

SUSTAINABLE FOREST MANAGEMENT IN UKRAINE: CHALLENGES AND PROSPECTS

The main characteristics of sustainable forestry and the key principles and criteria for sustainable forest management are described. According to the forest management plan the priority tasks for the structural units of the SE “Forests of Ukraine” are identified. The model of sustainable forest management for Ukraine, which includes sustainable forestry, forest monitoring and improving the regulatory framework, is developed. The State Forest Management Strategy of Ukraine is investigated. The features of the forestry reform in Ukraine are presented.

Key words: sustainable forest management, principles, criteria, forest management plan, model, forest monitoring, strategy, reform.

Excessive use of natural resources and deterioration of the ecological sustainability of natural ecosystems, in particular forest ecosystems, are global and require completely new approaches to the transformation of the economic system in accordance with the principles of the “green” economy. During the extensive use of the forest ecosystems functions, human creates vital goods and services and significantly affects the environment. It’s important that the quantitative and qualitative characteristics of forest ecosystems don’t deteriorate. Sustainable forestry in Ukraine depends on a number of factors (Fig. 1.1).

Maintaining ecological balance, preserving forest resources and biodiversity	Income stability, job creation, forestry sustainability	Consumer needs for timber, non-timber forest products, hunting and recreation
Improving the legislative and regulatory framework in the context of forestry reform	Innovative solutions, scientific research, forest management methods and modern technologies	Exchange of knowledge, implementation of advanced foreign experience, international cooperation

Figure. 1.1. Sustainable forestry in Ukraine

The main principles of sustainable forest management are: integrity (system transformation with maintaining financial balance), dynamism, balance (an efficient system, the result is determined by the impact of operational, financial and investment activities), adaptability (an open system is exposed to external factors), flexibility (achieving high competitiveness in the long term) and purposefulness (incentives to maintain sustainable development).

It’s worth highlighting six criteria for sustainable forest management:

- ✓ increasing the country’s forest cover and enhancing of carbon sequestration by forest ecosystems;
- ✓ increasing biological productivity and ecological sustainability of forest ecosystems;
- ✓ support the water-regulating, water-protective and soil-protective functions of the forest;
- ✓ producing forest ecosystem services (provisioning, regulating, supporting and cultural);
- ✓ protecting biodiversity, preserving rare and endangered species of flora and fauna;

- ✓ ensuring socio-economic benefits from forest ecosystems.

The system of criteria and indicators for sustainable forest management is aimed at achieving ecological resilience, economic efficiency and social justice in the forest use, compliance with the principles of international and national forest policy, prevention of depletion and degradation of forest ecosystems and ensuring responsible forestry. They must meet the following requirements:

- a list of criteria and indicators approved at the state level;
- indicators are clear, understandable and take into account environmental, economic and social aspects;
- consideration of scale in space and time.

The model of sustainable forest management is presented (Fig. 1.2).

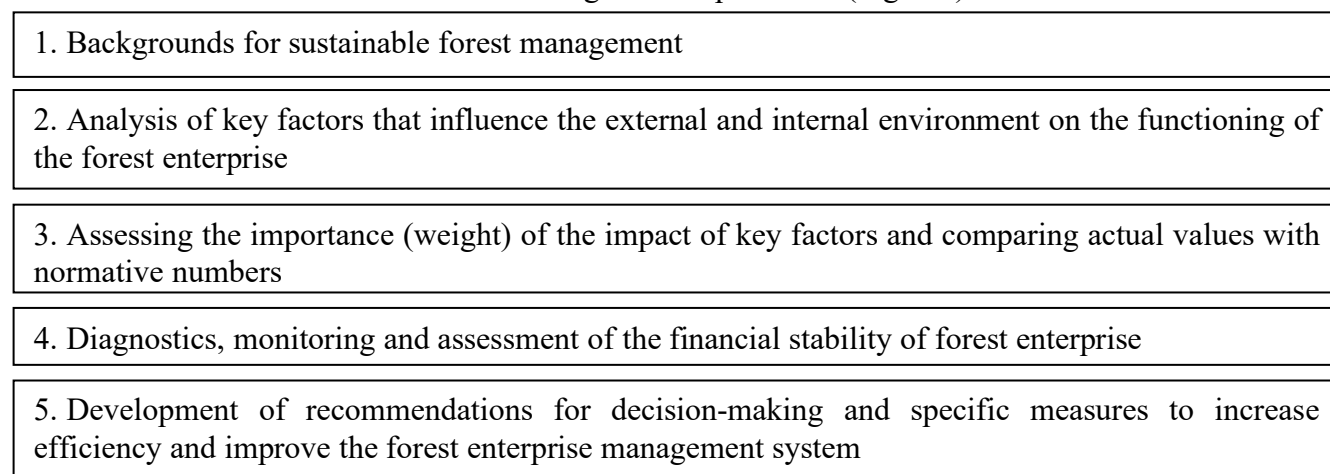


Figure 1.2. The model of sustainable forest management

Usually, the main focus is on the development of the economic system of a forest enterprise, while other, no less significant elements (environmental, social) are not so important. Timely diagnostics and detailed analytics of business processes allow us to clearly determine the direction of the enterprise's development in the long term, identify the available resources reserves at the enterprise, and take into account market trends.

In the context of forestry reform in Ukraine, over the past three years, there have been processes of optimizing the organizational structure of the State Specialized Forest Enterprise "Forests of Ukraine" (SE "Forests of Ukraine"), changes in strategic management, operational management, environmental management and social responsibility, increasing the investment attractiveness of forest enterprises, researching new markets for forest products, implementing innovative solutions, optimizing operating costs and minimizing negative environmental impacts, identifying risks and predicting the consequences that could potentially occur. There are also changes in approaches to HR management, forming a controlling system, improving information support, open public access to truthful, reliable, timely information, improving the company's image, strengthening competitive positions in the domestic market, and a clear development strategy in the European market.

Each year, a forestry management plan is approved for the structural units of the SE "Forests of Ukraine". According to the forest management plan, the priority tasks are:

- ✓ multifunctional and multipurpose use of forest resources;
- ✓ non-exhaustive and continuous forest use in the volume of annual wood growth;
- ✓ preservation of biodiversity and increase of forest ecosystem services;
- ✓ adaptive management in the field of forestry in relation to global environmental threats, in particular climate change;
- ✓ increase of the natural resource potential of forest resources;
- ✓ increase of forest cover to a scientifically substantiated level;

- ✓ involvement of stakeholders in forestry decision making, cooperation with local communities, solving local environmental, economic and social problems;
- ✓ protection of rights and improvement of the well-being of workers;
- ✓ increasing the efficiency of sustainable forest management, profitability of forestry activities;
- ✓ transparency of forestry enterprises' activities, openness and communication with all stakeholders.

The algorithm for implementing sustainable forest management in Ukraine is presented (Fig. 1.3).

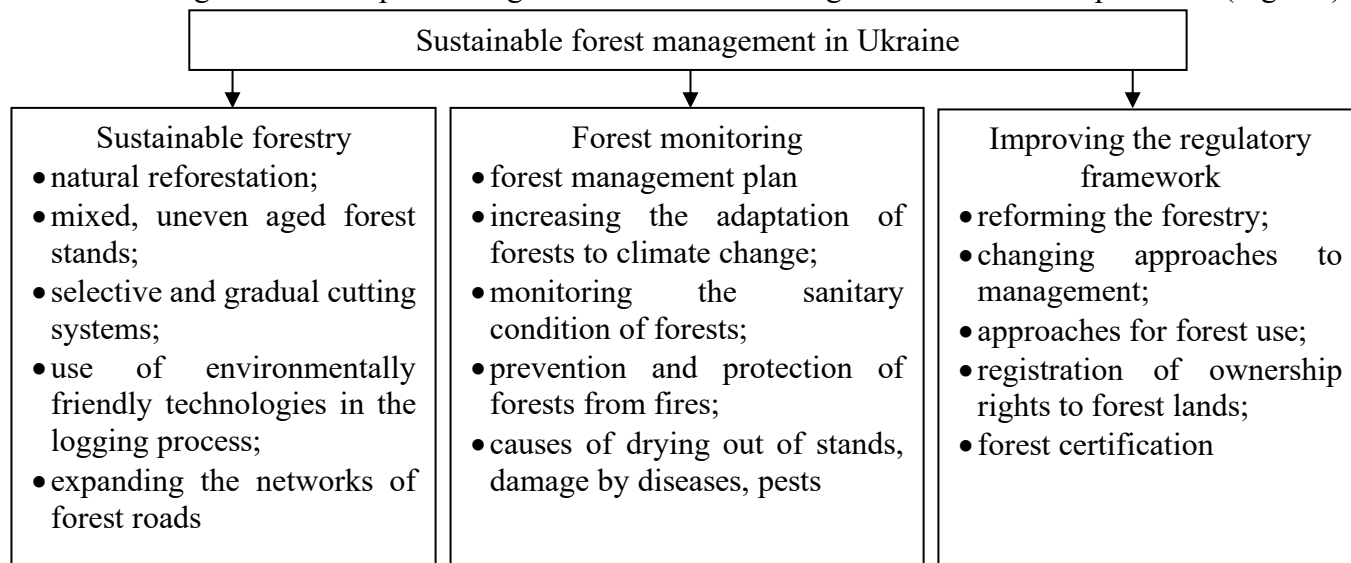


Figure 1.3. The algorithm for implementing sustainable forest management in Ukraine

The State Forest Management Strategy of Ukraine until 2035 is a comprehensive document that describes the environmental, economic and social aspects of sustainable forest management. The forestry reform in Ukraine is aimed, first of all, at improving the institutional structure of forestry and a clear delineation of economic functions (the responsibility of the SE “Forests of Ukraine”) and the formation of a national forest policy (the responsibility of the State Agency of Forest Resources of Ukraine). Particular attention is paid to the digitalization of forestry, for example most administrative services are available online, the use of GIS technologies for studying forest sites, online monitoring of forest protection from fires. Today, the logging process is clearly regulated and aimed at forming an optimal multi-age structure of tree stands, improving the assortment structure of forest products, ensuring natural forest renewal and continuous forest use, and maintaining the sanitary condition of forests.

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