gender of agricultural advisory/extension services linked to agricultural cooperative development, the establishment of networks of rural women and "women to women" visits, and training of young women entrepreneurs in computer skills, business management, and basic accounting.

CLIMATE-SMART AGRICULTURE PRACTICES

Cultivation technologies with the application of biofertilizers in the condition of desertification on degraded lands in the village of Velykiy Burluk, Kharkiv Oblast (89,5 ha - experiment, 25,5 ha - control plot) has been carried out. Project stakeholder, the company "Agrogeneration", conducted seeding of winter wheat using no-till technologies. The experimental part includes the usage of bio-fertilizer in the crop cultivation cycle. The approbation has been started under the FAO supervision in collaboration with Institute of Water Problem and Land Reclamation, covering a total area of 20 ha. The methodological approach to the application of drip irrigation in combination with conservation agriculture practices was developed for further implementation on the pilot sites.



Scheme of "Burlutske" PLAE shares in Kharkiv oblast.

ONLINE COURSE ON CONSERVATION AGRICULTURE TECHNOLOGIES AND PRACTICES

The FAO team in Ukraine is working on developing an online course on conservation agriculture practices, based on the Farmer Field School program. It is preliminary agreed to further incorporate the course into the study process in the most prominent national agriculture universities such as Mykolaiv Agriculture University, Bila Tserkva Agriculture University and the National University of Life and Environmental Science.

REHABILITATION AND MULTIPURPOSE SHELTERBELT MANAGEMENT PRACTICES

The functionalities of shelterbelts are the most diverse and universal. The shelterbelts reduce the speed of wind in fields and thus reduce the evaporation of moisture by soil and plants. They contribute to the accumulation of moisture due to better snow cover distribution and decrease the surface runoff of defrost water, significantly reducing erosion. With a purpose to create an incentive system to encourage the growth of shelterbelts, the methodological approach to shelterbelt establishing and reconstruction, as well as two relevant planting projects, were developed in cooperation with the Institute of Forestry. Based on the recommendations for the establishment, regeneration, reconstruction, and maintenance of the shelterbelts will be conducted reconstruction of already available 8 kilometers of shelterbelts on the project experimental plots as well as planting 2 kilometers of new shelterbelts in the area of the project experiment where it is needed.



Scheme of the location of sections for the creation and reconstruction of shelterbelts. DG Velykyi Klyn in Kherson oblast.
Source: FAO, 2019



Scheme of the experimental farm and the experimental field on the topographical map. DG Velykyi Klyn in Kherson oblast.
Source: FAO, 2019

MONITORING, EVALUATION AND ADAPTIVE MANAGEMENT

With the support of the project team, it has been ensured that awareness is raised on the situation with the land degradation in Ukraine on the national and international levels. The information has been shared through various radio, TV, newspapers and magazines. Besides, project objectives and intermediate results were promoted through various national public events. Knowledge exchange platform has been launched online by the link: <https://healthy-soils.org.ua/>. It is being populated with articles on topics directly linked to the project operations and recent developments or events of the project. Besides, the content of the website includes articles on the key project-related fields (e.g. conservation agriculture, integrated natural resource management practices, farmer field school, shelterbelts, national soil partnership etc.), scheduled events, links to agriculture-related information resources, project vocabulary, information on Sustainable Development Goals.



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