

STRATEGY OF SUSTAINABLE FORESTRY DEVELOPMENT

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Abstract— Kosovo has an area of 1.1 million hectares of which 53 percent is cultivable while 41 percent are forest lands. It is a geographical basin, situated at an altitude about 500 meters surrounded by mountains and divided by a ridge north/south into two sub-regions with similar size and population. The population is estimated to be between 2 and 2.2 million. The strategy aims to improve the agricultural sector and rural development of Kosovo. Taking into account the fact that 60 percent of population live in rural areas and are often unemployed, the strategy for agriculture and sustainable rural development activities is intended to create revenue and diversification of crops towards products with higher value to enable coverage of most domestic consumption requirements. Also, the strategy addresses the regional market opportunities and EU market and creates the food chain from farm to final food products.

Keywords— Forestry, improvement of agriculture sector, rural development, analysis of forestry situation, reorganization of forestry land management, enforcement of law.

I. INTRODUCTION

KOSOVO has an area of 1.1 million hectares of which 53 percent is cultivable while 41 percent are forest lands. It is a geographical basin, situated at an altitude about 500 meters surrounded by mountains and divided by a ridge north/south into two sub-regions with similar size and population. The population is estimated to be between 2 and 2.2 million, including 82 percent to 90 percent ethnic Albanians. The population of Kosovo is the youngest in Europe (much younger), where more than the half of population is approximately aged under 25 years. Kosovo is divided into 30 municipalities and about 1.500 villages. Agriculture is the main economic activity and also the sector that provides most in postwar Kosovo.

As a result of the war of 1998-1999, many farms are left empty; infrastructure is partially damaged, in some cases totally destroyed. After 1999, most farmers have returned, rebuilt their houses and have begun work on their farms so that in 2000, about 86 percent of the land is privately owned while the rest is owned by cooperatives (1 percent) and social enterprises 13 percent, with an area between 500-1.500 ha. Most of farms work to ensure living for their households. The

average land holding per household is about 3.2 ha, divided into average 8 plots and relatively small size. Nearly 80 of farms are between 0.5-2.0 ha. Kosovo based on the climate is divided in two agro-ecological zones, soil and vegetation. Southwestern part, Dukagjini plain covers about 43 percent of the total area and has more Mediterranean climate and annual rainfall of 770 mm. The eastern part, Iber Lepenci, has more continental climate and annual rainfall of 600 mm and depends even more on irrigation.

In both areas, wheat depends on winter rain and does not require irrigation. Data on land use change from three main sources: FAO data from 1997, the World Bank assessment after the war (figure 1) and recent agricultural survey by MAFRD/ESK (2001) based on samples of private households. According to FAO data, from total area of Kosovo, 585,000 ha are classified as agricultural land of which about 300.000 ha are cultivated (cereals, industrial crops, fruits and vegetables and forage crops), 180.000 ha are pastures in the high areas.

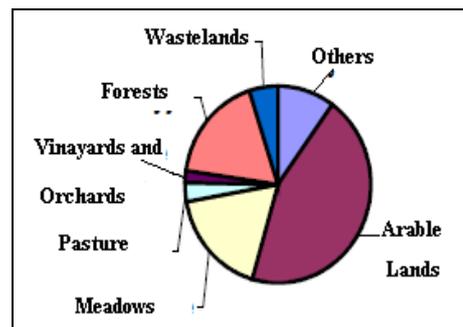


Fig. 1: Use of agricultural land in Kosovo in 2000 (FAO, survey to measure living standards).

After 1999, as in many other sectors and in agriculture and livestock resumed early attempts to develop this sector. Resumption of production has been mainly on private land with the support of donors, NGOs, remittances from the Diaspora and by the efforts of farmers. But the overall framework is not conducive to a strong revival of the agricultural sector in Kosovo. So this was the necessity of designing and drafting a strategy for Sustainable Development of Agriculture.

II. OBJECTIVES

The strategy aims to improve the agricultural sector and rural development of Kosovo. Taking into account the fact that 60 percent of population live in rural areas and are often unemployed, the strategy for agriculture and sustainable rural development activities is intended to create revenue and diversification of crops towards products with higher value to enable coverage of most domestic consumption requirements. Also, the strategy addresses the regional market opportunities and EU market and creates the food chain from farm to final food products.

In the short term: As an objective is the establishment of trade and fiscal policies that are at least neutral for agriculture and rural development. There is an urgent need to remove the present practices that are taxing local agricultural producers and hamper the development of domestic production as well as the capacity of local producers to compete with subsidized imports at extremely low prices. At the same time there is a need to regulate the cost and quality of domestic producers to increase their capacity to compete in local and international market. At the same time Government's budgetary and fiscal policies should be directed towards supporting agricultural producers and food products with international competitive potential in less favorable areas.

In the medium and long term: Kosovo shall aim to improve basic infrastructure and regional market integration and in particular will aim towards integration into the European Union (EU). Regarding this will be taken efforts to improve transport linkst, food processing industry, trade and storage capacities as a relief of a major barrier to trade agricultural products. Kosovo will also aim to become a member of the World Trade Organization (WTO), International Monetary Fond (IMF) (now is a member on full rights in both these international institutions), member of various agreements on free trade in the region such as CEFTA (now of extending membership), or for example, Central European Agreement on Free Trade, and to regulate and harmonize policies towards EU membership.

III. FORESTRY

Analysis of the state of forests are mainly based in the Forest Sector Study carried out in December 2001 by the Ministry of Agriculture, Forestry and Rural Development of Kosovo. The study concluded, among other things, that the annual value of products and other benefits from forests, forests lands are between 50-75 million €. The potential contribution of the forestry sector in GDP is between 1.8 and 2.6 percent and with adequate investment in the future it could be 3.4 percent of GDP. The total area of Kosovo, based on current estimates, is about 430.000 ha corresponding to 40% of the total area. From this area from 42.23% or about

181.606 ha are private property of 121.074 owners, while the remaining from 248.394 ha are public property. The number of private parcels is 317.100, with the number of parcels per owners to 2.4 and with an average area per owners to 1,5. Publicly owned are 57.77% of the forests of Kosovo [1].

Kosovo's forests are predominantly broad-leaved. Only 5 percent are classified as coniferous forests. About 80.000 ha are classified as degraded forests that would need different types of restoration measures to become productive. About 100.000 ha are classified as shrub and bare land of which 20.000 - 40.000 ha may be suitable for plantations. Forest are also a source of non-wood products. Non-wood products include wild mushrooms, strawberries, wild fruits, nuts and products derived from them (jam, jelly, juice, etc.) honey, sand, gravel, rocks, etc. Also there is a possibility for development of hunting and agro tourism. The value of non-wood products in the rest of Europe has probably fallen. However, in Kosovo the value of non-wood products is likely to increase, because people still keep in close touch with their rural/forest traditions and also because of the relative absence of pollution.

Although the detrimental activities to the sustainable development of forest have decreased compared with the levels of activities after the war, illegal logging is still a considerable problem. The main reasons for these activities are inadequate law enforcement, poverty, lack of fire-wood, high prices of wood, lack of other choices for income generation and high demand for wood products.

Since forestry and forest industry are important employers and contributors to the economy of Kosovo, actions should be taken to return the importance and previous state. As shown in Table 1, three main factors that hinder the development of the sector are: complicated structures, lack of scale in operations and economical/political state.

In general we can say that these factors result in a lack of consensus on important issues, high prices in manufacturing despite of low price of worklabour and difficulties in attracting qualified people. These facts have to be carefully considered when implementing the various actions and plans [2].

IV. OBJECTIVES

In most places the forest was declared as national resource and must be managed properly to ensure sustainable development, qualitative and quantitative. In Kosovo, forestry has been and still is an important part with economic, social and ecological dimensions.

Sustainable development of forests contain a number of different aspects of maintenance and appropriate expansion of forest resources, the maintenance of health and vitality of forest, biodiversity, socio-economical functions and conditions. Protective functions of forests (particularly for water and soil) should also be

emphasized. Some socio-economic indicators would be taken into consideration: contribution of the Kosovo economy, workforce and trade, but also to provide recreation and to maintain cultural and traditional values. Kosovo's forest resources should also be declared

as resources throughout Kosovo, and long-term objective of managing with this resource, to provide a valuable yield and at the same time preserve biodiversity for the benefit of present and future generations.

Table 1: Analysis of problems in the forestry sector

Factors	Effects	Results
Structures are complicated and institutional functions are weak.	Many bodies are involved in forest management and control (KFA, Municipalities, SE, SRUN, KFOR, CIVPOL).	Roles and responsibilities are mixed, risks from the lack of agreement on important issues, contradictory objectives.
The degree of forestry and forest industry sectors.	Forestry and forest industry can not benefit from the effects of economic scale or other benefits from disintegration.	High production prices along the chain, and the difficulty in capitalizing on the profits from the final output.
Economic and political situation.	Low wages, unemployment, problems with minorities, the economy is focused on services rather than manufacturing.	Difficulties in attracting serious investors and low productivity.

V. RESULTS

The results is here defined as performance measure (qualitative or quantitative), or desirable situation since the strategy has been implemented and carried out certain activities. Since the forestry is a long-term, the effects of investments should seen hard in short-term perspective. In addition, it may take decades to see real effects.

A) Quantitative performance indicators

However, despite such difficulties, it is important to agree on the number of performance measures of measurable quality. Below are some examples:

- Quantities of illegally logging woods. Taking into consideration made and planned efforts, the results should be seen within 1 year;
- The funds available for silvicultural activities and forest improvement. Depending on the forest reorganization programme works in public forests could be possible that the changes to be measured within 2-3 years;
- Change in average volume of the stump per hectare divided by time, is the clearly defined unit of measurement. Also, the improved yield (growth) and the diversity of species associated with this. Changes can be seen after a period of 5-10 years;
- The potential for increasing wood supply is closely related to factors such as improved productivity, market function, etc. Changes can be seen after 5-10 years.

- Qualitative performance measures in most cases are assessed with difficulty. Increased coverage (crown) of forest has the effect of absorbing carbon and therefore contributes to improvement of living environment. Other performance measures can be the implementaion and acceptance of the new law on forests and other means to support improved forestry.

B) Enforcement of Law

After passing the law on forests Nr_2003/3, and later the bylaws and the law amending the law on forest Nr_2004/29, performance of the Ksovo Forest Agency has been improved, as a result of the strenghtening of management functions and access to systems on best planning and control. As suggested in the new law, the Forest Fund will be established to support reforestation and other silviculture work.

C) Increase of knowledge and understanding on the importance of forestry

Regarding capacity building, the project target is to start 2 year training in early 2003. After 2-year project, the following results are expected:

- Holding of refreshing trainings for about 20 forest engineers and 80 forest technicians.

Priority will be given to the following topics:

- 1) Management planning (strategic and operational);
- 2) All aspects of silviculture (thinning programmes, works with seedlings,
- 3) afforestation and reforestation, forests rehabilitation);

- 4) Methods of cutting that are appropriate from environmental aspect;
 - 5) Forest protection, pest and disease control;
- Holding of training on management for about 10 managers. The training programme will include a theoretical part (in Pristina) and study tour in the respective countries of the region / neighbouring countries in Europe;
 - Establish permanent capacity for vocational training for about 50 -100 forest workers. To support this, should be trained about 10 teachers and instructors to work in school and field;
 - Permanent training options were organized for about 10 forest technicians;
 - Educational options were created for forestry personnel in neighbouring countries, preferably in the Balkan region, enabling 1-2 doctoral candidates, 3-4 magistratural candidates and 4-5 forestry engineers per year;
 - In order to ensure the sustainability of this project, KFA, as recepiency agency, shall create a section for training and education within its own organization.
 - Routines for public campaigns should be introduced and should be organized training of the private forest owners. Results from research activities will also contribute to improvement of the sector's performance.

D) Support to private sector development

In case of successful implementation, the actions will result in forest industry designed to meet the requirements of timber markets and the potential availability of wood (quality and quantity). Redesigned timber industry, due to taking country's best place on the market and having wood to meet certain requirements of quality and quantity, will have an increased capacity to pay wood to the benefit of the owners of wood. Consequently, this should enable more intensive management of forest resources. The position of private forest owners will be strengthened through the establishment of the association of forest owners. If joined, the group will become more powerful in determining the price of wood, they will have an impact on forest legislation and other decisions taken by various authorities that affect forestry on various aspects.

E) Reorganization of the management of public forest lands

In accordance with the above described activities, it's expected that by the end of 2003 to be established a new organization to take on management of public forest lands. This, inter alia, will include:

- Implementation of the law on joint management of all public forest lands in Kosovo;
- Jobs are organized into six supervision districts. The main consumers will be local sawmill, a reduced

number of privatized combines and reorganized for localized woodworking in their respective areas, and fire-food buyers;

- Managing Director and Management Board appointed by the representatives of Ministries, by professionals of certain municipalities;
- Allocation of sufficient resources (personnel, equipments and other physical assets) to cover all the tasks assigned to the organization.



Fig. 2: Damaged forests in the Mountain of Strelc [2]

VI. CONCLUSION

Forest management planning

Planning for sustainable management is greatly neglected for many years. For this reason there is an urgent need to train foresters in management planning and the introduction of effective tools for capturing, storing and presenting data. Training should include the whole chain, from data collection in the field, recording, processing, planning process and placement. The project should be based on results and experience gathered from the forest inventory that will constitute a continuation of this project. The project, in coordination with project staff development of the forestry sector will focus on capacity building that will include job training, oversees training of key personnels, establishing institutional structures and installations of appropriate planning softwares.

Use of improved non-wood products

The values of non-wood products from forest lands such as mushrooms, berries, medicinal plants, ecotourism, hunting and fishing will play an increasingly important role in Kosovo and could contribute up to 20 percent of the total value of forests in Kosovo. The reasons are both poverty factor towards many other countries, then rich flora and fauna as well as increasing number of people who will require different conditions of recreation that forests can provide. Unemployment in rural areas is a major social problem and is contributing the most rapid urbanization in Kosovo, but with many negative effects.

The improved commercial exploitation of non-wood products can provide a very good source of incomes for many families in rural areas. This project will be attached to non-wood products sector in the Kosovo Forest Agency and will play an important role in

building of function and resources of this sector, will include the necessary research work and capacity building.

Study on national park

Management of national parks is a source of conflict in Kosovo. The reasons are due to misunderstanding of the concept of protection and involvement of various actors, roles and confusing responsibilities of park management, unclear procedures in the establishment of parks and disability management. To solve these problems and this potential source of conflict is suggested to launch a project with the main objectives of setting criteria for establishment of different types of protected areas, which describes the planning procedures, setting of standards and rules for managing the park. This project was suggested to be attached to the Ministry of Agriculture and Rural Development, but should involve other ministries, other relevant NGOs.

Reorganization of forest industry

Investments in forest industry have been uncoordinated, which has caused over-investment and investment in less profitable areas. In order to help in the process of privatization and reorganization, the timber industry should establish a professional forum respectively Wood Industry Association of Kosovo (some are already established).

The objective of this association shall be to promote and protect the interest of private sawmills workers and other woodworking companies. Since there is a need also for technical support and training, the Association should actively participate in these matters.

Since it is anticipated that the private sector will (should) play an important role in the future in forestry and forest industry, this group should show high attention from government. Based on the objectives and strategies two main activities are outlined and suggested: Establishment of an association of forest owners and timber industry association.

It's proposed the appropriateness of establishing an association that supports private forestry in relation to the wood market, technology development, property issues, lobbying, etc. Forest owners' association have been established in most countries to represent and support the private forestry sector. Models and systems are well developed, and support can vary from complete management actions to provision of appropriate services, or specifically areas. Association which works well, by coordinating the supply of wood from many owners will increase the value of timber in which will benefit owners of forest and wood industry. Other private sector associations have already been established in Kosovo, so it is recommended that the establishment of the Forest Owners Association should be built based on the accumulated experience. This project may allow to assess the opportunities for higher value-added wood processed (collected panels, furniture, etc.) for local and export market.

Finally we can just underline that in a year we've

already left behind, so in 2009 by the Ministry of Agriculture, Forestry and Rural Development of Kosovo, was drafted the Forest Management Strategy for Kosovo and this strategy is for the period 2010-2020, which is now expected to be approved by the Government of the Republic of Kosovo, and according to this strategy are provided all action measures, also competencies that the forest sector to consolidate in the new state of Kosovo.

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