REPUBLIC of MACEDONIA

MINISTRY OF AGRICULTURE, FORESTRY AND

WATER ECONOMY

STRATEGY FOR SUSTAINABLE DEVELOPMENT OF FORESTRY IN THE REPUBLIC OF MACEDONIA

TCP/MCD/3002 (A)

Institutional development and capacity building in forestry and forest industry sub-sectors

CONTENTS

1. INTRODUCTION 2
2. VISION, GENERAL GOALS AND DIRECTIONS 5
   2.1. The VISION 5
   2.2. General Goals 6
   2.3. The main directions are: 6
3. FORESTRY SECTOR, RESOURCES AND ECONOMIC ISSUES 7
   3.1. Forest resources 7
      3.1.1. Forest 7
      3.1.2. Game 8
      3.1.3. Non-wood forest products (medicinal herbs, forest fruits, fungi) 9
   3.2. Forest industry 10
4. ROLE OF THE STATE IN THE DEVELOPMENT OF THE FORESTRY SECTOR 10
   4.1. Management of state forests 11
      4.1.1. Institutions and their capacity 11
      4.1.2. Forest Law Enforcement / Safeguarding 12
      4.1.3. Forestry Planning and Information management 13
      4.1.4. Financing 14
   4.2. Forest Ownership 15
   4.3. Management of private forests 15
   4.4. Public awareness 16
   4.5. Education, specialization and qualification 16
   4.6. Forestry research 17
   4.7. Inter - sectoral and international cooperation 17
5. FORESTRY AND THE ENVIRONMENT 19
   5.1. Forest protective function 19
   5.2. Biodiversity protection 19
6. SOCIAL ASPECTS 21
   6.1. Contribution of the forestry to employment creation, livelihoods and poverty reduction 21
   6.2. Input in Rural development 21
7. TRANSFORMATION OF THE FORESTRY STRATEGY INTO ACTION 22
   7.1. Strategic Planning 22
   7.2. Investments in the Sector 22
   7.3. Co-ordination 23
   7.4. Institutional Strengthening 23
   7.5. Forestry Legislation 24
   7.6. International Co-operation 24
   7.7. Monitoring and Evaluation 24
8. ACTION PLAN 25

1. INTRODUCTION

Traditionally, the understanding of forests[1] is considered to be their use as a resource that produces material goods, in first line timber and non-wood forest products, such as medicinal plants, plant parts, mushrooms, berries etc. Besides this, forests have many other benefits useful to society as relaxation and recreational use by people; multiaspect protective function especially in the line of biodiversity conservation and erosion control; mitigation of climatic extremes and water protection; oxygen production and quality improvement of the environment. Over the last decade, the role of forests in the fixation of carbon dioxide has grown importance as a reduction of one of the greenhouse gasses. However, these significant and very important functions of forests are in correlation with their condition and structure, area and quality.

The economic, social and ecological functions of forests are of significant importance to the sustainable development of society and for improving the quality of life, especially in rural and mountain areas.

Based on these numerous useful functions of forests, Republic of Macedonia perceives forests as part of its national treasure/heritage. The Constitution of the Republic of Macedonia affirms this: "All the natural resources of the Republic of Macedonia, the flora and fauna, amenities in common use, as well as the objects and buildings of particular cultural and historical value determined by law, are amenities of common interest for the Republic and enjoy particular protection."[2]

In the initial years of independence, Republic of Macedonia got into a difficult time of transition when the reconstruction of the economical and political system had to be done quickly and with it the economy. The period of transition was additionally burdened by the complex social and economic situation.

A number of negative changes in the development of the whole society and the economy have had their impact on the forest sector as well. In this ten-year period, many problems and circumstances brought the forestry[3] in a bad financial state that resulted with stagnation and backtracking of the forestry sector.

Currently the only strategic document of forestry is the Spatial Plan of the Republic of Macedonia (2004) where the strategic goals for development of forests are formulated until 2020. There is also a formulated strategy for development of the agriculture, forestry and water economy for the period from 1995 until 2010 (1996), but it was shown as inefficient.

Caught between the speeds of changes, the forestry sector was in a short time lap and had to react quickly. The political and both the economical changes in the Republic of Macedonia aligned with the European integration processes address priorities and focus toward the multifunctional usage of forests and their

[1] **forest -** land covered with forest tree and shrub species, as well as forest bare lands and meadows, forest roads, forest nurseries and other areas that are closely connected to forests. (Law on forests, 1997g., article 3)

[2] The Constitution of the Republic of Macedonia - Article 56, paragraph 1

[3] **Forestry -** the science, art and practice of sustainable management of forests and other natural resources that occur on and in association with forestlands.

management, integrating much wider aspects where protection, biodiversity and the care of the man and nature environment are placed first.

At the same time Macedonia is a signatory of many international agreements and conventions on forests and environmental protection, which influence forestry sector. EU orientation of this country implies the necessity of harmonization of forestry policy with the EU commitments.

The objective conditions now impose the necessity for creating an effective system for multifunctional management of the forests[4] and the development of a modern forest industry with high standards.

The formulation of a document with a long-term policy and strategy for the development of the Macedonian Forestry imposes a primary objective. The strategy should reflect all contemporary trends of the world forestry. In the same time, it should give methods for solution of the numerous problems in the Macedonian forestry in correlation with the demands of the sector, as well as with its significance for the sustainable development in accordance to the intension of the Republic of Macedonia to be a full member of the European Union in near future.

In response of that need in February 2005, the Government of Macedonia launched a process of formulating a National Forestry Policy and Strategy (NFPS). The process is based on world-recognized principles, inputs from experts as well as all relevant stakeholder groups and society as a whole. It sets the stage for all major decisions concerning the sector for the next 20 years.

[4] **management of forests** - planning, organization, governance and control of all forestry activities (care, protection and use).

2. VISION, GENERAL GOALS AND DIRECTIONS

2.1. The VISION

Instigated by the economical importance of forests, activities of the forestry sector will be competitive and adjustable to ever-changing market demands. In accordance with its capacities, forestry will provide conditions and resources for sustainable economic development of the sector.

Forest covered areas will increase, through afforestation of bare lands with quality plants, mainly of domestic species. Care and protection of artificial stands will be prompt and appropriate, providing quality forests, both biologically and economically. Degraded forests will be intensively transformed into high-forest. Illegal felling and other harmful activities will be eradicated through obedience of legislation and appropriate practice of law. Activities in these four segments will contribute to increment of total wood volume and improving forests and wood quality.

Non-wood forest product management will create significant economical benefits for the forestry sector and the state, and will be appropriately legislated. Contemporary infrastructure and facilities for collecting, processing and packaging will secure competitiveness of the products on European markets. Biological capacities will be respected, restricting over-exploitation, therefore protecting economically and environmentally important species and biodiversity.

The state will recognize multi-beneficial functions of forests and establish legal and economical frames, enhancing and stabilizing forestry's position in society.

Special attention will be given to protection and conservation of forests as a central ecosystem. This is of importance to biodiversity in general, but will also secure social, economical and cultural benefits to citizens of Macedonia.

Macedonia will be a popular destination for recreation, sport, eco-tourism and commercial hunting tourism, enabling significant foreign currency income. Besides the renown tourist centers, a large portion of activities and destinations will be directed to forest areas managed by the forestry sector.

An efficient system for early warning and suppression of forest fires will be established, while the state will secure efficient preventive protection from introduced pests and pathogens through an advanced quarantine service. In cases of overpopulation of pests and pathogens, responsible institutions will act promptly and accordingly, applying environmentally acceptable control methods.

Management and employees in forestry will utilize state-of-the-art technology and will be continuously exposed to up-to-date scientific and technological achievements. There will be tight cooperation with scientific-educational institutions for training, specialization, scientific research, applicative activities. Through qualified representatives from state and non-governmental bodies, forestry will be a member of all relevant international organizations and will actively participate in exchange of knowledge and experience.

The forestry sector will employ qualified and expert personnel, procuring prominent salaries, social and pension security and social, cultural and recreational benefits.

Management in forestry, state, regional or local, will be transparent, while decisions will be solely based on expert opinion. Qualified practice and management will enable coping with social, cultural, institutional, environmental and economical factors in our effort for establishing sustainable forest management.

United by a common vision, all stakeholders should participate in the achievement of the goals and actions of this Strategy. The Strategy will direct the realization of this vision, with sustainability being the leading principle. Sustainable development meets the needs of present generations, without compromising those of future generations

2.2. General Goals

The aim of the Government is to increase the contribution of the forestry sector to the national economy and rural development through sustainable forest management[5], ensuring renewable resources and protection of local and global environment, and providing products and services for improving the quality of life of all citizens.

To maintain and enhance economic viability forest sector in favor of overall national development the Government will:

- Provide the regulatory, institutional and economic frameworks for the implementation of sustainable forest management;
- Ensure the permanent financial mechanisms to improve the status of forests and the development of the forestry sector.

2.3. The main directions are:

1. Enlarging the forest covered area and improving the quality of the forests in accordance with the Spatial plan of the Republic of Macedonia.

2. Multifunctional forest management and sustainable development of economically viable forestry.

3. Increasing the contribution of forests and related goods and services to the quality of life in rural areas.

4. Enhancing the pubic and social functions of forests and forestry through the strategy for development by comprehensive valorization of its benefits.

5. Increasing the awareness of the environmental and social values of forests.

6. Improving the conditions for identification of the national and international funds for sectoral development support.

7. Harmonization of the forestry legislation with the national interests and international commitments.

[5] The concept of **sustainable forest management** was defined in 1993 at the paneuropean Ministerial Conference on the Protection of Forests in Europe as follows: "*the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national and global levels, and that does not cause damage to other ecosystems*".

3. FORESTRY SECTOR, RESOURCES AND ECONOMIC ISSUES

3.1. Forest resources

3.1.1. Forest

The total forest land in the Republic of Macedonia is 11,596 km^2 (1,159,600 ha) out of which forests are 947,653 ha[6]. The total wood mass is **74,343,000 m^3**, and the total annual increment is **1,830,000 m^3** with average annual increment on one hectare is 2.02 m^3**.**

With the help of the Afforestation Fund (that was active until 1990) more than 140,000 ha of bare lands were planted and it was achieved an incensement of the total afforested area with index of 1.6.

90.14%[7] of the total area is state owned forest, while their part of the total wood mass is **92.2%**. Private owned forests are **9.86%** (94,146 ha) [8] of the total forest area, and their portion of the total wood mass is **7.8%**.

Out of the total forest and forest land area, 8% are not planned.

Forestry in Macedonia is an economy branch that participates in the Gross Domestic Product with 0.3 - 0.5%, but if the multifunctional uses are valorized, the contribution will be bigger.

The contribution of the forest industry (primary and secondary wood processing, furniture, paper and celluloses...) is 2.5 - 3%

The planned annual available cut[9] in the Republic in Macedonia in the last 10 years is about 1,300,000 m^3, out of which it is used around 70%. From the produced special forest products[10], 80 to 85% is firewood.

Forests in the Republic of Macedonia are characterized in very rich biodiversity. Macedonia has significant non-timber forest resources: medicinal plants, mushrooms, forest fruits etc. and diverse game. The importance of forests is emphasized by the fact that the main part of the territory of the protected areas in this country are under forest.

Some of the main threats and problems in forest management and governance are: illegal logging that takes huge proportions, other illegal activities, forest fires which have affected nearly 100,000 ha for the last 10 years, climate changes trough the process of drying of the forests, insect calamities[11] and

---

[6] Statistical review: Agriculture, 5.4.5.03 504 Forestry, 1997-2004, State Statistical Office of the Republic of Macedonia

[7] Statistical Yearbook of the Republic of Macedonia 2004, (10.01, Forestry), State Statistical Office of the Republic of Macedonia

[8] Statistical Yearbook of the Republic of Macedonia 2004, (10.01, Forestry), State Statistical Office of the Republic of Macedonia

[9] **annual available cut - t**he planned and allowable rate of timber harvest from a specified area of land in accordance to the forestry management plans.

[10] **special forest products** - different wood products in the forest (fire wood, pulpwood, small round wood, round wood).

[11] **calamities** - damages

diseases. All these lead to enormous economic and environmental losses to the sector.

General Goal

Increasing the areas of forests and improvement of their structure and quality based on sustainable forest management (SFM).

Measures:

1. Encouraging the activities and providing assistance for the increase of the reforestation and afforestation with adapted tree species in accordance with the global regionalization and local conditions, including regeneration of degraded forests, planting forests on uncultivated and poor-quality soils as well as other non-used land areas;
2. Enforcing tending activities and thinnings especially in young forests, as well as regeneration of degraded forests, speeding up of the conversion of coppice forest into high forests and reconstruction of degraded forests;
3. Increasing the access of forests through road construction using environmental acceptable methods;
4. Taking measures for protection and conservation of the natural forest genetic resources trough:
   - Identification and evaluation of the natural forest *gene-fund*[12]*;*
   - Selection of seed orchards and "plus trees" from economically valuable forest tree species.
5. Taking measures to enhance the forest health condition trough removal or decrease of negative impact factors, and ensuring stable forest ecosystem:
   - Strengthening the capacities of the State Forestry and Hunting Inspectorate and the Forestry Police in the Ministry of Agriculture, Forestry and Water Economy and the centre for Diagnostic-Prognostic-Reporting-Service of Republic of Macedonia (DPRS);
   - Renewal and maintenance of the network for monitoring and control of the health condition of forests (IPC Forests);
   - Support for the research in the area of forest protection, especially those with applied usage in forestry;
6. Introduction of guidelines to address operational, silvicultural, environmental and safety issues;
7. Promoting sound use of wood and wood products from sustainably managed forests, forest law enforcement to combat illegal activities in forests that have negative impact on the forest resources and the economy.
8. Increase the use of modern scientific achievements in forest technologies.

3.1.2. Game

[12] **gene-fund** - all inherit material in a specific population.

Goals

Formation and sustainable maintenance of game populations with proper sex and age structure that will sustain:

- reproduction of quality specimens;
- sustainable management;
- hunting tourism development.

Measures:

1. Taking measures and activities to lead the game population density to planned normal one;
2. Development of conditions for improvement of the state of the domestic game, reintroduction[13] of the extinct domestic species and introduction of other game species;
3. To increase investments for improvement the trophy value of the game;
4. Improve coordination between the State and NGOs, esp. Hunting associations;
5. Set up a continuously updated database for the game stocks in hunting grounds, by regions and management hunting areas, and its continuous updating.
6. Introduction of scientifically based methods for game management and hunting, elaborated on commercial principles.

3.1.3. Non-wood forest products (medicinal herbs, forest fruits, fungi)

Goals

Encourage the utilisation of non-wood forest products through integrated forest management based on sustainable sylviculture, ecological and socio-economic approach, ensuring conditions for sustainable exploitation and additional incomes to the local population.

Measures:

1. Development of a study (inventarization) of the natural findings, the quantities and possible capacities for harvesting and processing of the non-wood forest products;
2. To elaborate normative, institutional and economic frameworks for proper regulation of the use of Non wood forest products;
3. To promote ecologically friendly methods and practices for utilization of non-wood forest products in accordance to the sustainable management;
4. Promote and support small and medium size enterprises based on non-wood forest products to provide employment and income to rural households.

[13] **reintroduction** - introduction of a certain species in a certain area for the second time.

5. Quantifying the total values of forests and their functions and developing instruments for the provision of new income from non-wood forest products.

3.2. Forest industry

Goals

Promote the establishment of economically viable forest industry in line of the wood supply and demand.

Create a favorable legal, economic and institutional environment for effective and competitive forest industry.

Measures:

1. Stimulating the investments in primary wood processing industry and furniture production to increase the capacities of the forest industry;
2. Support to the development of small- and medium-size private wood processing companies with technology/techniques allowing better competitiveness;
3. Privatization of the non-profitable and non-efficient state capacities for primary wood processing;
4. Securing continuous and stable raw material supply, raising plantations of appropriate trees species, and employ competent management to maintain competitiveness of the industry;
5. Accelerate the international standards in the sector and promote conditions for application of the Forest Certification[14] process;
6. Strengthening cross-sectoral communication and co-operation in accordance with the open market, trough technology information exchange;
7. Promoting and implementing affordable wood biomass based energy technologies.
8. Changes in the log sales system and introduction of electronic auctions open competitive bidding.
9. Analysis of the forest-wood chain in order to improve competitiveness.
10. Study for the national balance of timber, especially for the timber used for energy (firewood).
11. Establishment of a permanent connection between timber producers and consumers.

4. ROLE OF THE STATE IN THE DEVELOPMENT OF THE FORESTRY SECTOR

[14] **Forest Certification** - application of international standards for responsible management with the forests trough consultative process.

The role of the State in the forest sector can be described in six basic functions:

Legal (forestry policy and legislation formulation);

Control (institutional system that ensures implementation and enforcement of legislation, regardless of ownership type);

Support (activities carried out by State institutions to create conditions for ensuring sustainable forest management);

Ownership (management of State forests);

Social (stabilizing the forestry sector, increase of its possibilities, possibilities for new employment, revitalization of the rural areas; and

Education (education and creation of technical and expert people for the needs of forestry).

4.1. Management of state forests

General Goal

- Take the necessary economical, fiscal, financial and institutional measures to improve the effectiveness of forest management and its functioning on market conditions. Inherent in these measures is the concept of integrating the public-good functions of the forests into the market process.
- Promote Sustainable Forest Management principals and develop a system of criteria and indicators for their implementation in real forest management.

4.1.1. Institutions and their capacity

The Government of the Republic of Macedonia administers the forests and forestlands of state ownership through the following institutions:

- Ministry of Agriculture, Forestry and Water Economy;
- Ministry of Environment and Physical Planning;
- Public Enterprise "Macedonian Forests";
- National Parks and Hunting grounds;
- Public Enterprise "Jasen".

The State Inspectorate of Forestry and Hunting functions as a body within the Ministry of Agriculture, Forestry and Water Economy, controls and supervises the enforcement of the Law on Forest, Law on Hunting and all other laws and law binding acts that are in the function of forestry and hunting. The Forestry Police as a sector within the Ministry of Agriculture, Forestry and Water Economy protects the forests in accordance to the Law on Forests.

Within the framework of the Ministry of Environment and Physical Planning, functions State Inspectorate for protection of the environment that controls all legal and physical entities in the part of protection of the environment.

In accordance with the regulations in the Republic of Macedonia, the management of a certain natural resource is segmented in different areas. So on one natural area - a mountain, several legal entities are governing. For e.g.:

- with the forests - PE "Macedonian Forests";
- with the waters - PE "Water Economy" of the Republic of Macedonia;
- with pastures - PE "Pastures";
- with game - hunting association, PE "Macedonian Forests" or other legal entities;
- with other natural resources (stone, ore etc.) - the enterprise that gets the concessions from the state.

Thus on one area, there are several subjects with different interests and a conflict of interests arises. This means that in the Republic of Macedonia the territorial governance is not addressed well.

Goals

Create the necessary organizational structures with the adequate capacity to provide integrated management[15] for the benefit of protection and management of forest resources on a sustainable basis through due consideration being given to environmental, social, cultural and economic impacts.

Measures:

1. Reorganization of the Forestry Department in the MAFWE and establishment of an Agency for Forests and Hunting with sectors and departments and creation of an adequate governing structure for forest resources and wild life.
2. Strengthening the capacity and defining the jurisdictions of institutions responsible for forest management and natural resources in forests.
3. Fast transformation and reorganization of the PE "Macedonian Forests" due to week results of the past work.
4. Enhancing the personnel and technical equipment of the State Inspectorate for Forestry and Hunting as a body with in the Ministry.
5. Formulation of professional criteria allowing the employment of trained and professionally experienced staff.
6. Formulation of criteria for management of erosion protective forest and erosive lands.
7. Formulation of criteria for expert planning of forest activities in the forests with special function.
8. Support establishment of associations of foresters.

4.1.2. Forest Law Enforcement / Safeguarding

[15] **integrated management** - management with the space and all resources (forests, forest residues, water, minerals, game, tourism, non-wood forest products etc.) by one entity.

Illegal logging is a serious and long-term problem, jeopardizing sustainable forest management as well as forest value in a broader perspective. As a result, to the illegal logging natural regeneration is disturbed, it creates possibilities for erosion, forest fires, diseases and pest calamities, disturbances to the water regime etc.

Illegal logging and illegal sale of wood create economic losses to the state sector.

Goals

Promote forest law enforcement, governance and protection of forests and forest resources. Rising of public awareness directed at protection of forests from all violations.

Measures:

1. Harmonization of Macedonian forestry legislation with the appropriate regulations of the EU and the international community;
2. Strengthening cross-sectoral cooperation on forestry issues through appropriate regulations;
3. Strengthening administrative and technical capacity of the State Forestry and Hunting Inspectorate and the Forestry Police in order to improve the effectiveness of their control functions in state and private forests:
   - Increasing the staff number of the Forestry Police;
   - Enhancement of the material and technical equipment of the Forestry Police and readily financing it.
4. Implement a system of measures (economic, financial, legal) to restrict corruption, illegal usage and trading of forest products and other illegal activities in forests and forest resources;
5. Increasing the level of sanctions and their efficiency in order to eliminate illegal activities in the forests;
6. Ensure transparency in forest management, decision making, planning and implementation of forest activites.

4.1.3. Forestry Planning and Information management

Planning of all economic activities in forestry should be based on the principles of Sustainable Development

Goals

To provide the state, private sector, the public, non-governmental organizations and international institutions with accurate and timely information on the status of forests, forest management and forest products.

Efficient exchange of information cross-sectoral and within the forestry sector, public awareness rising on the value and importance of forests and forestry for the society, with active participation of all stakeholders.

Measures:

1. To introduce a common National Forest Inventory and Monitoring Systems on forestry recourses;
2. Improve the effectiveness and quality of the system for preparation and adoption of forest management plans:
   - Constituting a governmental Institution and/or licensed independent institutions that will be responsible for management planning in forestry and hunting grounds;
   - Improvement of the efficiency of the supervisory commission for adoption of the Special Plans for Forest Management and the Special Hunting Management Plans;
3. Provide technical and technological support to the structures and subdivisions of the forest administration for effective use of the information system.
4. Strengthening professional and technical capacity of the forestry and hunting planning institutions to develop multifunctional planning process;
5. To introduce integrated forestry information system based on Geographic Information System for the needs of Sustainable Forest Management.

4.1.4. Financing

The forestry mainly is financed trough the sale of timber and primary wood processing. The incomes from these sales are around 90% of the total annual income.

The forestry does not get any subsidies from the state as a support nor for the sustainable management of the public functions of forests. In that sense, the forestry sector lacks support from the state and cannot be consolidated on its own.

Goals

To secure adequate public funding for the activities related to sustainable forest management, maintaining protective and public forest functions, safeguarding, control, and enhancing biodiversity conservation.

Measures:

1. To develop and to implement an effective model for financing the forest sector, providing an optimum balance of state subsidies[16] and revenues from commercial activities;

[16] **subsidies** - state financial help.

2. Developing a financial mechanism by the Government for adequate compensations to the owners for forest lands-use change (with or without forest cover), based on appropriate normative changes;
3. Financing forest roads construction as a part of the public road network through the fund for public roads, in case of public interest;
4. Valorization of the public forest functions as a basis for financing the forestry by the state;
5. To further attract international donors' support for forestry projects

4.2. Forest Ownership

The Constitution ensures the right of forest ownership. Forests, as natural wealth are good with general interest for the Republic[17]. All types of forest ownership are equal under the law.

Goals

To upgrade the Cadastre of the forests and to complete distinction of state and private ownership.

Demarcate private and state owned forests.

Introduce consolidation of the state and private forestlands.

Measures:

1. Completion of the cadastre for forests - Identification and delimitation of lands and forests under different ownership;
   - Identification and delimitation of agricultural and forest lands;
2. To restrict fragmentation of forest ownership by stimulating private forest land consolidation;

4.3. Management of private forests

Goals

To create an efficient system of support to private forest owners so as to meet both the personal and the general interests and to realize the goals of sustainable management using the experiences from the European Union countries.

Measures:

1. Introduce possibility for licensed legal entities and individual professionals to provide services in private forests.

[17] Law on forests ("Official gazette of the RM", 47/1997, 7/2000 and 89/2004), article 2

2. Support the establishment of forestry advisory services in order to ensure good forestry practices and sustainable management of private forests.
3. Encourage the voluntary cooperation of forest owners to develop opportunities for improving the economic viability of small-scale forest holdings;
4. Encouragement and support for forest owners' organization in the aim of strengthening their potentials in the realization of sustainable forest management, realization of their own interests and the possibility of using the means of stimulation;
5. To provide support to the owners for activities concerning the afforestation, regeneration, forest protection, management planning and certification;
6. Creation of special plans for management of private forests.

4.4. Public awareness

For ensuring sustainable development of Macedonia's forest resources in the public and private sectors, it is necessary to promote participation of the different structures of society at all levels in as many aspects of forestry.

Goals

To ensure transparency of the forest management process and to increase the visibility of the forestry sector in society.

Measures:

1. To increase public awareness of the value and importance of forests to society and to initiate information campaigns on the main issues concerning the management of the Macedonian forests;
2. To develop and adopt a standard procedure for involving interested non-governmental organizations in different consultative processes;
3. Introduce system for dissemination of regular information to society for the forest development and management.

4.5. Education, specialization and qualification

Goals

To enhance and support education and training system, in relation to sustainable management of forests, for better economic development of the forestry sector and the improvement the quality of the environment at national, regional and global levels.

Measures:

1. Adaptation of the existing programs for high school and higher education in correlation with the world's modern programs and incorporation of modalities for education, specialization and qualification in forestry. The system should be flexible and adaptable to the needs and changes of the real state of the sector;
2. Create suitable conditions for the education and training of the requisite number of qualified employees with skills for the new participatory management;
3. Strengthen the capacity of institutions concerned with workforce safety and education as well as related research, thus contributing to the future availability of a highly qualified staff and workforce;
4. Promotion of multifunctional importance of forests in the education programs of the young generations.

4.6. Forestry research

Goals

Strengthening capacities in forestry research institutions to obtain new knowledge and development of technologies.

Measures:

1. Encourage and support inter-disciplinary research in order to take knowledge-based decisions;
2. Institutional strengthening and improving the existing research capacity in forestry, wood industry and nature protection;
3. Support for the applied research for the needs of the sector, private forest owners, small and medium enterprises and local communities;
4. Strengthen international co-operation in research and capacity building in forestry and wood industry;
5. Encourage multi-disciplinary research into the role of the social and cultural aspects of sustainable forest management in the overall goal of sustainable development;
6. Support research and analysis on the potential scope of CO_2 sequestration in forests and of carbon storing in forest products;
7. Support research and monitoring activities to better understand the possible impact of climate change on forests and their ability to reduce the impact of disasters as extreme weather events;
8. Undertake research on appropriate forest management in conditions of global climate change.

4.7. Inter - sectoral and international cooperation

Goals

Establishment of appropriate cross-sectoral cooperation that will enable unlimited flow of information and joint activities at all levels. At the same time to be secured participation and linkage to all international institutions and associations in the field of forestry.

Measures:

1. To support the country's active participation in bodies and structures of international organisations and processes related to the forest sector;
2. Establish a dialogue with other related sectors to seek joint solutions on cross-sectional issues in policy formulation processes, governance of forest resources, development of markets and industry;
3. Develop and strengthen partnerships between governmental institutions, non-governmental organizations and private sector;
4. To establish and strengthen international cooperation in forestry and to ensure conditions for the implementation of international agreements, conventions and resolutions on forests and related fields to which the Republic of Macedonia is a signatory;
5. To promote and mannerly facilitate external donor funding of forestry projects, especially in the fields of forest governance, climatic changes, forest protection, and small and medium size enterprises;

5. FORESTRY AND THE ENVIRONMENT

5.1. Forest protective function

Forest, as the most valuable part of the ecosystem, capable of significantly improving the general life conditions, occupies a special position in the global concept of environmental protection. Besides this, the role of forests in carbon sequestration from the atmosphere should be taken into account in relation to the Kyoto Protocol. Therefore, forests deserve a special treatment by an appropriate system of protection, care, and usage in the function of the sustainable development.

Goals

To ensure the maintenance of the protective forest functions and to increase positive contribution of the forest sector to environmental protection, water and soil protection, the protection of people and infrastructures against natural hazards, local and global greenhouse gas emission reduction etc.

Measures:

1. Assess the effects on the environment of the potentially harmful activities in forest regions;
2. Maintain, encourage and support ecologically friendly activities and practices in forests;
3. Stimulation of the maintenance of forest protection functions - sanation of eroded and degraded lands and forests and protection of headwater areas;
4. To improve technology and utilization methods of the forest resources in order to minimize damages to the environment;
5. To increase the area under forest and undertake appropriate sylviculture that increase the CO_2 sequestration;
6. Encourage sustainable forest management practices, taking into account the possible implementation of forestry activities under UNFCCC and Kyoto Protocol.

5.2. Biodiversity protection

Goals

Conservation and restoration of the components of biological and landscape diversity of Macedonian forests, through integrating conservation objectives into forestry practices.

Measures:

1. Coordinated implementation of the adopted recognized strategies in the Republic of Macedonia and the *Strategy with action plan for protection of the biological diversity in the Republic of Macedonia* (SAPPBDRM);
2. Introduction of Forest Certification;
3. Analyze of the state of the protected forest networks and its development;
4. Based on the general interests, identify the most favorable form of management of protected areas, with the obligatory participation of the local communities and forest owners;
5. Promote the restoration of forest biodiversity in degraded forests, plantations, and enhance incentives to promote natural regeneration and regeneration with native species and provenances[18];
6. To implement (SAPPBDRM) provisions for "*ex-situ*"[19] and "*in-situ*"[20] conservation, preservation and improvement of the gene pool of forest trees;
7. To increase funds granted by the state budget for activities linked with biodiversity conservation in protected areas;
8. Inventarization of protected areas of III and IV category in the framework of the economy forests;
9. Establishing cooperation with the citizens associations for joint activities in the field of biodiversity protection and the environment;
10. Promote forest management and landscape planning practices that are specifically suited to the protection of the environment;

[18] provenances - geographical origin of a species.

[19] ***ex situ*** - outside the place. *Ex-situ* protection is conservation of biological diversity components out side of their natural environment, in zoo garden, aquarium, botanical garden, arboretum etc. as well as conservation of the geological findings outside of their natural place, mainly minerals, rocks and fossils in museum or private collections.

[20] ***in situ*** - on the place. *In-situ* conservation is conservation on natural ecosystems and habitats, as well as sustaining and regeneration of the species capable of survival in their natural environment, and in case of cultivated plants and animals, in the environment where they have developed their specific characteristics; conservation of geological findings is conservation on the place of their creation of finding of the minerals, rocks or fossils.

6. SOCIAL ASPECTS

6.1. Contribution of the forestry to employment creation, livelihoods and poverty reduction

About 6,000 people are directly employed by the forestry and forest industry sub-sectors. The forestry sector indirectly provides job opportunities to many more people through multiple effects of production.

Goals

Encouragement of the economical development and creation of employment possibilities.

Measures:

1. Support for development of small businesses on local level, especially for services in forestry, non wood products and wood processing capacities which will enable development of rural areas;
2. Promote forest ecotourism.

6.2. Input in Rural development

Goals

Create opportunity for undisturbed economical development of rural areas and affirmation of the tourist-recreational function of the forest through sustainable development of forestry.

Measures:

1. Promote and support local business initiatives for development of different forms of tourism.
2. To identify and promote investments, which could favor rational use of the existing potential (collaboration with tourist agencies, training, and advertisement, infrastructure development etc.) for rural development.
3. Maintenance and development of the recreational forests.

7. TRANSFORMATION OF THE FORESTRY STRATEGY INTO ACTION

The key elements of the support to the forest policy implementation are:

1. Strategic planning
2. Investments in the sector
3. Co-ordination
4. Institutional strengthening
5. Forestry legislation
6. International co-operation
7. Monitoring and evaluation

7.1. Strategic Planning

The National Forestry Strategy provides a strategic framework for the development of the forestry sector and it will be updated regularly in agreement with the changes. This will be supported by the process of regular reporting on the state in the forestry sector.

The National Forestry Strategy is the framework for the transformation of the Forest Policy into action. It presents the short-term, medium-term and long-term objectives and Strategies for individual fields and regions where key issues should be resolved by identification of priorities.

The Strategy will identify actions to be taken to reach the objectives, the responsible institutions for implementation and support, the financial resources to be allocated and the period for the action. All these activities will be managed through the appropriate action plans elaborated by a transparent and participatory process.

7.2. Investments in the Sector

Forest Strategy implementation requires significant financial and human resources.

The Government will provide favorable conditions for the investments in public and private forestry sectors.

The Government will create conditions for continuous and stable investments in the forestry sector through the process of realization of the National Forestry Strategy.

Planned investments require co-ordination between private and state sectors, international and national donors:

Private sector: Creating the favorable climate for investments in the private sector. This includes the financial facilities, removal of market barriers, amendments to regulations on the change of forest land use, or similar form of forestry financing, and the development of the more transparent and reliable administrative and regulatory system. Thus, will be enabled higher private investments in the market-oriented forestry.

State sector: The Strategy of investment in the state sector will be based on the economic value of forest resources, which is defined on the analysis of different effects of income and expenditure in forestry work.

The improvement of law enforcement will decrease the negative impact on wood markets and increase the income for the sector that will ensure larger reinvestments in forestry. In the framework of the National Forestry Strategy, methods to resolve the above issues will be elaborated. It should answer the question how to finance sustainably the forestry sector.

Development partners: The Government will co-ordinate with the national and international donors concerning the mechanisms of financial support to the National Forestry strategy.

International financial assistance: Other sources of financing the sectoral development will also be activated, including international funds for support to sustainable forest management, to biodiversity conservation, protective functions of forests and for carbon sequestration.

7.3. Co-ordination

Despite the fact that the main responsibility and leadership for the management and implementation of this Strategy will be given to the Ministry responsible for forestry, all other Ministries which impact on the forest sector are obliged to include the Macedonian Forest Strategy in their decision making processes.

The MAFWE will establish the operative management mechanism for the strategy implementation, monitoring, control and reporting.

An Advisory body for sectoral planning and coordination will be created, in order to establish appropriate co-ordination between concerned institutions. The Advisory body will include the representatives of the Government, the Ministry responsible for forests, other relevant Ministries, the representatives of local authorities, private sector and other major stakeholders. This structure will ensure the co-ordination and maintenance of the balanced approach, as the direct participation of the Government in the sector will be re-defined and reduced, and as the role of the private sector and civil society will become increasingly important.

The National Advisory Body will make it possible for the public, foreign partners and all stakeholders to contribute to the regular debates on the forestry sector, to upgrade the sectoral co-ordination and to be informed on the priorities at the national level.

7.4. Institutional Strengthening

The institutional framework of the forestry sector will be strengthened to implement the forest policy.

The Government will provide support to the PE "Macedonian Forests" for forest management by better co-ordination, new partnerships, explanation of their role and responsibility and improved legal regulations. The Government will assist its restructuring, in order the increase the authority, forest management quality that will result in enhancement of the financial stability. The enterprises should

be profitable and market oriented in regards to basic criteria for Sustainable Forest Management.

Private sector: The Government will assist more significantly the participation of the private sector in forestry development.

Non-governmental organisations: The role of non-governmental organisations will be to promote the sustainable development of the forestry sector.

Their role is reflected in the following:

- encourage the local population,
- strengthen the democratic society,
- support the active participation in forest management at the local level,
- support the consultancy services,
- ensure the incorporation of the issues at the local level in the development processes at the national level,
- active exchange and publication of information.

7.5. Forestry Legislation

The Government will analyze and revise the legal framework of the forestry sector.

The Government will secure legal framework for the implementation of the Strategy for Sustainable Development of Forestry in the Republic of Macedonia.

7.6. International Co-operation

The Government will participate in the development and implementation of international commitments and agreements.

- Macedonia is a signatory to a number of international agreements that directly or indirectly affects the forestry sector. The Government will meet its commitments to these agreements by the national legislation and by the implementation of activities.

7.7. Monitoring and Evaluation

The implementation of the Strategy will be regularly monitored and evaluated by the responsible institutions in the forestry sector.

The implementation effect will be monitored and compared by the following categories:

- sustainable use of resources;
- maintenance of vital environmental functions and biodiversity conservation;
- economic growth in the field of business related to forests and forestry;
- higher standard of rural and urban population depending on forests;
- visible application of taken international commitments.

A well-defined information system will be established, with the reliable data on the agreed categories.

All the Strategies of investment in the forestry sector will include the plans of monitoring and evaluation of the success and categories that point to the advancement and effect. The results of sectoral monitoring and evaluation of success will be regularly published in the form of Report on the state of the forestry sector.

All stakeholders, and not just the Government of the Republic of Macedonia trough the Ministry of Agriculture, Forestry Water Economy, have a role to play in the implementation of the Strategy for Sustainable Development of Forestry in the Republic of Macedonia and a responsibility to contribute to its success through active participation and collaboration.

8. ACTION PLAN

…….