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## **IMPROVING THE ORGANIZATIONAL AND INSTITUTIONAL MECHANISM OF FORESTRY PRODUCTION ON THE BASIS OF A MARKET ECONOMY**

### ***Summary***

*The directions of improving the organizational and institutional mechanism of public authorities on aspects of public administration of forestry: first, a detailed analysis of the effectiveness of organizational and institutional mechanism of state regulation of forestry institutions and public authorities and developing a methodological approach to the formation of tasks in the administrative reform process. Ukraine, secondly, substantiation of the system of indicators for assessing the effectiveness of legal regulation of regional forestry at the regional and forestry at the regional level; third, the systematization of aspects of the distribution of managerial powers. The economic Strategy of development of forestry production in the context of organizational and institutional maintenance is offered. The purpose of such a Strategy is to coordinate the production activities of forestry enterprises; carrying out forestry activities; protection of forest protection; sale of wood; development of implementation of construction projects, in particular forest roads; implementation of investment projects. It was found that the introduction of electronic accounting by all permanent forest users will promote openness and transparency in the timber market, monitoring of illegally harvested timber, as well as regulate the accounting of harvested timber and bring it closer to international standards for forest management and conservation forest protection in order to highlight the function of public administration. It is proved that this Strategy will include: development (indicators) of effective forest management, increasing forest cover, improving the ecological situation, reducing erosion, reducing the resource and ecological potential of forest ecosystems, preserving biodiversity and increasing the resilience of forest ecosystems, promoting social solutions.*

*Economic problems of territorial communities, increasing the resilience of forest ecosystems to the impact of negative environmental factors, increasing man-made load, climate change, efficient use of forest resources in market relations, improving financial and economic mechanism, ensuring self-sufficiency and profitability of forestry in forestry regions strengthening the legal protection of forest protection workers. Based on the proposed innovations, it is determined that increasing the production of balanced forest ecosystems will increase wood growth by optimizing logging and other forestry activities, including the introduction of forest inventory legislation, which will allow accounting, monitoring and increasing forest ecosystems.*

### **Introduction**

The main natural object in forestry are forest ecosystems – a type of natural complexes, which combine mainly woody and shrubby vegetation with appropriate soil types, grassy vegetation, fauna, microorganisms and other natural components that are closely interrelated in their development, affect each other and the environment. Forest ecosystems of Ukraine are its national wealth and by their purpose and location perform mainly water protection, protection, sanitation, health, recreational, aesthetic, educational and other functions, are a source of meeting society's needs in forest resources, which are in state, municipal and private property [1].

Forests on the territory of Ukraine are located very unevenly and are concentrated mainly in Polissya and the Carpathians. Forest cover in different natural areas has significant differences. Gradual aging of forests leads to the deterioration of their sanitary condition [2].

According to Art. 2 of the Kyoto Protocol [3] Promoting the spread of rational methods of forestry, afforestation and reforestation on a sustainable basis is the responsibility of Ukraine. The need to substantiate and create an effective organizational and economic mechanism to ensure the balanced use of forest lands as an important component of ecosystem conservation is in line with public policy and European integration intentions of Ukraine, modern environmental requirements of social systems. According to item 3 of Art. Kyoto Protocol [3] Ukraine's reporting on forest management activities is mandatory, in particular on afforestation, reforestation, afforestation and forestry.

In this context, changes in the state in terms of market conditions, which determine the efficiency of forestry production to increase forest productivity and bring their area to the optimum level. Every year, both the initiative and state support for forestry production decreases, but the tax burden increases, the amount of working capital decreases, the price of forest products decreases, and bank loans become inaccessible to most enterprises. Taking into account the above problems, it is necessary to ensure the balance of both forestry and forestry production with the use of economic, environmental, social and legal components in market conditions:

– the economic component is aimed at assessing the financial and economic potential of forest enterprises, which should reflect a systematic approach, if we pay attention to the essence in terms of effective management. In the structure of this approach, it is expedient to single out such elements within its target block as mission, goals, criteria for evaluating goals, in the context of the functional block – planning and organization of activities, accounting and control of achieved results;

– the ecological component is aimed at increasing the ecological potential of forest ecosystems; increasing their resistance to negative natural influences and man-made load; introduction of a tool for paid forest use, which will be based on regulations;

– social component – aimed at maintaining the infrastructure in the settlements located in the forest area, taking into account the social consequences of the process of planning and management of forestry;

– the legal component is aimed at improving environmental legislation and environmental standards in the process of economic reform.

Each of these components should provide a set of methods, criteria and principles that will determine the development and effectiveness of the strategy for the activities of forest enterprises.

In order to conduct forestry in market conditions, in addition to reliable information on the availability and use of forest ecosystem components, it is necessary to have a system of indicators that would characterize the level of fiscal regulation and take into account destructive environmental and economic changes in the forest industry. The work of such researchers as S.O. Melnyk, V.P. Moroz, I.M. Sinyakevich, O.V. Sakal, V.V. Golyan, O.M. Shubaliy, B.M. Kolisnyk, V.V. Zozulya, A.P. Petrov and others.

High efficiency of forestry management is to ensure its profitability in the process of using all resources and useful properties of forest ecosystems. Effective management of this process is impossible without fiscal policy as a means of financial regulation of the economy, including in forestry, which is carried out through economic levers – taxes and government spending, ie through their transformation and effective use [4].

### **Part 1. Conceptual approach to improving the organizational and institutional mechanism of forestry production**

Modern forest use in Ukraine has signs of deep economic destabilization and produces a number of systemic problems, primarily political and institutional, environmental and social. The reasons for this state of forest use are the discrepancy between the existing management practice and the legal norms governing the use of forest resources and land; the contradiction between the external environment in which forestry enterprises operate and state regulation of the forest industry. These phenomena indicate an imbalance in the management of forestry production and the need for new approaches to developing development strategies. Scientists and practitioners understand the

need to improve the management and regulation of forestry at the legal level. The role of the functions of forest resources, primarily environmental and social, in balancing the interests of all actors involved in forest use needs to be rethought. It is time to develop an analysis of institutional factors influencing strategic decisions in this area. It is expedient to adapt the tools of strategic planning to the specifics of the functioning of forestry enterprises.

Management of forestry production with the transition to sustainable development, as well as the development of a system of program and methodological documents should include: analysis of the state of forest resources, directions and mechanisms to improve the rationality of their use; state strategies of long-term action; long-term medium-term forecasts of the industry development depending on the scenario of changing conditions; forecast of possible concomitant changes in the natural environment caused by production activities in different scenarios of the industry; short-term programs and forecasts of sectoral, regional and local levels related to changes in the structure of targeted use of forest ecosystems, as well as elements of the system of forest production.

As stated in the Forest Code of Ukraine (Article 25), the main task of public administration in the field of forest relations is to ensure effective protection, proper protection, rational use and reproduction of forest ecosystems. Public administration in the field of forest relations is carried out through:

- 1) formation and determination of the main directions of state policy in the field of forest relations;
- 2) determination by law of the powers of executive bodies and local self-government bodies;
- 3) establishment in accordance with the law of the order and rules in the field of protection, protection, use and reproduction of forests;
- 4) implementation of state control over the protection, protection, use and reproduction of forests.

According to the analysis of scientific works on forest law, today the right of forest use is considered as a complex institution of forest law. S.M. Shershun notes that in order to avoid and reduce the negative anthropogenic impact on forest ecosystems in the process of gaining practical experience, research in the forest sector, rules of conduct for people in the forest, consumption of forest resources and useful properties of forest ecosystems were developed. The universality of these rules has ensured their transformation into legal norms. Together, they formed the Institute of Forest Use Law, the rules of which regulate the conditions and procedure for multi-purpose rational use, reproduction and protection of forests, forest management, determine the rights and responsibilities of forest users. The general approach to the formation of norms involves the establishment of general requirements that ensure the environmental performance of forest use, and further specification of these requirements for certain types of forest use [5; 6].

An effective forestry management system in Ukraine, of course, cannot be built because of an exact copy of the system of one of the European countries. The analysis of O.M. Shubalim said that the assessment of the possibility of borrowing European experience in transforming the forest management system gave him the opportunity to conclude that each country builds a forest management system according to its own administrative structure, socio-economic and political situation, available forest resources, market infrastructure development, and the external environment, so they differ in structure, powers, principles of organization of interaction and functions of individual levels of government, the tasks of the primary links. None of the countries in the process of reforming governance tried to copy the experience of neighbors or leading developed countries, which ensured a high level of efficiency of all parts of the forest complex. In his opinion, structural transformations should take place in stages, taking into account, if possible, the positions of various stakeholders (state, local communities and the population) and have appropriate regulatory and methodological, institutional, financial, personnel and technical support [7].

Public administration in the field of forestry is carried out through decision-making, their implementation and control over their implementation. Control in any management system is carried out in order to verify compliance with and implementation of tasks, decisions, ie in fact after the implementation of other functions of management. Usually, control in the field of forest relations is considered as a component of environmental control, which is one of the functions of management in the field of nature management and environmental protection. However, control in forestry should not be determined by the principle «the tighter – the better». First of all, the level of discipline related to internal control should be raised and maintained.

The financial and economic subsystem of the organizational and economic mechanism of ecologically balanced forest management involves the effective functioning of monetary and fiscal components, which are a set of measures to influence the economic structure of the industry. These components of the mechanism determine budget support, fiscal regulation, soft loans, subsidies and penalties, standardization and certification, insurance and compensation, environmental management, licensing, etc. [8; 9; 10; 11]. To improve the organizational and legal basis for the formation of forestry, it is necessary to involve human resources specialists, scientists, independent experts, lawyers to develop a pilot project of internal control system at the level of forestry enterprises, which will contain a clear list of organizational and managerial measures. The final document of this system can be a provision on forestry, financial, accounting, personnel policy of the enterprise. Regulations should be developed on the basis of a systematic analysis (with the necessary calculations) of each element of business transactions and the choice of available alternatives [12; 13].

If we take the example of the analyzed world experience in the study of the forest industry, we can identify the following conceptual approaches:

historical (consists in the analysis of past events and legislation in order to describe the evolution of forest policy). One of the important elements of historical analysis is the study of specific cases of forest policy, which allows to investigate the emergence, development and solution of forest use problems [14];

institutional (aimed at analyzing institutions and organizations that formulate and implement forest policy). The study of organizational structures, division of responsibilities and functions makes it possible to identify the distribution of power functions between different organizations and ways of making and implementing political decisions. This approach also examines some laws and programs as a result of the activities of organizations. One of the types of institutional approach is a comparative approach to the analysis of forest policy, which consists in a comparative analysis of forest organizations and conditions in different countries in order to make recommendations for improving the organizational structures of domestic institutions [15];

analytical or procedural (studies the process of forest policy formulation, using modeling of decision-making processes). This approach is used to analyze and solve problems that arise in forest use, as well as to assess the effectiveness of forest policy [16; 17]. The institutional approach is somewhat enthusiastic about this work, as it has not been properly applied in Ukraine.

Note that there is a relationship between policy and different industries, but in most cases this relationship is quite formal in different circumstances. This suggests that policies in different areas often pursue different goals. It can cover different geographical regions and be carried out without much coordination. After all, this makes it difficult to analyze all policy areas that may affect the forest sector. However, it is important to understand some of these factors, as they create both challenges and development opportunities for the forest sector in the future.

The stages of development of forest relations in Ukraine show that they lag behind the requirements of a market economy, do not take into account many issues of sustainable forest management. Most leading experts believe that in order to better harmonize the principles and directions of forest development with the requirements of the concept of sustainable development, it is advisable to adopt a special normative document «National Forest Policy of Ukraine» – a conceptual document of national importance. would combine economic, social and environmental goals [18; 19; 20; 21].

Ecological and economic management of forestry includes: the desire to reduce the volume of continuous felling, stimulate natural regeneration, replacement of chemical methods of forest protection with biological:

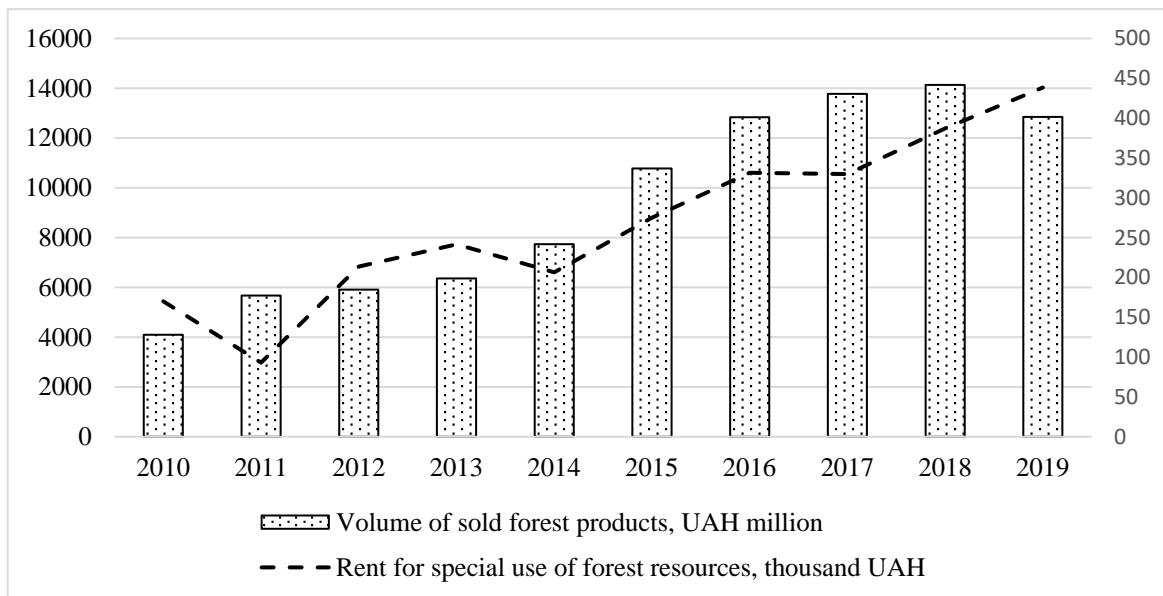
– increasing the volume of protective afforestation for the formation of sustainable forestry landscapes;

- conservation of biodiversity at all levels (from genetic to landscape), as well as the development of a system of small protected areas – reserves, tracts and forest genetic reserves;

- signing of international environmental agreements and treaties of Ukraine.

The improvement of forest policy should be based on the existing experience of developing similar documents in countries with developed forest industries, where the state itself has organized the development of forest policies, consolidating the efforts and resources of all participants in forest relations. At present, national forest policies (USA, Canada, Sweden, Germany, Finland, Austria, etc.) have been developed and implemented in most forest industry countries. The main objectives of forest policies are to increase the efficiency of the entire forest complex and its structural units, increase employment, preserve the environment and biodiversity.

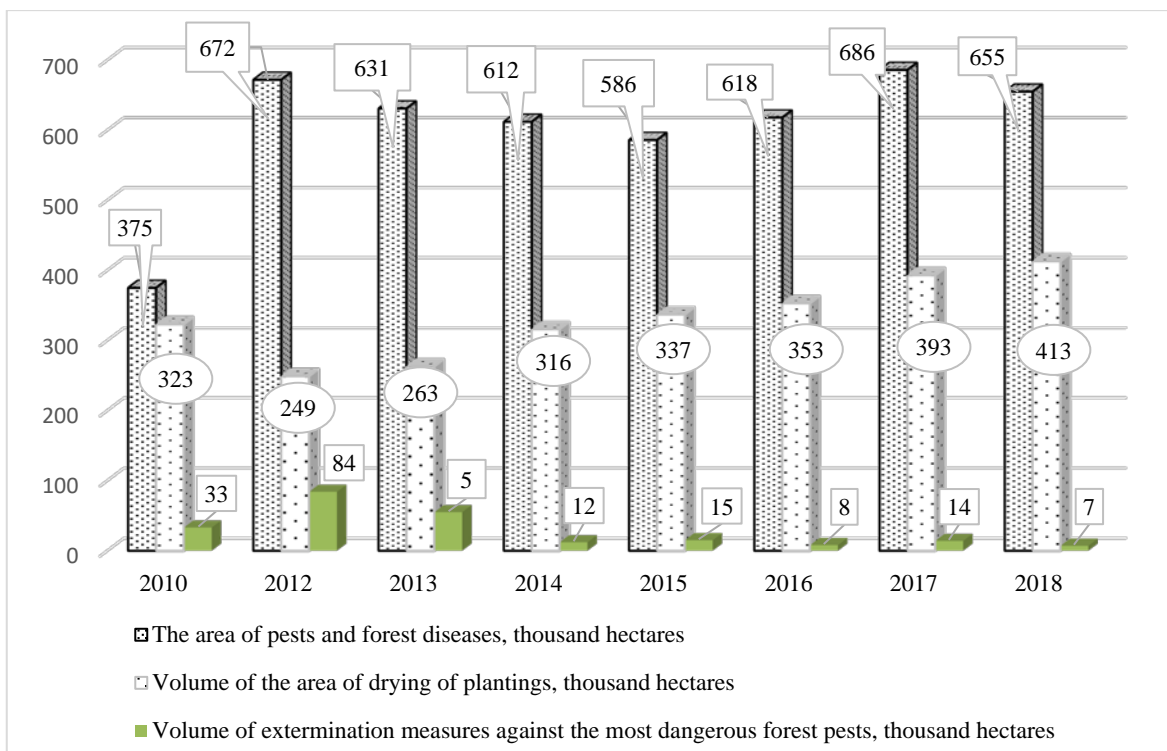
One of the main tasks of sustainable forest management is to ensure the growth of net forest income for the state as the owner of forests. The most important tasks of the state should be macroeconomic regulation and support of priority areas of forest complex development, which contribute to the formation of an effective structure of competitive production, consumption and trade in timber products [22].



**Figure 1. Dynamics of the volume of sold forest products and receipt of rent for special use of forest resources, thousand UAH**

*Source: calculated by the author on the basis of data from the State Forest Agency and the State Statistics Service [23; 24]*

It can be noted that one of the shortcomings is illegal logging, areas of pests and forest diseases and mass drying of trees (Figure 2).



**Figure 2. Dynamics of forest protection measures for the period 2010–2018**

*Source: formed by the author according to the State Statistics Service of Ukraine [24]*

Forest protection measures aimed at pest control, first of all, need to improve the monitoring service, which includes a system of monitoring, forecasting the movement of phytophagous numbers and the spread of forest diseases, a system of operational and rational decisions on forest protection measures. In addition, forest protection measures should be aimed at protecting and preserving forest areas from fires and illegal logging. [25; 26; 27]. It should be noted that the development and practical application of biological means of pest control should be included in the forest protection activities of the specialized service. Such products are harmless to humans and the environment, they can be used even in densely populated areas of Ukraine, where the use of any chemicals is prohibited. Indicators show the causes of forest ecosystem degradation and imperfect forest policies that do not address environmental, economic and legal issues. The issue of improving the legal regulation of forest protection works and the development of theoretical aspects, practical research on the use of forest protection remains open and debatable. To effectively address these issues, it is necessary to attract the full scientific potential of domestic science, successful foreign experience and modern innovations in the field of forest protection.

Implementation of directions in practice regarding the legal regulation of forest protection works and the development of competitive production should ensure efficient, multi-purpose use of forest resources, improve forest management and



increase the effectiveness of forest management measures. In the context of forestry, the following priority measures are proposed to improve it:

1. Complete the reform of public authorities in the field of forest management and control in the field of forest protection and reproduction, increase their funding, especially the functions of control and supervision of violations and illegal logging.

2. Improving the accounting, processing and submission of information on the state of use and sale of forest resources.

3. Intensification of forestry management (increase of volumes and quality of waste felling and reforestation works).

4. Changing the approach to the formation of rates of payment per unit of forest resource, the transition to the rent principle of setting rates.

5. Organization of target farms that provides intensive inexhaustible afforestation in order to ensure a stable supply of forest raw materials for large pulp and paper mills and timber companies.

The modern market-oriented forest resource sphere is impossible without an effective mechanism of its interaction with the state, legislative and executive bodies. Moreover, such a mechanism has become one of the main features of a highly developed forestry complex. This includes the creation of the actual infrastructure of the forest resources sector and the provision of favorable conditions for the effective functioning of all sectoral structures of the forest complex, as well as the activities of semi-governmental expert advisory organizations with the obligatory participation of business circles. In addition, it is necessary to single out such forms of activity as: development and implementation of forestry, woodworking and forestry policy, placement of state and municipal orders on forest products, legalization of lobbying activities of business structures in the industry, regulation of social and labor relations.

Analyzing the factors of competitive advantages of forest resources complexes that affect the structure and level of rental income from forestry production, it is worth noting internal and external rent-forming factors. The internal include:

- basic forestry-taxation, forestry and specialized forestry factors necessary for forest production and services: relevant components of forest resources (forest lands, forest plantations of appropriate breed and age structure, nature protection and recreational functions, location of forest ecosystems);

- forestry components of the complex (fixed assets of the forestry sector, machinery, technology, labor, finance);

- infrastructural forest resources components (recreation, leisure, green tourism, etc.);

- the required level of development of forestry production and utilization of forest processing capacity, innovation, financial, technical, economic and infrastructural potential, rates of investment and innovation for the use of sources of forest rent, able to ensure the formation of a competitive source of rent;

– socio-economic market-oriented conditions for the development of forest resources, organizational and legal environment, fiscal policy, ensuring the formation, distribution and effective redistribution of forest rents, business climate, organization and quality of management of all organizational structures of forest resources, regardless of ownership forests and production structures.

Thus, Ukraine needs a forest policy that formulates strategic goals for the development of the forest complex, organizational, economic, environmental and social priorities in achieving these goals based on international principles and criteria of sustainable forest management. In addition, the content of forest policy should not replace either forest legislation or the State Targeted Program for Forestry Development. Forest policy forms long-term goals for the development of the forest complex and ways to achieve them. Forest legislation creates the conditions for achieving the accepted goals, which provides for the creation of rules according to which the participants in forest relations operate in the forest sector of the economy.

## **Part 2. Algorithm for development of strategy of organizational and economic mechanism of forestry production on the basis of market economy**

Today, forests are an important strategic natural resource of our country and the main source of wood, food and medicinal raw materials, as well as other biological products, many of which are still insufficiently studied. There are economic, water protection, climatological, aesthetic and sanitary, ecological significance of forests. First, wood is a universal material, without which no economic activity can do. Secondly, forests increase the annual rainfall by 10-15% compared to forest-free areas, and forest plantations, fixing the soil with roots, stop erosion processes. Third, forests meet the needs of people for recreation, fresh air. On average, 1 ha of stands in Ukraine annually consumes 5 tons of carbon dioxide and emits 4 tons of oxygen [28].

Regarding forestry production, it is a specific branch of the market economy and has certain aspects, in particular the diversity of forest products, the need for production areas and so on. Forestry production includes the following types: woodworking, pulp and paper industry. Note that forestry is one of the leading sectors in the economy as a whole, producing and supplying raw materials to various production structures.

Among the main problems of development of forestry production today is the lack of funds for the renewal of equipment of woodworking enterprises, the creation of new facilities for the production of innovative and competitive products [29].

One of the ways to solve such a difficult situation, in our opinion, is the introduction of stimulating phases in the form of a pyramid, which is aimed at economic, environmental, social and legal goals and will achieve high efficiency and quality of any management activity. It will consist in improving

the legal support of forestry activities, namely the legal regulation of the behavior of subjects and objects of management, which is carried out through organizational and legal support, able to promote the purposefulness of forestry activities to meet public needs and interests.

As defined by the Basic Law of Ukraine, natural resources located within the territory of Ukraine (which include forest resources) are objects of property rights of the Ukrainian people. On behalf of the Ukrainian people, the rights of the owner are exercised by state authorities and local governments within the limits set by the Constitution of Ukraine (Article 13 of the Constitution of Ukraine) [30]. To implement these constitutional provisions, the Cabinet of Ministers of Ukraine has developed a number of concepts, including:

The concept of reforming and development of forestry (2006) which provided for the introduction of the organization of forestry on the basis of sustainable development, improving the efficiency of the forest sector in the public economy. The purpose of the concept is to solve such tasks as: improving the regulatory framework in the field of forestry and its harmonization with international principles of sustainable development and forest management; development of indicators of effective forest management; increasing the restoration and forest cover of the territory, increasing the resource and ecological potential of forests; conservation of biological diversity of forest ecosystems; increasing the resilience of forest ecosystems; efficient use of forest resources in market conditions; improvement of the financial and economic mechanism; promoting the solution of socio-economic problems of territorial communities;

State Program «Forests of Ukraine» for 2002–2015. This program identifies the main directions of sustainable development of forestry, aimed at strengthening the environmental, social and economic functions of forests in the reform of agricultural enterprises, as well as the adoption of new land legislation;

State target program «Forests of Ukraine» for 2010–2015, the task of which is forest planning, restoration of forest management, forest statistics, forest science and education, project work. Personnel and moral degradation must be overcome. We need a new economic policy, the ideology of creation [31];

Strategy of balanced development of forestry and hunting of Ukraine for the period up to 2020, aimed at defining tasks and tools for solving environmental, economic and social problems of forestry, increasing the level of economic potential, productivity, profitability and, consequently, creating conditions for its balanced development taking into account the peculiarities of Ukrainian forestry [32].

Currently, the Strategy of Forestry Reform of Ukraine for the period up to 2022, which provides for the development of forestry, in particular such as: combining the functions of regulation, supervision and control of timber with the functions of economic, imbalance and legal structure of forest resources management to distortions in the financial support of individual forest users;

the difficulty of obtaining title documents for the use of forest lands and, as a consequence, the lack of them in most forest users [33].

Having analyzed the strategies and concepts, it should be noted that the main problem of non-compliance and non-implementation of the above strategies is that the development program of the country's timber industry is inconsistent in terms of development, they trace incompatible principles, goals and objectives. The action plan for financial and economic support of forestry is not clearly defined, which is a key factor in the implementation of forest policy reform.

After all, the expediency of a separate administrative and economic structure of state forestry (within the general land use) is proved by the Law of Ukraine «On Forests», neighboring Poland – State Forests (Lasami Panstwowymi) [34].

That is, it corresponds to the Ukrainian «State forests of state ownership.» And this does not prevent him from being self-sustaining and profitable, as confirmed by Art. 50 of the Law of Poland «On Forests»: «State forests cover their expenditures from their own revenues and operate on the basis of financial independence.» Article 53 of the same Law establishes «Expenditures for the maintenance of the General Directorate of State Forests and regional directorates of State Forests shall be financed from contributions that aggravate the costs of forestry activities.» Forestries (in Ukrainian practice – forestries) make deductions from their income for the maintenance of the entire superstructure of sectoral management of regional and state levels, which provides the mentioned «their activities on the basis of financial independence» and management of neighboring Poland. productive forces and production relations of the Cabinet of Ministers of Ukraine, the report of which stated: «The management system in Ukrainian forests is inefficient... requires significant and urgent changes... in forests of state importance, their transfer to... financial self-sufficiency» [35].

Thus, the reform and transition from traditional «forest management», which took place in the first half of the twentieth century, in the second half, since 1959, led to significant negative financial and economic consequences for forestry, theoretical principles of forestry and adaptation of basic its NPA to market relations in the new conditions of forestry production, in particular the Forest Code of Ukraine, as well as mechanisms for the organization of forest use and logging, development of the woodworking industry.

Taking into account the above, as well as the fact that the basic principles of reforming the NPA in the field of state forestry since independence have been implemented and continue to be implemented on the principles of centralized state forest management, namely:

- excluding expenses, income and calculation of profitability;
- according to the complex mechanisms of calculating the rent for forest materials, the forest legislation of Ukraine needs to be radically improved, starting with the drafting of terms and their definition, adapted to UNECE / FAO terms, with approval at the sectoral level in coordination with the Ministry

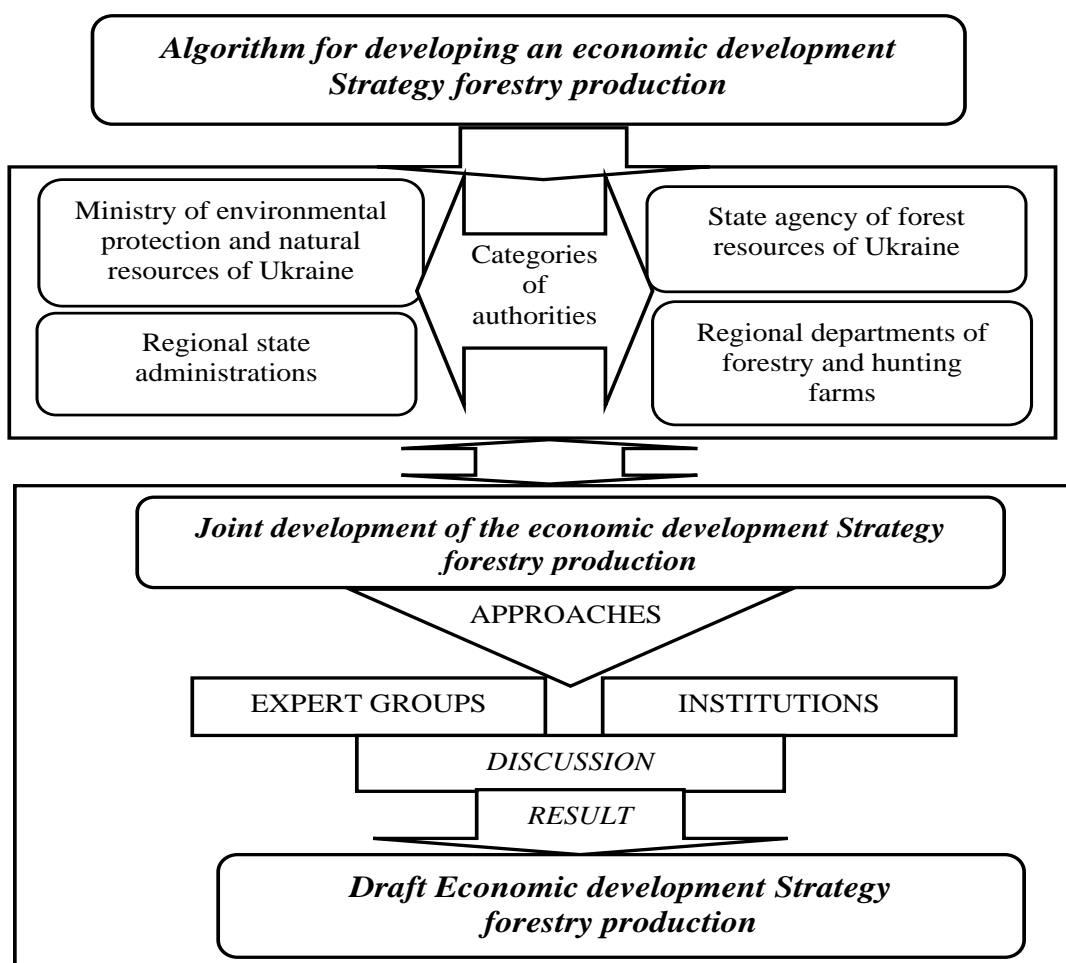
of Regional Development, Construction and Housing, utilities of Ukraine, as well as NAAS. To this end, it is necessary to develop an economic strategy for the development of the industry at the level of the State Forestry Agency of Ukraine, without transferring it to the decision of the Cabinet of Ministers of Ukraine. Only in this case, high-ranking managers will be personally interested in improving industry NPAs, simplifying their content and application, especially with the introduction of their authors in the legislation, as well as authors of changes to their current content.

Here are the directions of improving the organizational and institutional mechanism of public authorities in relation to aspects of public management of forestry production: first, a detailed analysis of the effectiveness of organizational and institutional mechanism of state regulation of forestry institutions and public authorities and developing a methodological approach to administrative reform Ukraine, secondly, substantiation of the system of indicators for assessing the effectiveness of legal regulation of regional forestry at the regional and forestry at the regional level; third, the systematization of aspects of the distribution of managerial powers. Based on these areas and the development of the cluster, it is advisable to implement an economic strategy for the development of forestry production in the context of organizational and institutional support.

At the stage of development of the draft Economic Strategy for the Development of Forestry Production, experts in the field of activity and experts of public institutions, representatives of expert groups will be involved for expert evaluation. Approval and approval of this draft Strategy should go through all stages of discussion – from the regional level to the representative authorities. The development of the Strategy is written by the algorithm, as involved all branches of executive power, including the Ministry of Environment and Natural Resources of Ukraine, the State Agency of Forest Resources of Ukraine, Regional State Administrations, Regional Departments of Forestry and Hunting, which are part of the forest industry (Figure 3).

We will analyze strategic alternatives to forestry production at the state and regional levels. At the state level, under the current institutional structure of forest management, the subject of strategy is the State Agency of Forest Resources of Ukraine. It is designed to organize the process of involving experts and agreeing key elements of the strategy with stakeholders. The process of forming the Strategy for the Development of Forestry Production also requires the involvement of regional stakeholders.

In order to achieve the set goal and rationally perform the tasks, such measures are needed as: coordination of the activities of forestry enterprises; carrying out forestry activities; protection of forest protection; sale of wood; development of construction projects, including forest roads; implementation of investment projects:



**Figure 3. Algorithm for developing an economic development strategy forestry production**

*Source: generated by the author*

- introduction of electronic accounting by all permanent forest users will promote openness and transparency in the timber market, monitoring of illegally harvested timber, as well as regulate the accounting of harvested timber and bring it closer to international standards for forest management and conservation. Improving the system of state forest protection in order to separate the function of public administration;
- carrying out adaptation measures in forestry to minimize the effects of climate change will involve the development of regional processes of climate change impact on forest ecosystems using statistical and mathematical forecasting methods;
- overcoming the consequences of drying pine in Polissya and spruce in the Carpathians; Improving the regulatory framework necessary for sanitary and health measures in forests.

The process of forest stands requires a long time, today there is a situation that the basic component remains sanitary felling, normatively established in Ukraine for localization of pests and diseases based on world and domestic forest protection practices with radical adjustment of terms and methods of application according to modern biology. pests.

As the Strategy contributes to the efficiency of forestry activities, it has such economic objectives as:

- development of criteria (indicators) for effective management of forest ecosystems;
- increasing the forest cover of the territory to a scientifically sound level;
- increasing the resource and ecological potential of forest ecosystems;
- conservation of biological diversity of forest ecosystems;
- increasing the resilience of forest ecosystems;
- assistance in solving socio-economic problems of territorial communities;
- increasing the resilience of forest ecosystems to the impact of negative environmental factors, increasing man-made load, climate change;
- efficient use of forest resources in market relations;
- improvement of the financial and economic mechanism;
- ensuring self-sufficiency and profitability of forestry in forested regions;
- strengthening the legal protection of forest protection workers.

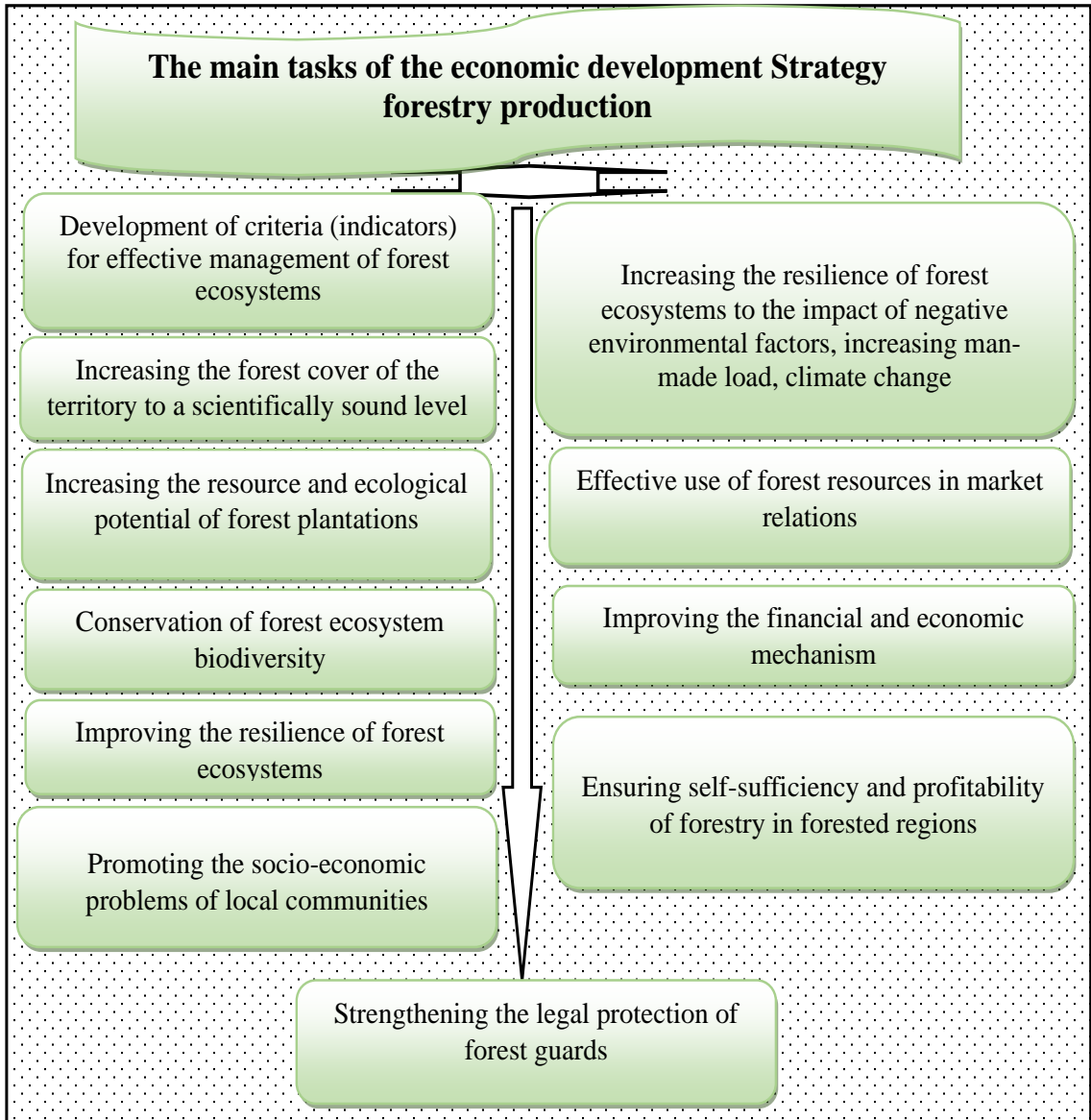
In Figure 4 The main tasks are presented for the development of the Economic Strategy for the development of forestry production, which will operate in the context of reforming and developing the forest industry with the definition of specific indicators of management objectives and harmonization of production processes.

After all, in order to increase the production of balanced forest ecosystems, it is necessary to increase wood growth by optimizing felling and other forestry activities, including the introduction of forest inventory legislation, which will allow accounting and monitoring of forest ecosystems and increase forest cover.

Ensuring balance and efficiency of organizational and institutional regulation as a component of forest management and achieving balanced forest resource development, which should be provided to entrepreneurship as an active aspect of market transformations, is important in market conditions. It should be noted that the effective implementation of environmental and economic implementation of forestry also involves the creation of organizational, economic and organizational and legal conditions for forestry production, and market organization will help attract investment in the development of forestry.

Given these trends, there is a need for the application and implementation of integrated solutions not only at the level of some natural systems, but also at the level of forest landscapes. One of the important aspects is also the formation of public interests in the direction of sustainable forest management. This will help maintain the proper balance of public interests in forest resources, develop the market not only for traditional forest products, but also the market of

ecological, sociocultural, recreational functions of forests, preserve land and water resources in need of protection, improve NPS and reduce social tensions. regarding violations of forest use norms.



**Figure 4. The main tasks of the economic Strategy for the development of forestry production**

*Source: generated by the author*

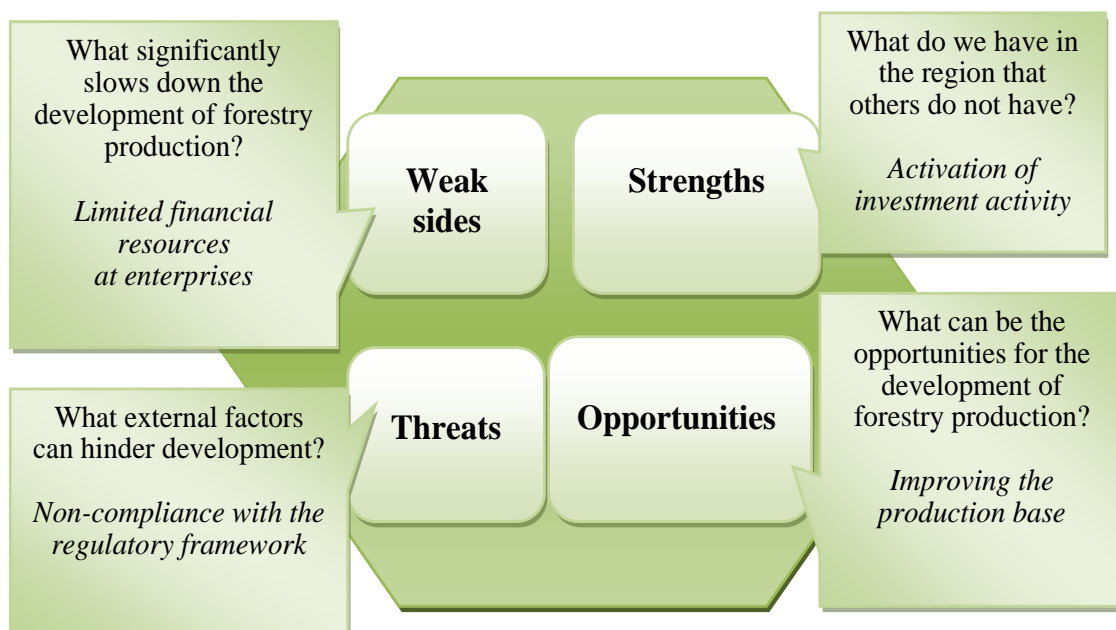
Thus, the implementation of certain prospects for the development of forestry in Ukraine in general, and protective and reclamation in particular, is hampered not only by the imperfection of the regulatory framework of the forestry industry, but also by the lack of appropriate principles and mechanisms to harmonize sectoral strategies and tactics with modern international, national,



intersectoral requirements for sustainable nature management, conservation of NPS. Implementation of criteria and indicators of balanced forest management in Ukraine tested by other countries will ensure further development on the principles of sustainable management. We have proposed a number of provisions for the formation of the optimal structural and functional organization of forest-agricultural landscapes. The optimal landscape should be complex in organization and include, together with arable land, forests and forest protection plantations, meadows and water sources, virgin lands and reserves. Forest plantations are the basis of the spatial organization of the agricultural landscape, are characterized by endurance and suitable for cultivation on unsuitable for agricultural use, adapted to environmental conditions and interact with them. Different types of reclamation and protective plantations should cover the whole territory.

With the help of SWOT-analysis you can identify the most pressing issues leading to the goal to be achieved to ensure forestry production. The application of SWOT analysis can be achieved in achieving maximum results, referring to the strengths and opportunities for forestry production (Figure 5).

First of all, in order to perform the SWOT analysis, it is necessary to provide answers to the questions about the key characteristics of the situation of forestry production.

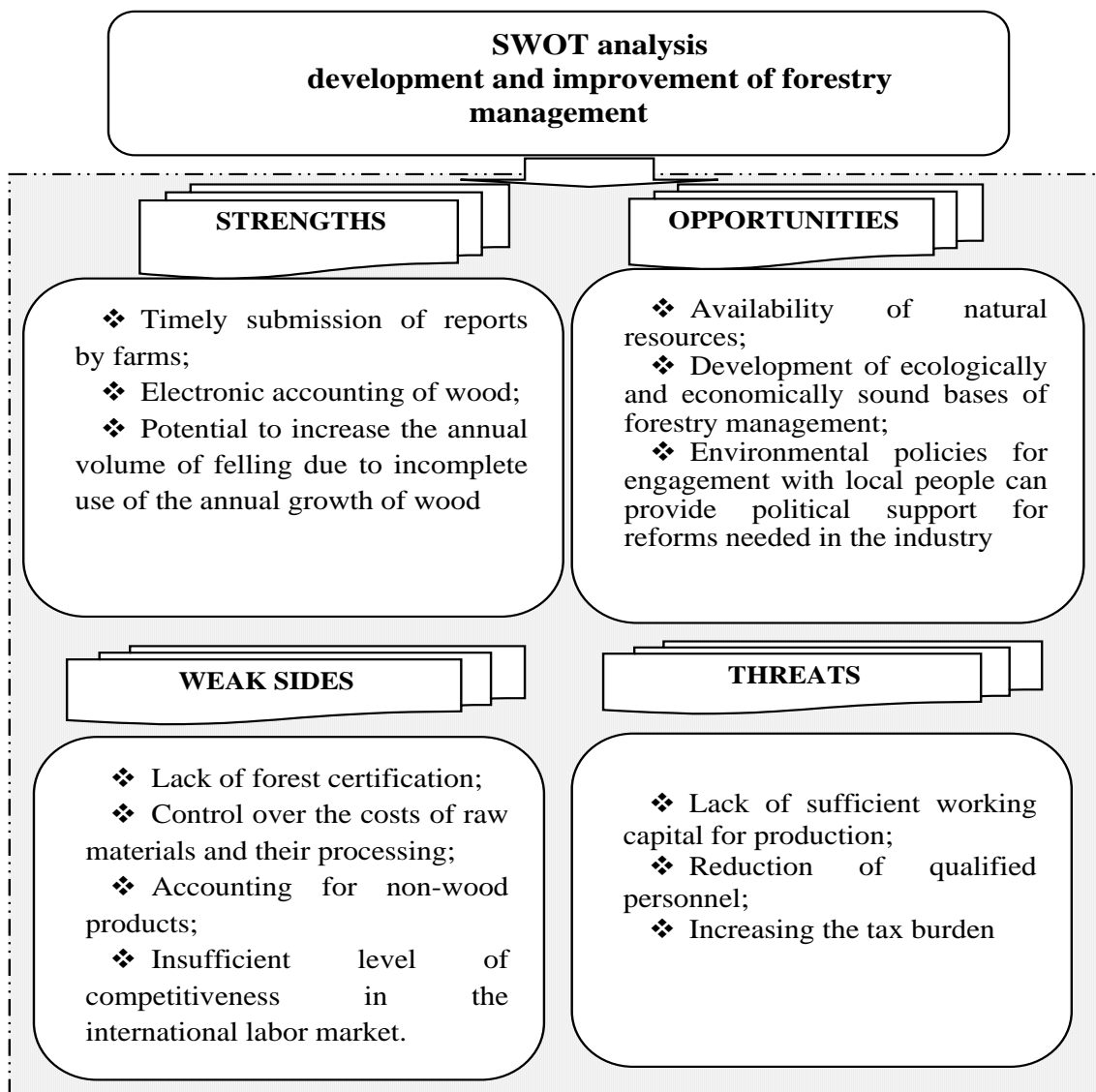


**Figure 5. SWOT-analysis as a synthesis of development and improvement of forestry management**

*Source: generated by the author*

The conducted research provided an opportunity to form the main opportunities, threats, strengths and weaknesses of improving the management

of forestry production. The strengths and weaknesses of the organization are considered as characteristics of the internal environment in the context of the analyzed problem. For the convenience of identifying the strengths and weaknesses of the organization should be classified its internal environment. For a commercial enterprise, the components of the internal environment can be: production potential, labor resources. If the object of planning is the forestry of the region or the state as a whole, the structure of the internal environment can be classified as follows: forest resource potential, labor resources, financial system. Opportunities and threats are characteristics of the external environment of the organization (6).



**Figure 6. SWOT-analysis of development and improvement of forestry management**

*Source: generated by the author*

The SWOT analysis identified the impact of the analysis on the activities of enterprises, which allows to reveal the details of analytical support and the impact on management decisions in forestry production at an early stage and allows to identify strengths and weaknesses, opportunities and threats. is a clue in the research process.

Based on the results of the analysis, a SWOT-matrix of development and improvement of forestry management research was formed, which will allow to identify the main strategic directions of development.

Among the promising areas of coordination of the forest industry, it is appropriate to highlight the following:

- 1) harmonization of sectoral regulatory frameworks;
  - 2) optimization of the structure of forest-agricultural landscapes on the principles of sustainable development;
  - 3) creation of a single, common ecological network based on agreed strategies for the development of the forest industry;
- changing the types of forest use on the principles of sustainable development, which must be taken into account and put into effect.

### **Conclusion**

From the above we can draw conclusions, proposed step-by-step methods to improve the economic component of management and based on them developed an economic strategy for forest production, which will operate in the context of forest reform and development with specific indicators of management and harmonization of production processes.

Regarding the implementation of proven criteria and indicators of balanced forest management in Ukraine, which will ensure further development on the principles of sustainable management and presented provisions for the formation of optimal structural and functional organization of forest landscapes that will ensure full reproduction of forest ecosystems.

Also, a SWOT analysis of the development and improvement of forestry management has been formed, which will allow identifying the main strategic directions of development: harmonization of sectoral regulatory frameworks; optimization of the structure of forest-agricultural landscapes on the principles of sustainable development; creation of a single, common ecological network based on agreed strategies for the development of the forest industry; changing the types of forest use on the principles of sustainable development, which must be taken into account and put into effect.

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