

THE INTERNATIONAL INNOVATION PROJECTS FOR IMPLEMENTATION OF THE CONCEPT OF ECOLOGICAL AND ECONOMIC SECURITY OF AGRICULTURAL NATURAL MANAGEMENT IN UKRAINE

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Abstract: The principles and projects regarding the implementation of the Concept of ecological and economic security of agrarian nature management in Ukraine have been developed. The relevance of the concept lies in: the implementation of the European integration vector of Ukraine's economy, the implementation of state policies aimed at the green economy, the creation of a favorable business climate, the need for investments, and the implementation of social security projects. Ensuring the implementation of international and national projects for economic growth will contribute to the development of the state's economy through the appropriate quality of education, science, medicine, culture and preservation of the natural environment in the context of a green economy. Scientific and methodological support of the concept includes: documents of Ukraine, EU, COT, ISO; environmental safety methodology; the concept of Total Quality Management; certification schemes; strategies and concepts for digitization and greening of the economy; scientific and methodological developments of the UN, FAO. The implementation of the concept results in food security through the implementation of FAO's provisions on the four dimensions of food security (availability, accessibility, utilization and stability) and the three main factors of security (access to food, care and nutrition, health and sanitation) which are now universally recognized in the world.

Key words: safety, projects, concept, agrarian management

1. INTRODUCTION

Over the past 50 years, global food production has increased by approximately 300% thanks to humanity's incredible capacity for innovation. In addition, the world community continues

to lose more than a third of all produced food, and each year such losses exceed 900 billion dollars. The global market for smart agriculture was valued at USD 15.3 billion in 2020 and is expected to reach USD 22.5 billion by 2026. According to recent estimates, global food demand will increase by 70% by 2050, requiring about \$80 billion in agricultural investment to feed the projected nine billion people (EOS Crop Monitoring 2022, Green Finance and Developing Countries 2016, Skrypchuk P and Suduk O. 2020).

The significant demand for agricultural products, caused by population growth, leads to an increase in the cost of fertilizers, pesticides, herbicides and other agricultural resources. In addition, global warming provokes severe droughts and soil degradation. All this makes agriculture critically important for the sustainable development of mankind. In a broad sense, agricultural technologies are designed to increase the productivity and profitability of farms by reducing costs or crop losses. In many countries of the world, national policies regarding agricultural production do not single out as separate priorities the use of land resources and water in the context of food security. The problem lies in the urgency of implementing the ecological and economic provisions of rational nature management in practice. Such problems are superimposed on the issue of safe supply of drinking water and sanitation.

Therefore, the world increasingly recognizes that complex, multifaceted issues, which include, in particular, food security and nutrition, require holistic interdisciplinary approaches, pooling of resources from different countries, and the implementation of innovative projects around the world. The documents have been developed and FAO by 2030 proposes: strengthening of global partnership; stimulation of innovations; implementation of international projects; state programs; development of civil society in the aspect of rational nature use (The Green Growth Action Alliance 2013, The Global Green Finance Index 2019, The High Level Panel of Experts 2021).

2. PURPOSE

Development of provisions for international cooperation (projects) regarding the implementation of the Concept of ecological and economic security of agrarian nature use as a tool for the security of the life of society (then the concept) in Ukraine.

3. MAIN PART

For Ukraine, the urgent tasks in the agrarian sector of the state's economy are: conducting a consistent state policy aimed at the European course; creation of a favorable business climate; export of finished products; investment attraction; development of capital markets; implementation of national and international economic development projects. Ensuring the implementation of international and national projects for economic growth will contribute to the development of the state's economy through the appropriate quality of education, science, medicine, culture and preservation of the natural environment (NE) in the context of a green economy. Transformed and innovative agrarian business projects and an ecologically and economically justified system of nature management will be able to effectively provide competitive advantages for Ukraine on the international market of goods and services. Therefore, we propose the Concept of ecological and economic security of agricultural nature use in Ukraine. The concept reveals the provisions of ecological and economic safety of agrarian nature use: reforming the economy of Ukraine into a socially responsible, ecologically safe, economically expedient one; introduction of greening, digitalization, socialization and economic justification of projects and programs; implementation of project management provisions from the global level to the level of a small farmer (a person as a nature user, as a resident of a community delineated by a certain territory); introduction of mechanisms of intellectualization of the sphere of nature use and implementation of a project approach in the

activities of each community; the safety of the vitality of society and, therefore, the natural capital of the country (Fig. 1).

The concept of ecological safety of agricultural nature use is based on the idea of prevention and compensation of damage caused by NE, health and property of citizens through pollution, damage, irrational use of natural resources, destruction of natural ecological systems and other offenses, concept of ecological certification of territories, etc. The concept takes into account the national program of adaptation of the legislation of Ukraine to the legislation of the European Union and acceptance of Ukraine as a candidate for the EU. Such decisions are taken into account in practical proposals and in the development of new normative legal acts of Ukraine taking into account EU legislation. In particular, the concept of "natural capital", "green" economy, environmental audit and management, safety and economics of agrarian nature use as economic categories that are taken into account in the economies of developed countries.

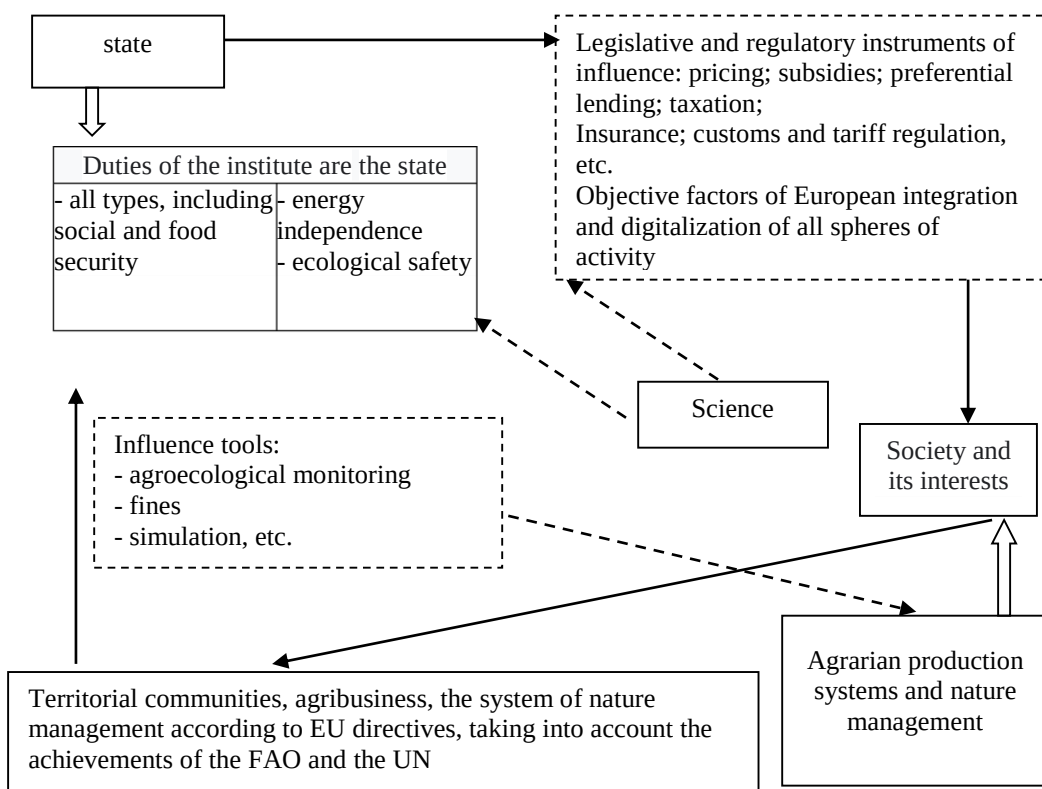


Figure 1. The place of the concept of ecological and economic security of agrarian nature management in the vital activities of the state

Sourc: (developed by the authors)

The concept should be considered as: a mechanism for guaranteeing the environmental safety of the sphere as a whole of all types of nature management, including agricultural for the general public of NE users; a practical toolkit for regulating ecological and economic relations at both the macro and micro levels; a system of criteria for macroeconomic evaluation of natural resources (from the state to the community level). The implementation of the concept of security of agricultural nature management must be carried out at the global, regional, local and point levels. It is necessary to take into account various indicators (sanitary and

toxicological, ecological, sociological, demographic, medical, etc.) in order to quantitatively measure the safety of agrarian nature use of the territory (community).

The concept envisages the economic development of territorial communities in the direction of increasing their food security, providing the population with food products, raw materials for industry, a quality environment for the population to live in, natural resources of appropriate quality and quantity, and preservation of natural capital. Therefore, taking into account such environmental functions will contribute to the filling of the local budget, including through the development of sustainable green tourism, the formation of a positive image and the promotion of the brand of certain territories. From this, a comprehensive ecological assessment of the safety of agricultural nature management of the territory of communities and regions includes:

- systematic assessment of the complex of factors of the NE and the social sphere;
- definition of anthropogenic load;
- zoning of the territory in terms of tasks and relevant indicators (thanks to the environmental audit procedure and the received information);
- determination of factors, resources, sequence of works for economic activity according to the principles of "green" economy;
- constant monitoring (GIS, etc.), for example: normalization of impacts on NE; control of sources of influence on NE; quality control of NE components;
- making management decisions: formation of socio-ecological and economic decisions; prevention of manifestation of anthropogenic factors in NE; minimization of the consequences of the manifestation of natural factors of ecological danger; development and improvement of environmental protection legislation and methods of forming an ecological outlook.

The strategy and means of implementation consist in creating appropriate conditions for the development of the economy in accordance with the requirements: European integration, greening, taking into account innovation and investment opportunities of Ukraine on the way to overcome the crisis in the economy, conducting a unified policy in the field of metrological support, standardization, certification and accreditation.

The state strategy for the introduction of the concept should be a systematic document that provides for the systematic reproduction of the main components of greening, such as: the development of laws and their adaptation to EU directives; economic stimulation of innovations; reproduction of demand for ecological goods and services; reproduction of an ecologically oriented production base; reproduction of greening motifs, etc. Under these conditions, implementation of system innovation processes of environmentalization of socio-economic development is possible only in the event that the state authorities will be able to form reproductive mechanisms for the preservation of natural capital.

To implement the concept, it is necessary to introduce innovations in the areas of: safety of nature management, audit, insurance, licensing, information economy, metrology, standardization, certification, project management, etc. In particular, it is necessary to organize: the development of a regulatory and legal nature in accordance with the process of adaptation of EU directives, the submission of grant applications, the development of joint international projects, the exchange of experience and the provision of a laboratory base for measuring the quality of NE.

The mechanism for ensuring environmental security of the territory (community) is ordered sequence of stages of scientific and practical research aimed at determining reliable and justified criteria and identifying effective measures to improve the environmental condition of

the NE. The first block consists of the determination of quantitative indicators and criteria of environmental safety, assessment of adverse events, determination of the structure, system, and quantitative assessment of territory safety. The second unit is designed to evaluate the methods and mechanisms for ensuring the security of territories, the implementation of this system in the practice of managing the socio-ecological and economic circumstances of the given area, and monitoring the results of the implementation of the entire system.

The mechanism of implementation of the concept includes the stages and sequence of the implementation of the concept in Ukraine, which will depend on: the development and terms of approval of the concept, the correction of legislative and regulatory documents, their compliance by all levels and authorities and business, the accession of Ukraine to the EU, as well as the formation of an environmental and political worldview all sectors of the population and business.

The concept will be implemented in the following ways: the provisions of the concept must be taken as a basis during preparation projects of program and strategic documents, law's projects and other legislative acts, projects plans of measures in the socio-ecological and economic sphere; measures to implement ways to achieve strategic goals and relevant tasks of the state economic policy must be included in the activity plans of the Cabinet of Ministers of Ukraine and relevant plans of ministries (Approve the Methodology 2022, Berawi M, Suwartha N and others 2019, Gorova A, Skvortsova T and Lisitskaya S 2017, Ostapchuk T, Orlova and others 2021).

The main goal of such formation of safe nature management should be the creation of a decentralized model of management of natural resources, capable of effectively influencing the processes of socio-economic development of territories in the conditions of a market economy.

- creation of institutional infrastructure (a central certification body within the structure of the Ministry of Natural Resources of Ukraine and independent environmental auditors who have undergone training and have the appropriate license, or a certified commercial structure);
- harmonization and adaptation of world and EU directives in Ukraine;
- expansion of financial and economic capabilities of territorial communities;
- instruments of public-private partnership, methodical approaches to the valuation of NE (natural capital) objects of Ukraine, in particular:

- a) Administrative and legal instruments, namely: legislative and regulatory framework (laws and resolutions of the Cabinet of Ministers of Ukraine, directives and regulations of international organizations) and standards (standards of various types, industries and countries, limits, quotas, etc.);

- b) Economic instruments: subsidies, grants, loans, leasing, insurance, payments for nature management, price instruments, preferential taxation, etc.;

- c) Communications and information provision, education, public participation, international monitoring of the sphere of nature management, environmental engineering, consulting.

Appropriate financing from the State Budget of Ukraine should be provided for the introduction of the concept as a document of national importance. In addition, European and international aid funds may be used for such purposes. In order to reduce the time and costs for finalizing and introducing the concept and its regulatory support, it is necessary to use the cooperation mechanism of various ministries and departments.

Legislative and regulatory support consists of:

1) Amendments to the Laws of Ukraine "The Environmental Protection", the Law of Ukraine "The Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period Until 2030", "The Confirmation of Compliance", "The Standardization", "The Metrology" and metrological activity", "The protection of consumer rights", "The conformity assessment", "The waste", etc.

2) Harmonization of a number of EU directives regulating activities related to the proposed concept, for example: Directive No. 2011/92/EU on the assessment of the impact of individual public and private projects on the environment; Directive No. 2000/60/EU on establishing the framework of the Community's activities in the field of water policy, as amended; Directive No. 2008/50/EC of the European Parliament and the Council on ambient air quality and cleaner air for Europe; Directive 2003/4/EC of the European Parliament and the Council of January 28, 2003 on freedom of access to information on the state of the environment; Directive 2011/92/EU on environmental impact assessment (EIA), etc.

3) Developers of legislative and regulatory documents that will include a complex of legal provisions regarding the certification of the field of nature management: development of technical regulations; preservation of the share of mandatory certification of products and services; introduction of voluntary certification in the field of nature management (including agricultural); continued harmonization of legislative and regulatory documents of Ukraine with international ones, etc.

Scientific and methodological support includes:

- legislative and regulatory documents of the Ministry of Natural Resources, the Ministry of Economy of Ukraine, the EU, COT, ISO; NE quality methodology; the concept of Total Quality Management and the model of the European Foundation for Quality Management (EFQM); certification schemes; strategies and concepts for digitization and greening of the economy; scientific and methodological developments of the UN, FAO and specialists; concepts in the field of agribusiness and environmental economics;

- inclusion of the issue of development of agrarian clusters in the general concept of creating clusters in Ukraine;

- creation of a system for monitoring land relations, deregulation of the field of land management, digitization of permit procedures and administrative services in the field of land relations;

- ensuring the development of the national infrastructure of geospatial data, transfer of powers of state bodies in the field of regulation of land relations to local governments;

- creation of legal, tax and financial credit conditions for the active development of agricultural cooperation and other forms of associations of small producers;

- simplification of the procedure for carrying out economic activities for economic entities producing craft food products for their sale on local agricultural markets;

- implementation of programs to support producers of organic products;

- implementation of measures aimed at increasing the level of education of producers regarding the advantages of conducting organic production;

- ensuring the full functioning of the State Agrarian Register as a system of accounting and monitoring of all agricultural enterprises, including simplifying their access to state support programs;

- introduction of a traceability system in supply chains of resources for the production and sale of agricultural products;

- introduction of equalization of the tax burden for farms operating in the legal field;
- approbation of European practice in the field of administration of entities producing agricultural products and in the field of effective electronic monitoring;
- popularization of the concept "Industry 4.0" and its individual elements as a mandatory factor for increasing the competitiveness of industrial enterprises on international markets;
- provision of conditions for the creation and development of industrial parks as investment sites with existing engineering and transport infrastructure;
- creating and ensuring the functioning of the geoinformation system for monitoring the development of regions and territorial communities;
- ensuring effective dialogue between the central bodies of executive power and local self-government bodies, as well as local government, the public and business;
- implementation of projects and programs of support and development of certain types of territories;
- ensuring the use and implementation of the smart specialization approach of each region in accordance with the EU methodology;
- joining Ukraine to the European Smart Specialization Platform (S3 Platform).

Implementation of the concept also requires the use of digital technologies. Digital technologies contribute to balanced agricultural management of nature and, in particular, to the formation of sustainable food and agricultural systems.

4. CONCLUSION

The expected result of the implementation of the concept is the definition and public support of the state's strategic course in the socio-ecological and economic sphere, the consistent implementation of which will make it possible to: shape the potential for agribusiness and invest in the quality (adequate) state of the NE; GDP growth per capita; growth of labor productivity; growth of export volumes; maintaining the quality of the NE.

The implementation of the concept results in food security through the implementation of FAO's provisions on the four dimensions of food security (availability, accessibility, utilization and stability) and the three main factors of security (access to food, care and nutrition, health and sanitation) which are currently universally recognized by FAO (The High Level Panel of Experts 2021).

The positive results of the implementation of the concept are formulated as follows:

1. Availability of a sufficient amount of food of appropriate quality, which is supplied at the expense of domestic production.
2. Obtaining quality food, clean water, sanitation measures to achieve a state of nutritional well-being, when all physiological needs are satisfied.
3. Stability - to ensure the socio-ecological and economic development of the state.
4. Society has access to high-quality NE and uses it for innovative environmental projects.
5. Harmonization of EU directives, FAO methods for rational management of nature for: production, infrastructure, food consumption, all types of business, protection of natural resources, etc.

Predictive developments in the field of agrarian nature management require the implementation of the provisions of the European integration of Ukraine, environmental management, audit and, in the future, environmental certification in the field of nature management. Certification in this case is: the final stage of confirmation of compliance after

the completion of a set of economic, environmental, and social tasks. For example, the harmonization of "Guidelines for the interpretation and application of Directive 2005/29/EC of the European Parliament and of the Council on unfair business-to-consumer commercial practices in the internal market". Such a methodology is aimed at raising awareness of the Directive among all interested parties. Let's note that EU Directive 2019/2161 of the European Parliament and the Council has been amended to better implement and modernize the Union's consumer rights protection rules, which entered into force on May 28, 2022.

The concept implements provisions of multilateral partnership mechanisms for financing and strengthening food security and improving nutrition within the framework of the implementation of the Agenda for the period until 2030, the Association Agreement of Ukraine and the EU, for example [EOS Crop Monitoring 2022, The Green Growth Action 2013, The High Level Panel 2021]. At the same time, the industrial model of agricultural improvement implies the use of intensive farming systems, in which large specialized farms occupy a prominent place, which in certain conditions work on the basis of massive volumes of fossil fuels and non-renewable and synthetic production resources.

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