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SUSTAINABLE FOREST MANAGEMENT STANDARDS AND THEIR APPLICATION IN THE FORESTRY OF BELARUS

This article includes the aims and tasks, main positions of the sustainable forest management and harvesting, their grounded corresponding to criterias and indicators. Especially there are the practice use of the state standards and technical codes putting practice at the system of the sustainable forest management and harvesting. There are the main demands in the system of technical norms and standardization up the technical norm lawful acts for the specialists at the forest enterprises during planning, organization and conduct of forestry.

In conclusion there are the suggestions to the monitoring of main demands about state standards and technical codes putting practice at the system of the sustainable forest management and harvesting, increase of the effectiveness forestry. In education it would suggest to use at the educational curriculums the main positions of state standards and technical codes during educational practices. In the position instructions and functions duty it would suggest to write the concrete demands of the state standards and technical codes for every specialists.

Introduction. Forest and forest resources are the most important renewable resources of Belarus, and one of the main factors of national ecological and economic security.

Forests occupy 38.8% of the territory of Belarus, and make 9.45 million hectares with the total standing volume of 1.6 billion m³. Uneven age structure of the woods (the young stock occupies only 20.3% of the forested areas; middle-aged stands – 48.6%), unsustainable species composition (36% of total area are occupied by softwood broadleaved species), imperfect economic relations in the spheres of forest exploitation and forest production price formation are the main reasons of insufficient forestry.

The national forest policy is aimed at efficient use, preservation, extended reproduction of forest resources. It is based on the international principles and agreements on sustainable management and conservation of forests, preservation of biological diversity, performing of economic, ecological and social functions (Strasbourg, 1991; Helsinki, 1993; Lisbon, 1998; Vienna, 2002) [1].

On the whole, the quantity of forest resources increases. For rational exploitation and economic potential improvement, for arrangement of conditions for national integration into the developing process of sustainable forest management, in 2005 upon initiative of the Ministry of Forestry, Belarusian Association of Forest Certification (BAFC) was established, and in October 2005 it was admitted as a member to the Council of Europe (PEFC).

Main part. The government standard “The Sustainable Forest Management. Main Provisions” is the main standard that establishes criteria and performance of sustainable forest management in the Republic of Belarus [2].

The sustainable forest management in the Republic of Belarus is a matter of international and

European processes, in which Belarus participates, and it is based on the provisions of the UN Convention on Biological Diversity.

The sustainable forest management is implemented by the juridical entities that deal with wood management of forest exploitation, on a voluntary basis in cooperation with the Ministry of Forestry of the Republic of Belarus.

The requirements for forest management that afford high productivity and stability of ecosystems, increasing of the biological diversity, mitigation of adverse effect on the environment, sustainability, economic efficiency and social orientation, are provided by STB 1360, STB 1361, STB 1582, STB 1592, STB 1625, STB 1627, STB 1688, STB 1715.

The sustainable forest management is aimed at:

- preservation of forest and other related resources, their biological and landscape diversity;
- increasing of economic efficiency of forestry and meeting the needs in forest products in- and outside the territory of Belarus;
- preservation and increasing of forest’s climate-regulating function by rising forest’s ability to fix atmospheric carbon;
- effective and independent system of supervision on compliance with legislated environmental forest management demands and sustainable forest management standards;
- provision of sustainability of forest exploitation and reproduction of forest resources;
- improvement of quality, consumptive qualities and competitive abilities of forestry production and services;
- development of international cooperation of the Republic of Belarus in the spheres of forestry, growing stock resources exploitation, forests conservation and management, and greater involvement in international economic and scientific and technological cooperation;

- maintenance and increasing of local population employment in the timber complex for growth of prosperity and social stability.

Measures, taken for sustainable forest management, are the main features, characterizing forest management in the current legislation along with obligations, accepted by the Republic of Belarus according to the signed international conventions and agreements.

The system of measures and performance of sustainable forest management provides:

- confirmation of juridical entity's forest management conformity to the legislation of the Republic of Belarus, regulations and requirements and principles of sustainable forest management;

- bringing the regulatory background in the Republic of Belarus in compliance with the principles of sustainability ;

- bringing the quality of forest management into compliance with ecological, economic and social requirements, provided by international agreements, the laws of the Republic of Belarus, and the standards of sustainable forest management [3].

The relationships, arising from regulatory framework for forest certification, are governed by Law of the Republic of Belarus on Technical Rating and Standardization.

The main requirements of the system of technical rating and standardization when elaborating technological norms are following:

- transparency of the process of elaborating government standards and possibility to participate for everybody interested;

- developing government standards according to already existing normative acts and technical norms;
- consideration of correspondence of developing and operating government standards;

- registration of government standards by the State Committee of the Republic of Belarus for Standardization.

The normative framework for forestry certification was created according to the requirements of the European Union Practical Guides, requirements of the Programme for the Endorsement of Forest Certification (PEFC) concerning the use of logotype of European Certification for Forest Products.

The development of the normative base of forest certification is conducted according to the requirements of the system of technological regulations and standardization of the Republic of Belarus.

On August 4, 1995 the Ministry of Forestry of the Republic of Belarus and the Committee for Standardization, Metrology and Certification of the Republic of Belarus appointed UE "Belgiproles" as Republican head organization on standardization and certification in the field of forestry sector.

UE "Belgiproles" has elaborated a range of government standards, in accordance to which for-

est certification and main principles of sustainable forest management should be conducted; the elaborated standards include STB 1358-2002 Sustainable forest management and forest utilization. Requirements to technologies; STB 1360-2002 Commercial fellings. Requirements to technologies; STB 1361-2002 requirements to intermediate fellings; STB 1582-2005 Requirements to forest conservation activities; STB 1592-2005 Forestry machines. General technical requirements, etc (15 standards in total).

On the basis of STB 5.1.10-2002 "National certification system of the Republic of Belarus. Forest certification sub-system. Basic provisions" the Ministry of Forestry has approved and put in force Technical Codes of Common Practice (TCP) for different kinds of forest activity (38 in total): TCP 047-2009 (02080) Regulations on reforestation and afforestation in the Republic of Belarus, TCP 143-2008 (02080) Rules of fellings in forest in the Republic of Belarus, TCP 060-2006 (02080) Rules of withdrawal and inventory of cutting areas in the forests of the Republic of Belarus, etc. All the technical norms are sent to the involved enterprises (forest stations). TCP 198-2009 (02080) establishes a procedure of implementation of technical norms in the enterprises of the Ministry of Forestry of the Republic of Belarus.

Technological regulations provide implementation of technical, technological, organizational and methodological norms and rules that are set in the technological regulations and used in the forestry sector.

While implementing TCP, the enterprises are guided by:

- organizational arrangements of the State Committee for Standardization and the Ministry of Forestry, official sources of information concerning TCP, and the mentioned Technical Codes of Common Practice. TCP and Standards, concerning forestry, including technical norms and codes, State Standards, International Standards, specifications, organization standards are to be executed.

The implementation of TCP and State Standards in the enterprises of the Ministry of Forestry is carried out according to the principles of coordinated activity of all departments and units.

Control and organizational-methodical management of TCP implementation in the organization system of the Ministry of Republic of Belarus is conducted by departments of the Ministry of Forestry, Republic head organization on forestry standardization UE "Belgiproles", departments of the State Production Forestry Enterprise. The main sources of TCP distribution are:

- official printed press of the Ministry of Standardization about elaboration, adoption, enforcement.

– the directory of technical norms, applied in the forestry of Belarus; administrative arrangements of the Ministry of Forestry and its departments.

For the adoption of technical norms the head of organization is responsible along with the chief specialists in the sphere where technical norm or TCP is implemented.

The implementation procedures provide the following [4]: the involved specialists must be informed about the enforcement, and, if necessary, a plan of organizational-technical measures (OTM) on the implementation must be worked out.

The plan should include following measures: providing the forestry station with the necessary number of copies of TCP and their examination, conformance checking at the enterprises, providing of meeting the technical requirement, including providing the enterprise with materials and equipment, which is necessary to bring the enterprise into compliance with new demands.

The approved OTM plan should be brought to the notice of all the departments and direct performers.

The activity on technical regulation implementation is conducted by enterprise units that are directly governed by it. TCP are implemented by direct including its prescriptions in the technical documentation or including after implementing it. If a manufacturer or a supplier voluntary applied technical norm and have declared about compliance of his production with the norms, or if the production is certified as compliant with the standard or norm, hence the further compliance with the requirements of the standard or norm is necessary.

Technical codes are applied by the subjects of technical regulation and standardization, participating in the processes of production developing, manufacturing, exploitation, storage, transportation and recycling, or providing services in accordance with area of distribution and sphere of circulation of TCP.

The funds of the technical norms are created on the enterprises of the Ministry of Forestry. Fund administration procedures provide fund compilation accounting, in accordance with the inventory book of technical norms, fund updating and safekeeping. The fund compilation is conducted on the basis of acquisition orders for branch technic codes through UE "Belgiproles".

Implementation of technical standards is monitored by the Committee for Standardization bodies, specialists of the Ministry of forestry, UE "Giproles", State Production Forestry Enterprises. In the forestry stations technical standards are controlled by master forester, chief engineer, standards and metrology engineer, along with other involved specialists, such as forest crop engineer, forest management engineer, etc.

Conclusion and Recommendations. In the process of auditing and supervising forestry establishments, all the technological problems are classified according to the points of TCP, and the performance of direct executive is estimated. The extent of liability is given in the corresponding application. TCP include a range of necessary forms, tables, acts, norms that provide high level of technological works and systematic quality control, which is the object of attention of standardization and metrology engineer. System monitoring and analysis of TCP breaches help to improve corporative culture and professional performance. The analysis of supervision activity of the Ministry of Forestry shows that frequency of violation of STB and TCP on the forestry establishments decreased by 18%, thus economic sanctions declined. Permanent labour discipline monitoring, required by TCP and STB, helps to increase the forestry sector efficiency. For the foregoing reasons we consider it's necessary:

1) to work out computer programs for monitoring the compliance with the requirements of TCP on all the stages (forestry station, regional establishment, the Ministry of Forestry), which can be a good preventive measure and will contribute towards the forestry management efficiency;

2) to adapt educational process for the professional activity at the level of educational institutions by including into educational program parts of TCP and STB, conducting practical and laboratory trainings, which will improve the quality of education;

3) to point out in the duty regulations and job descriptions the sections of technological processes, for which the designated person is responsible;

4) when entering employment of engineers and technical workers, to bring to their attention the sections of TCP which they are responsible for.

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