

SECTION XV. ÉCOLOGIE ET TECHNOLOGIES DE PROTECTION DE L'ENVIRONNEMENT

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ECOSYSTEM APPROACH IN THE FIELD OF RATIONAL USE AND LAND CARE

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When settling the global problems of modern age, the paramount importance is paid to rational use of land resources, based on conservation of biodiversity and application of ecosystem approach.

Ecosystem approach was officially adopted at the Fifth Conference of the parties of Convention on Biological Diversity Protection in May 2000. As it is specified by the Convention, ecosystem approach is «the strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way» [1].

As the result, ecosystem approach enables to balance three goals of the Convention on Biological Diversity: protection, sustainable use and equitable distribution of benefits obtained as a result of biological resources use. Its 12 principles and 5 operations directives combined form the instrument to adopt the most diverse decisions [2].

Biodiversity and ecosystem services are extensively applied in the fields where living natural resources are used in the capacity of the goods, namely in crop farming, livestock farming, forest husbandry, fishing industry. On this account, for the facilities engaged in primary industry of living natural resources in the capacity of the goods the following additional requirements are specified: protection and conservation of biological diversity; support of ecosystem services potential; furtherance to living natural resources use based on balanced development principles by way of implementation of the practice, combines necessity of their conservation with economic development priorities.

As for the land ecosystem, vegetation mantle change is considered to be the serious problem. Pursuant to the forecasts the unsustainable land-use pattern will remain one of the primary factors resulting in reduction of biodiversity, particularly due to expansion of agricultural production.

Increase of degradation processes in land resources has conditioned the reasons of occurrence of many negative implications, namely: deterioration of food products quality; incidence rate of people, human migration into environmentally safe regions; diminishing of soil fertility, land pollution.

Ecosystem approach implementation implies substantiation and introduction of flexible, scientifically grounded land-use system for each region, agricultural farming community and farming enterprise meets the interests of land-owners of all types and

provides high productiveness of tillable land, conservation and soil fertility recovery. The state as for dealings in land shall act in the capacity of the lands consolidator and efficient instrument of provision of stability and effectiveness of agricultural land-use and stable socially and ecologically oriented policy in the field of land relations [3].

With a view to form the ecosystems approach in the field of sustainable use of land resources and conservation of biodiversity it is required to establish measures as follows:

- orientation of agricultural science for creation of energy- and resources-saving technologies in agricultural production;
- minimization of topsoil disturbance by mechanized cultivation;
- improvement and conservation of protection organic soil mantle by using cover-ground crops and after-harvesting residues aiming to protect soil, conserve moisture and nutritive substances; furtherance of biological activity of soil;
- use of high-yielding varieties of agricultural crops adapted to local conditions with resilient to biotic and abiotic stress factors;
- improvement of plants nutrition using crop rotation and sustainable use of organic and mineral fertilizers;
- integrated control over insect-pests, diseases and weeds with the use of biological protection tools and, if required, application of selective pesticides of insignificant danger for environment;
- sustainable use of water resources with conservation of sound structure of soil and minimization of damage for environment.

Also, significant step for ecologization of agriculture and sustainable use of natural-resources potential of agricultural farming communities is organic farming development which is very promising for Ukraine. In 2019 there were more than 500 certified organic facilities and they used to cultivate 460 000 ha of agriculturally used areas.

Furthermore, Ukraine occupies the first place in East-European region in terms of certified area of organic tillable land, primarily specializing in farming of grain crops, grain legumes and oil-bearing crops and also is ranked twentieth amongst the world countries which are the leaders of organic movement [4].

In the organic agriculture the principle of sustainable development is laid down – this is integrated approach in development of farming agriculture and livestock breeding, it furthers the land resources reclamation, improvement of ecological balance and conservation of biodiversity.

Organic production incentive mechanism shall specify use of economic instruments in the form of preferential taxation, purpose-oriented crediting and increased purchasing prices for ecologically clean food ingredients, subsidies and grants for production of ecologically clean products and appropriate investments.

Thus, actualization of issues of environment protection and production of ecologically safe products problems raises the profile of rural districts for the society. Using ecologically safe conventional as well as modern technologies, the commodity producers can integrate the natural resources conservation and ramping up of agricultural products gross output.

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