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FOREST INDUSTRY CHALLENGES OF DEVELOPMENT AND BALANCED USE

KOSOVO CLUSTER AND BUSINESS SUPPORT PROJECT



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FOREST INDUSTRY CHALLENGES OF DEVELOPMENT AND BALANCED USE

THE REPORT RECOGNIZES THAT OPTIMUM, SUSTAINABLE USE OF THE FORESTS WILL INVOLVE A BALANCE OF THREE PURPOSES: HARVESTING OF TECHNICAL WOOD FOR SECONDARY DOMESTIC PROCESSING; HARVESTING OF FIREWOOD; AND PROVIDING FOR RECREATIONAL ACTIVITIES. THE NEEDS FOR MANAGING THE FORESTS TO ACHIEVE THE FIRST TWO OF THESE PURPOSES ARE IDENTIFIED AND THEIR COSTS QUANTIFIED. THE REVENUE STREAM ARISING FROM CONTROLLED SALE OF WOOD PRODUCTS OF THE FOREST, LUMBER AND FIREWOOD, IS EVALUATED.

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PURPOSE OF ASSIGNMENT

The purpose of this assignment is to study previous reports and analyses of the Kosovo Forest Sector, several of which have been published since the conflict, and to consolidate their findings and recommendations in one summary document which can be used to persuade senior levels of Government and donor organizations of the importance of the forestry sector to Kosovo's economic development.

The assignment recognizes that optimum, sustainable use of the forests will involve a balance of three purposes: using technical wood for secondary domestic processing; harvesting of firewood; and providing for recreational activities. The needs for managing the forests to achieve the first two of these purposes should be identified and their costs quantified. At the same time the revenue stream arising from controlled sale of wood products of the forest, lumber and firewood, should be evaluated. The terms of reference for this assignment specifically stated that the potential revenue from other non-wood products, wild berries, mushrooms, hunting licenses and eco-tourism, should not be addressed at this time in the interests of keeping the report focused on forestry issues.

BACKGROUND

Within the Ministry of Agriculture, Forests and Rural Development, the Forestry Department and the Kosovo Forest Agency are the bodies responsible for the policies and management of resources of Kosovo's forests. These bodies currently receive insufficient funding to achieve the goal of maximizing effective use of Kosovo's forest resources.

The wood processing industry in Kosovo is one of the best-developed local industries. It is an employer of skilled and semi-skilled labor. It is already exporting to several countries in Europe, and is an industry with potential for attracting outside investment. The industry was founded long ago on the abundant availability of timber from both conifer and broadleaved forests. A cadre of competent manufacturers form a business base on which to build a much stronger industry. However, their ability to survive depends on continuing availability of local timber sources; if they have to resort to importing lumber in large quantities, the commercial advantage they currently enjoy will disappear.

Increasingly, as the industry sees its exports grow, it recognizes the trend in the world markets for consumers to demand wood products manufactured out of lumber harvested from certified forests and having a demonstrable chain-of-custody provenance. None of the forests Kosovo at present are certified. Some initial steps have been taken to develop a roadmap for the forest industry to move towards getting some of its forests certified; but until illegal logging is curtailed and some forest management plans are prepared, no accredited certifying organization will consider Kosovo forests.

ABSTRACT

The Riinvest Institute for Development Research was commissioned to produce this report. The Institute's comprehensive report, complete with considerable research data pertinent to the issue, is included herein. However, an Abstract of their main findings and recommendations, is first presented with the objective of allowing decision makers to see the larger picture without getting distracted by too much detail. These details will eventually need to be read and absorbed before a comprehensive forests strategy is implemented. Annexes referenced in the Abstract are to be found in Riinvest's main report.

EXECUTIVE SUMMARY

Forests are a very important natural resource in Kosovo's economy for the environment, social and economic wellbeing of Kosovo. Forest area is about 40% of the total landmass of Kosovo. Forests supply timber for processed wood products, and are also a source of firewood, wild fruits, different medicinal plants, and construction aggregates. The forested lands have potential for development of many recreational activities, such as tourism and hunting. Properly managed, this resource could benefit the Kosovo economy to a much greater extent than it currently does. If Kosovo's forest resources are managed in a sustainable way, then it will be possible to fulfill the needs of population with firewood and almost certainly with lumber for wood processing industry as well.

It is estimated that the Government current annual revenue from controlled sales of wood harvested from Public Forests is €1.5 million; this could be increased to €8.0 million if better management, and elimination of illegal logging, led to an 80% use of the annual allowable harvest. A further €0.213 million is generated for the Government from issued individual licenses for the harvesting of Private Forests; this, too, could be increased to €0.432 million with better oversight and cooperation between the Government and private forest owners.

According to the Agriculture Master Plan of Kosova (2007-2013), about 8%-10% of the population obtains their livelihood through value creation in forestry and the forest industry. In rural areas rich in forest the proportion might be as high as 20%. The annual value of the products and other benefits from the forest and forest land is somewhere between €50 and €75 million. The current potential contribution of the forestry sector to GDP is between 1.8% and 2.6%; with appropriate investments, this can be increased up to 3 – 4 % of the GDP.

However, the forest sector is facing numerous problems, which are preventing Kosovo from taking advantage of this resource. Such problems include unclear arrangements over management issues, insufficient capacities to implement new laws and regulations, lack of expertise and personnel, illegal harvesting and lack of funds and projects to implement the necessary investments. The primary purpose of this study is to identify actions that should be taken to correct these problems; to quantify their costs; and to estimate the budgetary benefits that would result.

These revenue improvements will only occur after investment in the forest infrastructure, construction of new and maintenance of existing forest roads; and after investments in silviculture treatment, particularly cleaning and thinning. The report addresses the unit costs per hectare for these improvements depending on the forest categories in which they are implemented.

Although Kosovo needs a long-term strategy for the development of its forests, this should not impede progress being made immediately in taking actions which have already been identified in several earlier reports and which will inevitably be specified in a future strategy.

The law that directly affects the forest sector, is Law No.2003/3, the Law on Forests in Kosovo. The legislation prescribes the mandate, responsibilities and tasks of the different actors – principally the MAFRD/ Forestry's Department (FD) and Kosovo Forest Agency (KFA) with its regional and municipal units - that are involved in forestry. Unfortunately there are many omissions, contradictions and inconsistencies in the Law and the administrative directives which supplement the Law. Common opinion of these is that so far there is no need for any other law on forest; there is a just a need for its amendment on certain issues.

Recently, the KFA, with donor assistance, has prepared forest management plans for 3000 ha. in Decane, and 2500 ha. in Ahishte-Kacanik. Other forest units will be identified for which forest management plans should be prepared. Cost-benefit analyses, using unit cost/sales data such as is developed in this report, should be prepared for each forest unit.

1.0 FOREST RESOURCES IN KOSOVO

Kosovo's total forest area is estimated at 464,800 ha or 42% of the land area (Annex 1, Table 1.1.1 and Table 1.1.2). Some 278,880 ha are public forestlands and under the control of the Kosovo Forest Agency (KFA), which is organized into six geographic regions. The KFA also has a regulatory function in relation to the 185,920 ha of private forestlands.

The total standing volume on public forestlands is estimated as 33.5 million m³ [25.9 million with diameter > 7 cm]; and on private forests circa 19.5 million m³ [14.5 million > 7 cm]. Trees with diameter < 7 cm are not counted in the allowable cut. Distribution between public and private forests in the allowable cut has been estimated in an FAO report to be 60% from public and 40% from private.

The gross annual increment is approximately 1.3 million m³. The annual allowable cut is estimated at 900,000 m³ gross corresponding to 77% of the calculated increment on areas surveyed. About 700,000 m³ will be harvested in high forest and about 200,000 m³ in low forest.

The main harvesting operations in Kosovo are cleaning and thinning. The road infrastructure is poor. This has resulted in harvesting being concentrated in areas with easy access and increasingly the allowable cut volume is located in remote areas where access is difficult. Official harvesting is currently some 210,000 m³ per annum. Since the war, the majority of timber harvested is used for firewood.

Generally speaking public forests are located on higher elevations (>800m). Those public forest stands at lower elevations (<800m), presumably because they are most accessible, have been subject for heavy cutting activities. Reforestation [artificial seeding] is extremely low – averaging around 240 ha per annum in recent years - is at altitude less than 600 meters, and is mainly of coniferous species. More than 60% of the stands created through natural seeding are located on altitudes between 600 – 1 000 meters (for more details, see Annex 1, Table 1.1.3). These forests are often growing well, are of good quality and can be used for cutting technical wood.

Kosovo forests are predominately oak and beech, created through natural seeding. In the public forest area 66% is broadleaf, and in all private forest area 92% (Annex 1, Table 1.2.1, Table 1.3.1 and Table 1.3.2).

Considerable areas have uneven-aged stands. 50-60% of the trees are less than 40 years old (see Annex 1, Table 1.3.3) Most of the forests area, both public and private, needs extensive silviculture treatment particularly cleaning-thinning (see Annex 1, Table 1.3.4).

It is noted that 85,600 ha are not included in forest surveys because to a large extent they are located near minefields and other inaccessible areas. The contents of these areas are not included in projections and calculations made in the report.

2.0 GOVERNANCE AND MANAGEMENT OF KOSOVO'S FORESTS

2.1 Legal Infrastructure

During the post-war period several new laws and regulations were promulgated by two institutions: UNMIK and Kosovo Assembly (see Annex 2, Table 2.1.1). These laws superseded the Law on Forest of 1987; this law was very detailed, with strict planning requirements, regulations about private forestry, but lacking clear procedures for public participation and local management. The Law was evidently not suitable for the new post-war circumstances in the forest sector.

The law that is currently in force and that directly affects the forest sector, is Law No.2003/3, on Forests in Kosovo (and his Amendment No. 2004/29). It was produced in cooperation with the UN/ FAO office in Prishtina and incorporates seven Administrative Directives, and a Wildlife Management Law. The new legislation defines the mandate, responsibilities and tasks of the different actors that are involved in forestry. The new law in general is built on the principles of major global policies on sustainable forest management. Those principles are intended to be applied everywhere in the world among democratic society. According to the law in force, "the forests of Kosovo are a national resource. It shall be managed in such a way as to provide a valuable yield and at the same time preserve biodiversity. Forest management shall also take into account other public interests".

The Kosovo Trust Agency is the authority in charge for management of Socially Owned Forest Enterprises. Forest management in practice is undertaken by KTA in close cooperation with MAFRD/ KFA. By a Memorandum of Understanding (MoU) signed on 15 June, 2006:

"without prejudice to the KTA authority and its responsibilities under the KTA Regulation, MAFRD/ KFA shall be responsible for the management of the Enterprise Forest's Assets, pursuant to the Law;" and

"in such a way as to preserve and enhance the value of the Enterprise Forest Assets."

Based on the same MoU, the MAFRD is responsible to cover expenses of the KFA for the management of those enterprises from the Kosovo Consolidated Budgeted (KCB) and also to transfer funds generated from the issue of licenses, permits and other activities to the KCB. Under those new conditions the KTA may seek reasonable information from KFA on the use of such assets.

Other laws that indirectly affect the forestry sector are laws promulgated by the PISG/ Ministry of Environment and Spatial Planning (MESP). Those are: the Environmental Protection Law, a Nature Protection Act, a Spatial Planning Act, and a Water Protection Act.

So far, the relevant parties are dissatisfied with new law when applied in practice. They agree that the law must be amended since it fails to appropriately address all sectors' requirements. As one might expect the complaints are different and depend on the interests of the complainant. Yet the common opinion of all actors of the sector is that so far there is no need for any other law on forest; there is just a need for its amendment on certain identified issues.

2.2 Forest management Structure in Kosovo

The 2003 Law on Forests addresses international standards, such as: precautionary, conservation of biological diversity, intergenerational equity and ecologically sustainable development. Unfortunately, application of the law is inhibited by low budget allocations, lack of development strategy, incomplete legal infrastructure, too few workers, inadequate capacity building in the sector and absence of an effective information system for the sector. The results anticipated by the law are few.

The MAFRD/Forestry Department (FD) and Kosovo Forest Agency (KFA), with its regional and municipal units, are the bodies responsible for the policies, legal infrastructure and management of resources in the public forests and to some extent in private forests as well (see Annex 3, Chart 1 & Chart 2).

There are several stakeholders who have a role to represent and address the interest of the public regarding sustainable forest management through coordination, advice and general support. However, most are at initial stage of their development, and do not represent at this time a strong lobby to influence the decision making process. The situation must be changed rapidly in the near future.

2.1.1 MAFRD/Forestry Department and Kosovo Forest Agency

The MAFRD completed work on the Agriculture and Rural Development Plan, 2007-2013, in 2006. Eight development measures were identified. Only one, Measure 5 - Improving Natural Resource Management, applied to the forest sector. The measure:

“will focus on ensuring the sustainable use and management of natural resources, particularly pastures, that part of forests used for firewood... as well as increase awareness of environmental issues and biodiversity”; and “the measure will seek to protect the forest environment, restore forestry production potential, and introduce actions against illegal cutting, as well as provide support for nonproductive investments in the forestry sub sector”.

The measures identified are superficial and without elaborated details.

Within the MAFRD, the Forestry Department is in charge for setting forestry policy, for both public and private forests, development of management policies for the wild animals and ecotourism, development of the educative, training and consultation systems in forestry, data management as well as monitoring and forest control. The Department promulgated the Law on Forest and has adapted some related administrative directives.

The Kosovo Forest Agency is the executive body of the MAFRD. By the Law on Forest, the KFA is responsible for matters relating to the regulation of private forests and the management and administration of public forests and national parks in Kosovo, except for issues that the law in particular states that is the responsibility of another authority.

2.1.2 Local Governance

Contradictory regulations and laws, lack of clarity in their drafting, and much misinterpretation bedevil local governance of the forest industry. Much of the local

governance was regulated initially by UNMIK Regulation 2000/45, but since then new regulations have contributed to the confusion.

At issue, is a Municipality's right to manage and use the forests and forest land within its territory. When the new Law on Forest, came into force in 2003, all rights of municipalities previously allowed under the state system prior to 1999, and subsequently under the UNMIK laws and regulations of 2000, all the municipalities' rights were suspended. The municipalities believed that the government had abolished their "ownership" over the forests. The Municipalities consider the new Law as the key problem in need of resolution for successful forest management in Kosovo. Under the present law, "de jure", the municipalities with their Forest Departments do not exist in the hierarchy of the forest management; "de facto", on behalf of the sector, the MAFRD has established official cooperation with municipalities and their respective forest departments. This is regularized through a Memorandum of Understanding with the Municipalities setting out an agreed modus operandi while the confusion persists. However, the Municipalities feel that the memorandum, in practice, is not fully respected by the KFA, and exchange of information goes only one way – from Municipality to MAFRD.

The main issue to be solved by the authorities is re-definition of the municipality's role and responsibilities in forest management. This was recommended in a FAO Report - Plan for development of the forests sector in Kosovo.

Municipalities are looking at the forestry as an opportunity for income and employment generation. Currently based on law in force, all net incomes gained in the forestry are sent to the Kosovo Consolidated Budget (KCB). 20% of those incomes are supposed to be returned to the municipalities (municipalities claim that this happens very infrequently).

2.1.3 Management of Private Forests

The private forestry sector in Kosovo is underdeveloped. No intensive professional activity is applied in the sector. According to 2003 Law on Forest, owners of private forests in Kosovo shall manage the land in accordance with this law and any rules promulgated under this Law. Responsibilities that Kosovo Forest Agency has, regarding the private sector in forestry, are limited to provision of the extension services as well as consulting. More serious cooperation among both sectors needs to be developed.

2.1.4 Legal Infrastructure and Management Issues

The following issues need to be seriously addressed to ensure the successful and sustainable development of the forest sector:

Legislation: Existing legislation must be clarified, contradictions eliminated and inconsistencies resolved. The situation becomes worst due to the lack of strategy. If Kosovo intends to fully respect UNCED criteria for sustainable forest management, then there will be a need to include all legal, policy and institutional arrangements to support them.

The role of municipalities: The Municipalities' forest management competencies provided for in the law of 1987 was cancelled under the 2003 Law. This new law does not elaborate on the role of municipalities. The existing temporary solution of a

Memorandum of Understanding between the MAFRD and the Municipalities must be embodied in law.

Forest strategy: A strategy for sustainable development of the forestry sector is a fundamental requirement. A strategy will assist in identifying necessary administrative directives, and clarifications needed to existing legislation. A strategy will eliminate much of the lack of coordination in present investment activities.

Illegal logging: The law states that for any un-allowed action in protected forests, and in addition to any other damages that may be due under the law, the court may order a person to pay a fine of up to €25,000. The minimum threshold is not determined by this law. Fines imposed by judges neither cover the value of the damage created, nor are sufficient to deter the violator from future violations. For whatever reason, the courts are not serious in implementation of the law. Very few cases of forest violation are solved (see Annex 2, Table 3.1.1). Illegal harvesting remains an attractive occupation on a wide scale.

Forest guards: Unarmed foresters, and their low number, inhibit efficient security of the forests. Currently, a single forester covers 1,458 ha of the forests.

Harvesting procedures: the licensing of competent and responsible private operators through transparent tendering procedures against well defined scopes of work and standards of performance is the way of forest utilization according to the law in force. The use of updated and appropriate technology; obligations for road upgrades and maintenance; monitoring of compliance with volume permitted to be cut under the contract; and clean-up after harvesting, as defined by contract, must be completely respected.

Regarding to this issue the aim of the KFA is to amend this article of the law by insisting to certify the private operators only for the service purposes (as wood harvesting, logging, etc.).

KFA's property: Currently the KFA is operating in a rented building. The Agency needs to have its own property, such as: offices, warehouses, transport means, etc. Those are defined neither by the new law nor by any existing UNMIK Regulation.

Current budget: The budget allocated to the sector at present is very low. Neither urgent nor longer-term capital investment in forestry can be undertaken by existing budget.

The Forest Restoration Fund: The new law states the fund is “hereby established as a special-purpose, dedicated fund within the Ministry’s budget for the purpose of enabling the Ministry to invest and encourage others to invest in forestry and to support other forestland-related services or projects”. The Forest Restoration Fund is defined by law, but does not work in practice since it is in contradiction to the KCB’s legal financing procedures.

Community participation: The new law foresees public participation, but the provisions are not respected. Public participation is an important factor for ensuring transparency on sustainable forest management. Forest certification by international bodies demands such transparency.

Professional capacity building: Capacities are at a very low level in the sector. There is a lack of human resources for the preparation; implementation and

monitoring of the forest's strategy and management plans as well as the number of the workers for day to day activities in the sector (see Annex 3, Table 3.1.1).

Undeveloped forest infrastructure: The existing network of forest roads in forestry is too old and un-maintained. The adjacent forest is already harvested. Building of new roads that will provide access to new forest areas for utilization purposes is a priority.

Forest Health: Another priority is forest protection from pests, diseases, accidental fires and human damages. With existing number of the workers in the forestry, their professional capacities, present technology, and budget allocation for the sector, it is impossible to protect our forests effectively.

Forest Certification: No forests in Kosovo have been certified by an accredited agency. Kosovo's existing wood processing industry has a primary objective to access important markets of European countries, as well as the others. Unless Kosovo's forests are certified, the processors will have to obtain certified lumber from outside Kosovo, thus increasing considerably their costs of production.

3.0 QUANTIFICATION OF FOREST BENEFITS

3.1 Basic Data and Assumptions

This analysis addresses the total forest reserves in Kosovo, public and private.

Total annual increment is calculated to be about 1,367,000 m³, of which only 1,167,000 m³ is on surveyed forestlands. (See annex 4, table 4.1)

The annual allowable cut is 900,000 m³, [77% of the surveyed forestlands annual increment]. (See annex 4, table 4.1.1)

The reserves in the Public forests are made up of approximately 56% Firewood, and 44% Technical wood. In the Private forests, mostly low forest, the respective figures are 46% technical wood, and 54% firewood. (See annex 4, table 4.1.1)

According to the KFA, the lack of the necessary personnel and financial resources makes it impossible to plan and achieve the annual allowable cut, and based on the data of KFA for the past four years, the KFA on average has harvested only about 187,667 m³ of firewood per year; and only 23,596 m³ of technical wood per year. (See annex 4, table 4.1.3)

50% of Kosovo families [167,500] use firewood (See annex 4, table 4.1.4). An average of 5 m³ is required annually per family. Therefore total family needs for firewood is 837,500 m³. (See annex 4, table 4.1.5)

Current Kosovo needs for technical wood are unknown. The volumes imported in 2006 were estimated at around 300,000 m³, and the KFA planned to harvest about 33,200 m³ (implemented only about 80%). Nevertheless the demand from the wood processing industry is estimated to be growing but due to the lack of studies in this field, its impossible to assess it more accurately. (See annex 4, table 4.1.5)

3.2 Current Wood Availability and Revenues

Taking annual averages of the past 4 years i.e. 2004-2007:

Availability:

- The planned annual harvest by the KFA was 250,809 m³; 107,842 m³ from public forests and 142,968 m³ from private forest lands. Approx. 80% of the planned harvest was realized. (See annex 4, table 4.1.3)
- Public forests yielded 23,596 m³ of technical wood. None was harvested on private lands. (See annex 4, table 4.1.3)
- All the private harvest went for firewood; the public forests yielded 62,677 m³ of firewood. So Kosovo forests provided firewood amounting to 187,667 m³ per year. (See annex 4, table 4.1.3)
- The harvested firewood provided only 22.5% of the total needs in Kosovo [837,500 m³].
- Without comprehensive and accurate data from Customs Dept. it is impossible to know the exact amount of firewood being imported. One calculation has estimated imported firewood at 100,000 m³.
- The shortfall in firewood needs is presumably made up of illegal harvesting, and will amount to around 550,000 m³. (See annex 4, table 4.2.1.4)

- It is estimated that of the illegal harvesting, 20% is cut from public forest and 80% from private forests, but this estimate all depends on the correct assessment of imported firewood.

Revenues:

- The Kosovo Consolidated Budget received revenues from the sales and fees of wood harvested on Public lands of €1,334,637. (See annex 4, table 4.1.3)
- The Kosovo Consolidated Budget received fees from sales by the Private forest owners of €187,485. (See annex 4, table 4.1.3)
- Under the Law on Forests, 40% of revenues, forwarded by the KFA to the KCB, is supposed to be returned to the KFA for forest improvements, i.e. €608,850. (See annex 4, table 4.1.3)

3.3 Potential Availability and Revenues from Well Managed Forests

Availability:

- The planned annual harvest by the KFA is 900,000 m³; 540,000 m³ from public forests and 360,000 m³ from private forest lands. (See annex 4, table 4.2.2.1)
- Assume that the actual harvest is 80% of that planned annually by the KFA.
- Public forests yield 189,460.624 m³ of technical wood. Private forests yield 131,133.64m³. (See annex 4, table 4.2.2.3)
- Public forests yield 244,949.808 m³ of firewood, whereas Private forests yield 154,455.93 m³ firewood. (See annex 4, table 4.2.2.3)
- The harvested firewood provides 47.7 % of the total needs in Kosovo [837,500 m³]. The balance of 438,094.26 m³ will have to be made up from imports and/or, regrettably, by diverting technical wood to firewood. (See annex 4, table 4.2.2.3)

Potential Revenues:

- The Kosovo Consolidated Budget received revenues from the sale of wood harvested on Public lands of €8,133,316.80. (See annex 4, table 4.2.2.3)
- The Kosovo Consolidated Budget received fees from sales by the Private forest owners of €625,084.812. (See annex 4, table 4.2.2.3)
- Total revenue received by the KFA is €8,758,401.612 and is sent to the Kosovo Consolidated Budget [KCB]. (See annex 4, table 4.2.2.3)
- Under the Law on Forests, 40% of the total revenues are returned to the KFA for forest improvements. At different levels of implementation, the KFA generates different amounts for forestry investments, and those figures are as follows:
 - At 60% level of implementation: €2,627,520.53 (See annex 4, table 4.2.2.2)
 - At 80% level of implementation: €3,503,360.64 (See annex 4, table 4.2.2.3)
 - At 100% level of implementation: €4,379,200.81.(See annex 4, table 4.2.2.4)

If we assume a different % of the annual allowable cut is actually harvested, then revenues generated for the government are as follows:

Table A. Government and KFA Revenues based on implementation level (%)

	Level of implementation by the KFA 60%	Level of implementation by the KFA 80%	Level of implementation by the KFA 100%
Revenue from the sales of wood harvested on public lands	6,099,988 €	8,133,316.80 €	10,166,646 €
Revenue from fees on sales made by the private forests	468,813.62 €	625,084.812 €	781,356.015 €
<i>Revenues returned to the KFA for forest improvements</i>	<i>2,627,520.53 €</i>	<i>3,503,360.64 €</i>	<i>4,379,200.81 €</i>

Source: Annex 4 – Table 4.2.2.2/4.2.2.3/4.2.2.4

4.0 INVESTMENTS REQUIRED TO ESTABLISH WELL-MANAGED FORESTS

4.1 Forest Management Plans:

Forest Management Plans contain all the plans for everyday activities in a forest for the next ten years, starting from planned forest harvesting, activities for sector development, silviculture treatment, afforestation, and forest protection (from pests, diseases, fires, human damage etc). The lack of effective up to date management plans has a direct impact in the sustainable management of the forest, creates opportunities for forest misuse and mismanagement, and for inadequate treatment of the forest area. In order for the total forest surface to be covered with valid management plans, a serious professional and financial commitment is required.

There is a total lack of management plans in Kosovo. In the public sector, the Norwegian government and the KFA, have begun the process of developing the methodology and technology for preparation of forest management plans, and have covered an area of 5,600 ha, or 1.2% of the total forest area. Private forests are also required to possess management plans; however, for owners with small forest parcels, it is sufficient to prepare one-year operative plans. No analysis has been done regarding the cost of preparing management or operative plans for the private forest. Estimates for the costs of preparing Forest management Plans vary according to the elevation of the forests and are given below.

- In high forest and National Parks: €18.39¹ per ha.
- In low forest: € 8.26² per ha.
- In forests under regeneration: € 4.00³ per ha.

The average estimated cost to draft management plans is €12.26 per ha (See Annex 5, table 5.1.2). The cost to draft plans for 50,000 ha. of accessible public forests in Kosovo per year [a reasonable number if plans are to be produced for all of Kosovo forests within the next ten years – after ten years, the plans have to be updated and prepared again] is €700,000.

4.2 Silviculture Treatment

Due to illegal harvesting of older growth trees, Kosovo's forests are too young. 58% of the public forests, and 81% of the private forests, are less than 60 years old. More than 75% of Kosovo's forests need some form of treatment and extensive investment in silviculture. Because of their young age, the main treatment will be cleaning and thinning.

Commercial thinning [of trees with diameter > 7 cm] is a profitable venture and can be contracted out. Cleaning and thinning of trees with lesser diameters require a lot of investment because they have no commercial value.

According to the FAO's "Kosovo Forest Inventory Report" dated 2002/2003, 171,800 ha require cleaning-thinning, of which 93,000 ha are in coppice or mixed low forests. The estimated costs for cleaning and thinning is €150 per ha. (See Annex 5, table 5.2.2 / 5.2.3).

This is an area where consideration should be given to "briquette" manufacture from the waste removed from the forests. Such an initiative would generate additional revenue to the KFA thus helping to offset the thinning costs, and at the same time contribute to an improved use of the forest resource.

¹ See Annex 5, table 5.1.2.

² See Annex 5, table 5.1.2.

³ See Annex 5, table 5.1.2.

4.3 Forest Roads

Urgent investments are required for the improvement of the existing road network especially in the high forest area. Its present condition doesn't fulfill any of the known standards. It hinders most activities for using the forest. Over recent years, harvesting has been concentrated mainly on accessible areas with forest roads; little has been harvested in other where there is no forest road access. The road network requires a complete evaluation, and the roads classified based on their needs for investments and maintenance. Maintenance of the existing road infrastructure will be costly due to the lack of attention in recent years. Estimates for the costs of improving forest roads are given below.

- Maintenance of existing roads: €210⁴ per ha.
- Construction of new roads: €350⁵ per ha.
- Future maintenance of all roads in high forest areas: €6.00⁶ per ha.

⁴ See Annex 5, table 5.3.1

⁵ See Annex 5, table 5.3.1

⁶ See Annex 5, table 5.3.1

5.0 RECOMMENDATIONS

1. Kosovo Government and MAFRD should increase the current budget allocations in order to meet the urgent investment needs of the forests, through reconsiderations of the existing programs and government policies.
2. KFA should identify approximately 50,000 hectares of forests for which to start immediate preparation of Forest Management Plans.
3. Urgent investments should be made in the forest infrastructure by building new forest roads, and upgrading and maintaining existing roads, in order to ensure access to the forests. Areas for improvement should be selected in tandem with identification of units for which Forest Management Plans are being generated.
4. MAFRD/ Forestry Department should propose amendments to the current forest law, and especially address better definitions of the roles of different stakeholders. Additional administrative directives, especially those that will change the licensing procedures of forest harvesting operators, should be proposed.
5. MAFRD/ Forestry Department should propose a special action plan for approval by the Government oriented towards a rapid reduction of illegal harvesting. The plan should address:
 - ◆ Better organization of KFA and special cooperation with courts and KPS.
 - ◆ Cooperation with municipalities and communities for increasing awareness about different forest issues on forestry.
 - ◆ Cooperation with media and civil society
 - ◆ Explore the possibilities for encouraging illegal harvesters to shift from illegal to legal harvesting
6. Private Forest Operators should be licensed and properly equipped in the technological as well as professional sense, in order to avoid damage to the remaining trees in their forests, and to protect the forest against pests, diseases, accidental fires, and other human damage.
7. MAFRD/ Forestry Department should seek support for research into using thinning and forest waste in the form of briquettes as an alternative to firewood thus reducing the dependency on illegal wood harvesting.
8. In parallel with implementing these immediate actions, consideration should be given to:
 - ◆ Preparing a "Forest Development Policy and Strategy for Kosovo", through the involvement of all the relevant stakeholders.
 - ◆ Incorporating in the Strategy the measures to be taken to get Kosovo's forests, in whole or in part, certified by a world recognized certification body.
 - ◆ Building capacity for ensuring sustainable managerial practices. The KFA should develop programs for education and training at all levels of the forestry sector.
 - ◆ Creating a database and intra-network of the forest sector.
 - ◆ Developing a modern monitoring system for all the activities in the forest sector.

RIINVEST FINAL REPORT



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Forest Industry Challenges of Development and Balanced Use

Final Report

Prishtina

16th of January 2008

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Executive Summary

Forests are a very important natural resource in Kosovo's economy, and are considered to be a very important resource for the environment, social and economic wellbeing of Kosovo. Forest area is about 40% of the total landmass of Kosovo. Not only that they are used for wood products, but they are also a source of many other products, different plants that are used for medicinal purposes, many types of stones (for gravel and other means), as well as the potential for possible development of many recreational activities (such as tourism, hunting etc). However, the forest sector is facing numerous problems, starting from unclear arrangements over management issues, insufficient capacities to implement new laws and regulations, lack of experts in this field, illegal harvesting and lack of funds and projects to implement the necessary investments.

The law that is in force and that directly affects the forest sector, is the Law No.2003/3, on Forests in Kosovo. So far the new law has been completed by seven Administrative Directives, and a Wildlife Management Law. The new legislation announces the mandate, responsibilities and tasks of the different actors that are involved in forestry. The new law has constituted the basis for sustainable forest management and efficient forest's land use too. In general the new law is built on the principles of major global policies on sustainable forest management such as: precautionary, conservation of biological diversity, intergenerational equity and ecologically sustainable development, set forth in Annex III to the Report of the United Nations Conference on Environment and Development (UNCED/ Rio de Janeiro, 3-14, June 1992). Based on such criteria, all international community of democratic society with a free market economy system, including developed as well as developing countries, are trying to adjust their forest management systems. Similar effort is proceed in Kosovo too

According to the law in force, "the forests of Kosovo are a national resource. It shall be managed in such a way as to provide a valuable yield and at the same time preserve biodiversity. Forest management shall also take into account other public interests".

The new law on forestry is of high importance for the forest sector in Kosovo. The new law has grounded disclosure, transparency, sustainability in the forest management as well as new approach, the approach toward free marked oriented economy in forestry

The main identified actors for the forestry's sector in Kosovo are: MAFRD/ Forestry's Department (FD) and Kosovo Forest Agency (KFA) with its regional and municipal units.

Other relevant stakeholders of the sector are: different NGO-s (such as: Association of the Wood Processors of the Kosovo, Association of the Private Forest's Owners, Association of the Forestry Engineers, Era-association, Ecological Association Prizren, Association of the Hunters etc.), Private Operative Contractors, Courts, Kosovo Police Service (KPS), non-wood product collectors and local community.

The role and responsibilities that stakeholders have at this phase, as to represent and address the interest of the members regarding sustainable forest management through coordination, advice and general support in the interests of the members at national level, up to now are minimal. They are at the initial stage of their growth. So, due to the present situation they do not represent a strong lobby that influences decision making process. The situation must be changed rapidly in the near future.

If Kosovo's Forest resources are managed in a sustainable way, then it is possible to fulfill most of the needs of population with firewood and possibly lumber wood as well (we do not know the needs of the population for lumber wood, because no study has ever been conducted regarding this issue).

At the moment, domestic production capacities are not exploited as much as they should, due to the lack of management plans and lack of road infrastructure, as well as neglect through low financial commitments to the forest by the government.

One of the most urgent needs for the forest sector in Kosova, is the composition of the "Strategy and Policy Development of the Forest". Due to the lack of a Development Strategy in the forest sector, many problems arise especially for the department of the planning management, and problems due to the lack of Strategy are inter-communicated in the whole planning and exploitation process of the forest. The cost of drafting managing plans, plans for opening new roads, the inclusion of the needs and interests of the community, and that of the wood refinement sector, all of these problems are closely linked to the development of the forest strategy. Thus, MAFRD and KFA need the technical and financial assistance of investors, in order to develop a comprehensive forest strategy.

The road network spread out in the forest is 7m/ha. The present condition of the existing roads doesn't fulfill any of the known standards and hinders most activities for using the forest. Thus, urgent investments are required for the improvement of the existing road network (such as providing the existing road infrastructure with protected walls, drainage, and other road network elements) especially in the high forest area.

The necessary investments that are required for the forestry sector are as followed:

- The preparation of the "Strategy and Policy Development of the Forest" for both types of the forest (public and private), and its cost is estimated to be around 220,000 euros, or 0.87 €/per ha.
- The preparation of "Forest Management Plans" (10 year plans) is urgently needed, and the cost of preparing them is, for high forestlands is estimated to be about 18.39 €/ha, whereas the cost for the coppice forest (low forestlands) is estimated about 8.26 €/ha.
- Treatment opportunity of both high and low forestlands is urgently needed, and its estimated that treatment (cleaning and thinning process) for the low forestlands to be about 150 €/ha, and for the high forestlands we lack data to specify the exact price per ha, but its estimated to be even higher.
- The forest road infrastructure is in dire need for investments for building new roads, and using European standards the cost is estimated to be about 70 € per 1m, the cost of repairing the existing ones is estimated to be 30 €/per 1m, whereas the cost of maintenance for the new and existing roads is estimated to be about 0.5 €/per 1m.

Recommendations:

1. Kosovo Government and MAFRD should increase the current budget allocations in order to meet the urgent investment needs of the forests, through reconsiderations of the existing programs and government policies.
2. KFA should identify approximately 50,000 hectares of forests for which to start immediate preparation of Forest Management Plans.
3. Urgent investments should be made in the forest infrastructure by building new forest roads, and upgrading and maintaining existing roads, in order to ensure access to the forests. Areas for improvement should be selected in tandem with identification of units for which Forest Management Plans are being generated.
4. MAFRD/ Forestry Department should propose amendments to the current forest law, and especially address better definitions of the roles of different stakeholders. Additional administrative directives, especially those that will change the licensing procedures of forest harvesting operators, should be proposed.
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7. MAFRD/ Forestry Department should seek support for research into using thinning and forest waste in the form of briquettes as an alternative to firewood thus reducing the dependency on illegal wood harvesting.
8. In parallel with implementing these immediate actions, consideration should be given to:
 - ◆ Preparing a "Forest Development Policy and Strategy for Kosovo", through the involvement of all the relevant stakeholders.
 - ◆ Incorporating in the Strategy the measures to be taken to get Kosovo's forests, in whole or in part, certified by a world recognized certification body.
 - ◆ Building capacity for ensuring sustainable managerial practices. The MAFRD / Forestry Department should develop programs for education and training at all levels of the forestry sector.
 - ◆ Creating a database and intra-network of the forest sector.
 - ◆ Developing a modern monitoring system for all the activities in the forest sector.

I. Introduction

This Research Report is prepared based on the request of USAID - Kosovo Cluster and Business Support.

The purpose of this report is to study and assess previous reports and analyses concerning the Kosovo Forest sector and to consolidate their findings and recommendations within a summary document which can be used to persuade senior levels of the Government and donor organizations of the importance of the forestry sector to Kosovo's economic development.

The assignment should recognize that optimum, sustainable use of the forests will involve a balance of the three purposes:

1. Harvesting of the technical wood for secondary domestic processing
2. Harvesting of the firewood, and
3. Providing of the forest for recreational activities

In order to achieve these purposes, the objective was to identify and quantify the cost of forest management. At the same time the revenue stream arising from controlled sale of wood products of the forest, lumber and firewood have been estimated.

The report also identifies the possible areas where the Government of Kosovo, USAID or other donor organization might provide technical assistance, in order to improve and lead to more effective economic growth.

The methodology of compiling this report was as followed: The first phase of the project was to conduct a literature study review of all the relevant publications to this sector. The detailed reading list can be seen in references at the end of the report.

The second phase included, preparing the questionnaire for the parties that were planned to be interviewed. The interviews were conducted with the representatives of MAFRD, Forestry Department, Kosovo Forest Agency, representatives of the three regional offices of KFA, the representative of the wood processors association, and with the representatives of three municipalities. Also data gathering from KFA, and UNMIK Customs was included in the report.

The last phase was to process everything starting from: literature review, processing of interviews, analyzing the Customs database, and drafting the research final report. Furthermore, the report was structured as followed:

Annex 1 – Summary of Forest Resources in Kosova

Annex 2 – Governance and Management of Kosovo's Forests

Annex 3 – Forest Management

Annex 4 – Quantification of Forests Benefit

Annex 5 – Investments Required To Establish Well Managed Forests

Annex 6 – References

Lastly, the Riinvest Institute would like to thank the USAID-KCBS for their dedicated support through their ongoing advice and consultation while drafting this report. Riinvest Institute also thanks all the relevant parties that contributed towards the completion of this report. The results and interpretations are the responsibility of the Riinvest Institute and do not necessarily reflect the opinions of other parties.

i) Background**ii) History and summary of the present situation on the forest sector**

Forests are a very important natural resource in Kosovo's economy, and are considered to be a very important resource for the environment, social and economic wellbeing of Kosova. First of all it's very important to mention the fact that the forest area is about 40% of the total landmass of Kosova. Not only that they are used for wood products, but they are also a source of many other products, different plants that are used for medicinal purposes, many types of stones (for gravel and other means), as well as the potential for possible development of many recreational activities (such as tourism, hunting etc). However, the forest sector is facing numerous problems, starting from unclear arrangements over management issues, insufficient capacities to implement new laws and regulations, lack of experts in this field, illegal harvesting and lack of funds and projects to implement the necessary investments.

The majority of forest area (more than 60 %) with high wood quality happens to be at a high altitude of 600 – 1000 m above sea level. At this height the forest area usually experiences an exceptional growth volume and is mainly used as a source for the fulfillment of the industry's needs with lumber wood (technical wood of first and second class). The forest area at a lower altitude has been the subject of more illegal harvesting, due to the low cost and easy access to them.

Due to the special circumstances that Kosova has experienced (such as the war in 1998 – 1999), and the weak management of our forest, large areas of the forest have suffered irreparable damage. The illegal harvesting of the firewood forest for personal profits is a big problem. Supporting the forest sector is of utmost importance with the aim of achieving a sustainable and rational utilization of this very important resource. The importance of the forestry sector can be viewed also from the agriculture perspective because some farmers can see this as an opportunity to change their business activities, from agriculture production to forest production. The increase in afforestation of agriculture wasteland is a very important activity that will contribute towards the reduction of the dependency on agriculture, and will also improve the environmental conditions of rural areas¹.

The annual value of the products and other benefits from the forest and forest land is around 50 € - 75 million €. The current potential contribution of the forestry sector to GDP is between 1.8% and 2.6%. With investments, this can be increased up to 3 – 4 % of the GDP².

¹ The Agriculture Master Plan of Kosova (2007-2013)

²The Agriculture Master Plan of Kosova (2007-2013)

ANNEX 1.
Forest resources in Kosovo

1.0 FOREST RESOURCES IN KOSOVO

1.1 General Description

Forests are a key resource for the economic, social and environmental well-being of the people of Kosovo. A high proportion of Kosovo's biodiversity is forest based, thus advancement of forest management is very important for meeting Natura 2000 network requirements under the EU Birds and Habitats Directives. Forests are also diverse ecosystems. They provide a wide range of important habitats, give shelter, reduce the levels of carbon dioxide in the atmosphere, act as "green lungs" in urban areas and add to the diversity of the landscape and ultimately to the quality of life.

The multiple benefits of forests can only be assured if they are managed wisely and in line with the principles of sustainable forest management (SFM).

About 8%-10% of the population obtains their livelihood through value creation in forestry and forest industry. In rural areas rich in forest the proportion is considerably higher, and might be as high as 20%. Annual values of products and other benefits from forest and forestlands is estimated to be in the range of 50-75 (62.4) million €. Based on an estimated GDP of 2 850 million €, the potential contribution of the forestry sector to the GDP is in the order of 1.8%-2.6³%.

The newest data about forest resources in Kosovo, including public and private forestland, are the data from National forest Inventory (FAO 2003). In the past the main data for national level in forest came from Forest management plans and cadastral information for private sector. Following table represents main land use classes:

Table 1.1.1 Land use classes

Land use	Area (ha)
Forest	464 800
Other wooded land	28 200
Barring land	23 400
Agriculture	342 400
Pastures	153 200
Urban area-Buildings	40 000
Water	4 600
Other	41 600
Total	1 098 200

Source: National forest inventory (FAO 2003)

In comparison with old statistics data and cadastral data, the forest area is increased. There are several reasons for increased forest area like reduce of number of domestic animals, different definition for land use classes, methodology for estimation of area, transformation of agriculture areas into forest (afforestation) ect. The following table represents the old statistics data source and comparison with NFI data:

³ The Agriculture Master Plan of Kosova (2007-2013)

Table 1.1.2 Comparison of forest resources from different data source

Data source		Public forest Ha	Private forest Ha	Total Ha
Old statistics		266 000	162 000	428 000
Cadastral data 2004		196 000	198 000	394 000
NFI 2003:	Visited area	202 800	176 400	379 200
	Not visited	76 080	9 520	85 600
	Total	278 880	185 920	464 800

Source: Statistic Agency, Cadastral Agency, NFI (FAO 2003)

Out of the total area made up of surveyed and not surveyed forestlands 278 880 ha is classified as public forestlands and 185 920 ha as private forestlands. This total area (464 800 ha) is slightly larger (6-8%) than previous estimates. The reasons for increasing the forest area are relevant if we take in consideration the reasons presented above. The national forest inventory which was completed in 2003, estimated the total forest area as being 464,800 ha or 42% of the land area. Some 278,880 ha are public forestlands and under the control of the Kosovo Forest Agency (KFA) which is organized into six geographic regions. The KFA also has a regulatory function in relation to the 185,920 ha of private forestlands.

The total standing volume on public forestlands is estimated as 33.5 million m³ and on private forests circa 19.5 million m³. The gross annual increment is approximately 1.3 million m³. The inventory estimated the annual allowable cut as being of the order of 900 000 m³ gross corresponding to 77% of the calculated increment on areas surveyed. About 700,000 m³ will be harvested in high forest and about 200,000 m³ in low forest. Through NFI areas classified as no current stands are on lower elevations. It might be assumed that these areas are most accessible, and have for this reason been subject for heavy cutting activities. More than 60% of the stands created through natural seeding are located on altitudes between 600 – 1 000 meters. These forests are often growing well, are of good quality and are used for cutting technical wood. 50% of the total area is located on elevations lower than 1 000 m. Areas not surveyed are classified through photo interpretation. Tree species have been classified as undefined broadleaved species (see also table 1.1.3). Generally speaking public forests are located on higher elevations (>800m) than private forest (<800m).

Table 1.1.3 Public forest area by origin and elevation (ha)

Stand origin	Elevation								No data	Total
	200-400	400-600	600-800	800-1000	1000-1200	1200-1400	1400-1600	>1600		
No Stand	400	6 000	9 800	4 400	800	600	200			22 200
Natural seedling	1 400	4 400	16 800	22 600	10 200	13 000	9 400	11 400		89 200
Planting or artificial seedling		1 600				200				1 800
Coppice/planting (mixed)	200	4 000	3 000	2 000	4 800	2 000	1 000	600		17 600
Coppice	800	7 600	21 400	25 000	2 800	2 600	1 400	400		62 000
Coppice with standards			3 000	5 000	2 000					10 000
No data									76 080	76 080
Total	2 800	23 600	54 000	59 000	20 600	18 400	12 000	12 400	76 080	278 880
Percentage by area	1	8	19	22	8	7	4	4	27	100

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2

The main harvesting operation in Kosovo are cleaning and thinning. The road infrastructure is relatively poor with a low road density and lack of maintenance in recent years. This has resulted in harvesting concentrating in areas with easy access and increasingly the allowable volume is located in remote areas where the access is difficult. Official harvesting is currently some 200,000 m³ per annum. Since the war, the majority of timber harvested is used for firewood and this is the main source of heating even in some urban areas. The demand for firewood is currently great and as the main source for heating and energy. Afforestation in Kosovo has averaged around 240 ha per annum in recent years and is mainly of coniferous species. There is one forest nursery in Peja under the control of the Forest Research

1.2 Climate conditions

Kosovo enjoys a continental climate with temperatures ranging from -20° C during the winter to +40° C during the summer. Average annual rainfall is 720 mm. In the western areas (Peja, Gjakova) this increases to between 900 –1,000 mm, while areas in the North (Mitrovica) and Central/East (Pristina, Lipjan) are considerably drier with annual average rainfall of circa 600 mm. Most rainfall occurs during the May-June and October-January periods. February, March and August are the driest months.

Kosovo has a varied geology that ranges in age from the Neo-Proterozoic to the Holocene. The geology is characterised by substantial structural features on a regional scale, including normal faulting and thrusting. Soils are relatively free-draining and fertile with an average pH value of 6. Overall the conditions for forestry are quite favourable, with no pronounced dry periods or other extreme conditions.

Table 1.2.1 Growing stock by tree species (1 000 m3)

Tree species	Public forests			Private forests			Total		
	Surv.	Not S	Total	Surv.	Not S	Total	Surv.	Not S	Total
Quercus	2 872		2 872	6803		6 803	9 675		9 675
Fagus	11 834		11 834	4129		4 129	15963		15963
Other Broadleaves	1 584	5 385	6 969	2121	600	2 721	3 705	5 985	9 690
Abies Alba	1 413		1 413	164		164	1 577		1 577
Picea Abies	834		834	568		568	1 402		1 402
Pinus ssp	1 994		1 994	25		25	2 019		2 019
Other coniferous	184		184	39		39	223		223
Coniferous <7 cm	117	9	126	9	1	10	126	10	136
Broadleaves <7 cm	4 861	2 022	7 066	4756	245	5 001	9 617	2 267	11884
Other w. land Conif.	166		166	20		20	186		186
Other w. land Br.l	54	180	234	10	20	30	64	200	264
Total	25 913	7 596	33 509	18644	866	19510	44557	8 462	53019

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

1.3 The forest structure and main species

Public forest area is dominated by broadleaved forest, created through natural seeding, accounts 66% of the public forest area with the main species being oak and beech. Coniferous forest, covering 5% of the total public forest area, are dominated by *Abies alba*, *Picea abies* and *Pinus* species (see Table 1.2.1).

A considerable area belongs to unevenaged stands, due to silviculture methodology used (selective harvesting).

Table 1.3.1 Public forest area by species class and stand structure

Species class	Stand structure					Total
	Under generation	Even-aged	Two-Storeied	Uneven-aged	No data	
No trees	1 600	400				2 000 (1%)
Conifer		5 000	1 400	8 400		14 800 (5%)
Broadleaf	2 600	117 400	11 200	52 800		184 000 (66%)
Mixed		200	1 800	1 800		2 000 (1%)
No data					76 080	76 080 (27%)
Total	4 200	123 000	12 600	63 000	76 080	278 880 (100%)

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

While almost all private forest area is dominated by broadleaved forest, created through natural seeding, accounts 92% of the total private forest area with the main species oak and beech. Coniferous forest, covering 2% of the total private forest area, are dominated by *Abies alba*, *Picea abies* and *Pinus* species.

Table 1.3.2 Private forest area by species class and stand structure

Species class	Stand structure					Total
	Under generation	Even-aged	Two-storeyed	Uneven-aged	No data	
No trees	1 800					1 800 (1%)
Conifer		2 200	200	1 800		4 200 (2%)
Broadleaf	4 600	108400	10 800	45 800		169 600 (92%)
Mixed				800		800 (0%)
No data					9 520	9 520 (5%)
Total	6 400	110600	11 000	48 400		185 920 (100%)

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

Most of the forests area, both public and private, belongs to young age, which needs silviculture treatments and investments.

Table 1.3.3 Forest age distributions (Public and Private Forests)

Age class (year)	Public forests (%)	Private forests (%)
0-20	29	26
20-40	18	32
40-60	11	23
60-80	9	8
80-100	3	4
100-120	2	1
120-140	1	1
No data	27	5

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

Since most of forest area belongs to new age, this indicates the needs for silviculture treatment which are presented in the table below (Silviculture treatment needs), where the process of cleaning-thinning dominates.

Table 1.3.4 Areas by treatment opportunity (%)

Treatment opportunity	Public	Private
No treatment	20	24
Regeneration without site preparation	1	1
Regeneration with site preparation	1	1
Conversion	5	7
Cleaning-thinning	32	44
Thinning	4	6
Clear cut, strip clear cut	1	-
Selection felling	5	4
Salvage cutting	4	8
No data	27	5

Source: NFI (FAO 2003)

ANNEX 2

Legal Infrastructure

2.0 Legal Infrastructure

Under the new political and economic circumstances created in Kosovo in the post-period of the year 1999, is made a serious effort to include in the general frame of the Kosovo's economy and legislation all important aspects of the forestry sector's policies. During this period were done permanent attempts to create and enforce laws and regulations, promulgated in the country by two institutions: UNMIK and Kosovo Assembly.

Table 2.1.1 Existing legal infrastructure of forestry

No.	Regulation	Subject	Year of promulgation
1.	Administrative Directive No.2000/ 23	On establishment of the Forest Authority of Kosovo	2000
2.	UNMIK Regulation No.2000/ 27	On establishment of the Administrative Department for Agriculture, Forestry and Rural Development.	2000
3.	UNMIK Regulation No.2000/ 45	On local self-government	2000
4.	UNMIK Regulation No.2001/ 06	Amending UNMIK administrative direction no. 2000/23 implementing UNMIK regulation no. 2000/27 on the establishment of the Administrative Department of Agriculture, Forestry and Rural Develop.	2001
5.	Administrative Instruction No.2001/1	Announces that KFA is responsible for public forest and forest land administration...	2001
6.	UNMIK Regulation No.2001/ 19 Appendix X	Have to do with nomination of the Ministry of Agriculture, Forestry and Rural Development (MAFRD) and his tasks...	2001
7.	Law No.2003/ 3	Law on Forests in Kosovo	2003
8.	Administrative Directive No.07/ 2003	On establishment, responsibilities and activities of the KFA	2003
	Law No.2004/29	For changes and fulfillment of the Law No.2003/3 on Kosovo Forests	2004
9.	Law No.02/ L53	Law on Wildlife Management	2006
10.	Administrative Instruction No.06/ 2005	On the registration, licensing, of the producers of forestry seedling material and seedlings of the decorative trees	2005
11.	Administrative Instruction No.12/ 2005	On establishment of the prices, taxes for the use of the wood forestry products, non-wood products and professional technical services.	2005
12.	Administrative Instruction No.23/ 2005	About the issue of professional licenses	2005
13.	Administrative Instruction No.25/ 2005	For Selling of Forests Trunks and Woods Assortments	2005
14.	Administrative Directive No.02/ 2005	On responsibilities and tasks of the foresters	2005
15.	Administrative Instruction No.03/2006	On the authorizations and competences of forests inspections and procedures of issuing decisions	2006
16.	Administrative Instruction No.12/ 2006	Have to do with management planes for the forests in Kosovo.	2006
17.	Administrative Instruction No.15/ 2006	About standards and conditions for licensing of the wood processors	2006

Source: MAFRD/ FD

In the legal framework of the existing laws in Kosovo, still are some laws passed before 1989 by the Kosovo Assembly and FRY, and accepted as applicable by current government. Declared situation was present in the forest's sector too, by being in the force of the Law on Forest of 1987, till the year 2003. This law was very detailed, with strict planning requirements, strict regulations about private forestry and with lack of clear procedures for public participation and local management. The Forest's Law of 1987 evidently was not suitable for the new circumstances created in forest sector in Kosovo that are attempting to act toward free market oriented business environment.

Today, present legal infrastructure of the sector is leading the forest operations in Kosovo. With establishment of the UNMIK administration in Kosovo, it was obviously that the existing legal infrastructure will change. The current legislation is in the process of being replaced by the new one, based on principles of transparency and free market economy.

To solve the urgent matters of the sector, during the period of transition, by UNMIK are released certain number of the regulations. The most important one are shown in table 2.1.

In further, the law that is in force and that directly affects the forest sector, is **Law No.2003/3, on Forests in Kosovo**, produced in cooperation with UN/ FAO office in Prishtina. So far the new law is completed by seven Administrative Directives, and a Wildlife Management Law. The new legislation announces the mandate, responsibilities and tasks of the different actors that are involved in forestry. The new law has constituted bases of sustainable forest management and efficient forest's land use too. In general he is built on the principles of major global policies on sustainable forest management, set forth in Annex III to the Report of the United Nations Conference on Environment and Development (UNCED/ Rio de Janeiro, 3-14, June 1992). Those principles are intended to be applied everywhere in the world among democratic society. According to the law in force, **“the forests of Kosovo are a national resource**. It shall be managed in such a way as to provide a valuable yield and at the same time preserve biodiversity. Forest management shall also take into account other public interests”.

The new law on forestry is of high importance for the forest sector in Kosovo. He has grounded disclosure, transparency, sustainability in the forest management as well as new approach, the approach toward free marked oriented economy in forestry. That make him different and very important comparing with the old law.

With entry in the force of this law all other provisions as Forest Law of 1987 that regulates this field, cease to exist.

For the purpose of facilitating the implementation of the economic reconstruction and development of the Kosovo, the Special Representative of the Secretary-General, pursuant to the authority given to him under United Nations Security Council Resolution 1244 of June 1999 has promulgated the UNMIK/REG/2002/12 (amended by UNMIK/REG/ 2005/18), on the establishment of the Kosovo Trust Agency (KTA) where is specifically defined the KTA role and responsibility.

As promulgated by KTA Regulation, the Agency is the authority in charge for management of Socially Owned Forest Enterprises known as “Ekonomi Pyjore”, wood processing enterprises known as “Kombinate të drurit” and their assets too. Forest management in practice is undertaken by KTA in close cooperation with MAFRD/ KFA that were implementer of the activities in forestry.

By the Memorandum of Understanding (MoU) signed on **15 of June, year 2006**, between KTA (on behalf of Forestry Socially Owned Enterprises) and MAFRD (representing Kosovo Forest Agency), “without prejudice to the KTA authority and its responsibilities under the KTA Regulation, MAFRD/ KFA shall be responsible for the management of the Enterprise Forest’s Assets, pursuant to the Law” ...”in such a way as to preserve and enhance the value of the Enterprise Forest Assets.”

Based on the same MoU, the MAFRD is responsible to cover expenses of the KFA for the management of those enterprises from the Kosovo Consolidated Budget (KCB) and also to transfer funds generated from the issue of licenses, permits and other activities to the KCB. Under those new conditions the KTA may seek reasonable information from KFA on the use of such assets.

Previously, only by UNMIK’s special permit, the MAFRD/ KFA was allowed to undertake planned activities in the forestry.

The other laws that are indirectly affecting forestry sector in Kosovo are laws promulgated by the PISG/ Ministry of Environment and Spatial Planning (MESP). Those are: the Environmental Protection Law, a Nature Protection Act, a Spatial Planning Act, and a Water Protection Act.

However, so far, the new law applied in practice has resulted with dissatisfaction of relevant parties of the sector, as: MAFRD/ KFA, different sector’s NGO-s, municipalities, etc. All of them agreed that this law must be amended since the law doesn’t cover in proper way all sectors’ requirements. The complaints on the current law are different and they depend on the level of the complainant.

In general, the main weak point that have resulted as problematic during the law implementation in the forestry is uncovering (or not covering well) of all relevant issues of the sector. Some of them are as follow:

The licensing procedures: the way of forest utilization, by the law in force, is foreseen via licensing of the private operators through tendering procedures.

According to the KFA, they are interested through adequate normative acts to amend the existing law regarding to this article. By the new act is intended to reduce the activities of the private operators only on service provision.

According to municipalities, substantial forest’s damage is created by those private operators, through inadequate working technology used during the wood harvesting. Further, no any investment is made by operator in road maintenance or building of the new ones during the forest utilization (as were obligated by the contract with KFA). Cleaning of the place after the wood harvesting were included in the contract but not respected by operators in the practice. Then, again based on the declarations of the municipalities, very often they have misuse their license for wood harvesting through cutting of much higher volume of the wood that were allowed to do.

The lack of definition of the KFA’s property: currently the KFA is operating at the rented building. If the amendment of the law on licensing will be arranged, as is required by the KFA, then Agency needs to have defined his own property, such as: offices, warehouses, transport means, etc. Those are not defined neither by the new law nor by any existing UNMIK Regulation.

Unarmed foresters: and their low number, present further problem for the KFA that influences the provision of efficient security of the forests. So far one forester is covering 1,458 ha of the forests.

The Forest Restoration Fund pleaded by new law, is “hereby established as a special purpose dedicated fund within the Ministry’s budget for the purpose of enabling the Ministry to invest and encourage others to invest in forestry and to support other forestland-related services or projects ‘.The Forest Restoration Fond is definite by law, but do not work in practice since is in contradiction with legal financing procedures in Kosovo respectively with KCB.

The role of municipalities: the law in force does not elaborate the role of municipalities in the sector as well as the role of Social Forest Enterprises (Ekonomivje Pyjore). Do not cover the needs of particular regulations on commercial functions as well. The municipal main complaints have to do with their competencies in the forest management hierarchy. All their competencies in the field of the forest management declared by the law of 1987 were close down by entry in the force of the new law

Public participation in the forest sector so far is not adequate. By law, only Chapter V- Public forest, Article 17, 17.2 (a, b, c, d, e), have to do with public participation. The public is meant to be involved through participation in public discussions organized by the Respective Ministry regarding to the forest’s management long term planes. As per annual action planes, all evidence on activities will be presented to the public “on the request of the interested party”. The public participation is important factor for ensuring the transparency on management; that is also highly recommended by principles of the sustainable forest management. Other forms of public participation must be foreseen by competent bodies in the near future for the sector. For instance, one way is their participation in the Forest Advisory Board.

Undefined minimums of fines for the violators of the forests have resulted as very problematic in the practice, since this seems to be the main reason why illegal forest harvesting is still attractive and is continuing sorely in Kosovo. The law states that for any un-allowed action in protected forests or in addition to any other damages that may be due under the law, the court may order a person to pay a fine of up to 25,000 €. The threshold of the minimum fines for any violation of the law is not determined by this law, and this is used in an unconscious way by individuals of the courts in Kosovo. Based on the statements of the MAFRD representatives, the damage created by violators, usually is charged with unreasonable values of money so neither the created damage is covered, nor the violator has learned the “lesson”. According to them many individuals of the courts are not very serious in the implementation of the law. That is argued by MAFRD with presentation of the very low number of the solved cases of forest violation, reported by the foresters/ inspectors of the KFA. Details are presented in the table below:

Table 2.1.2 Charges and their structure for the damages in the public forests

No.	Year	Requests for Charges	Infraction charges	Criminal charges	Volume of damage (m ³)	Value of damage (€)	Investigated cases %
1.	2004	5,415	3,729	1,652	11,997	1,465,583.00	-
2.	2005	7,899	5,872	1,977	18,550	2,003,515.00	40
3.	2006	8,732	6,568	2,164	21102.65	2,350,532.00	0.003
4.	2007	3,699	3,203	580	8,421	1,031,327.44	n/a
Total		25,745	19,372	6,373	60,070.65	6,850,957.00	

Source: KFA, 2007/ Annual Forest’s Management Planes (for 2004-2007)

According to the KFA, when a person has been caught doing illegal harvesting, then the forester/ranger issues him/her a warrant to appear in court, and this case instead of being completed as soon as possible, the case lasts about three to four years to be completed. Thus, illegal wood harvesting and other illegal activities in the forestry, still remains very attractive for the violators.

However, what ever it is, with all the legal loopholes that it might have, the new 2003 Forest Law it's of high importance for Kosovo's forestry. Common opinions of all actors of the sector is that so far there is no need for any other law on forest; there is a need just for some amendments on the identified issues above.

Annex 3

Forest management structure

3.0 Forest management structure in Kosovo

Today, forest's management in Kosovo is based on international advanced standards, such as: precautionary, conservation of biological diversity, intergenerational equity and ecologically sustainable development. Those standards for the sector are assured by new law on forests.

Based on such criteria, all international community of democratic society, including developed as well as developing countries, are trying to adjust their forest management systems. Similar effort is proceed in Kosovo too.

In the letter, advanced forest management for Kosovo's forestry is established well, but in practice, so far, the results are minor. Low budget allocation, lack of development strategy, uncompleted legal infrastructure, inadequate number of the workers, unsatisfied capacity building in the sector and absence of the effective information system for the sector, are some of the major issues that are contributing to the situation. Additionally, inadequate road infrastructure and working technology are complicating processes too.

The main identified actors for the forestry's sector in Kosovo are: MAFRD/ Forestry's Department (FD) and Kosovo Forest Agency (KFA) with its regional and municipal units. The mentioned bodies are in charge for **the policies, legal infrastructure and management with forest's resources** in public forests and in some way to private forests too.

Other relevant stakeholders of the sector are: different NGO-s (such as: Association of the Wood Processors of the Kosovo, Association of the Private Forest's Owners, Association of the Forestry Engineers, Era-association, Ecological Association Prizren, Association of the Hunters etc.), Private Operative Contractors, Courts, Kosovo Police Service (KPS), non-wood product collectors and local community.

The role and responsibilities that stakeholders have at this phase, as to represent and address the interest of the members regarding sustainable forest management through coordination, advice and general support in the interests of the members at national level, up to now are minimal. They are at initial stage of their growth. So, due to the present situation they do not represent a strong lobby that influences decision making process. The situation must be changed rapidly in the near future.

3.1 Management of public forests

3.1.1 Central governance level in forestry

The MAFRD on the year 2006 has completed work on the Agriculture and Rural Development Plan, 2007-2013 (ARDP 2007/'13). Through identified eight development measures is planed fulfillment of the strategic development goals of the agriculture sector.

The **Measure 5**-Improving natural resource management is based on Axis 2 (A/2: Environment and improved land use). The measure it "will focus on ensuring the sustainable use and management of natural resources, particularly pastures, that part of forests used for firewood... as well as increase awareness of environmental issues and biodiversity. {...}" "The measure will seek to protect the forest environment, restore forestry production potential, and introduce actions against illegal cutting, as well as provide support for nonproductive investments in the forestry sub sector". This is all what is rounded by this document about development of the forestry in Kosovo.

The planned measures for the forest sector by ARDP 2007/'13, have to do mainly with agriculture sector. Represented measures by the mentioned document for the forest sector are superficial and without elaborated details.

a) MAFRD/ Forestry Department (FD):

Within the MAFRD is established Forestry Department that is in charge for compilation and development of the forestry's policies, legal infrastructure (that regulates the forest's sector), development of the management policies for the wild animals and ecotourism, **development of the educative, training and consultation systems in forestry**, data management as well as monitoring and forest control. The Forest Department comprises sectors that are presented in Annex 2 of this document.

The goals of the Respective department are:

- "Integral forests and forest's land protection, development of the forest's funds with purpose of it ecologic, economic and social functioning that indicate saving and raising of the special values as water resources, air cleanup, soil fertility, landscape, agro-tourism and forest's infrastructure.
- Through controlled use of the lumber that can not be higher then annual growth, to achieve the main objective of the sustainable forest management.
- To defend in balanced way the interests of the legal entities and private persons in the forest sector."

In order to achieve the above mentioned goals, the Department has promulgated the Law on Forest and has adapted some related normative acts. The forestry legislation in force is harmonized with EU legal standards too.

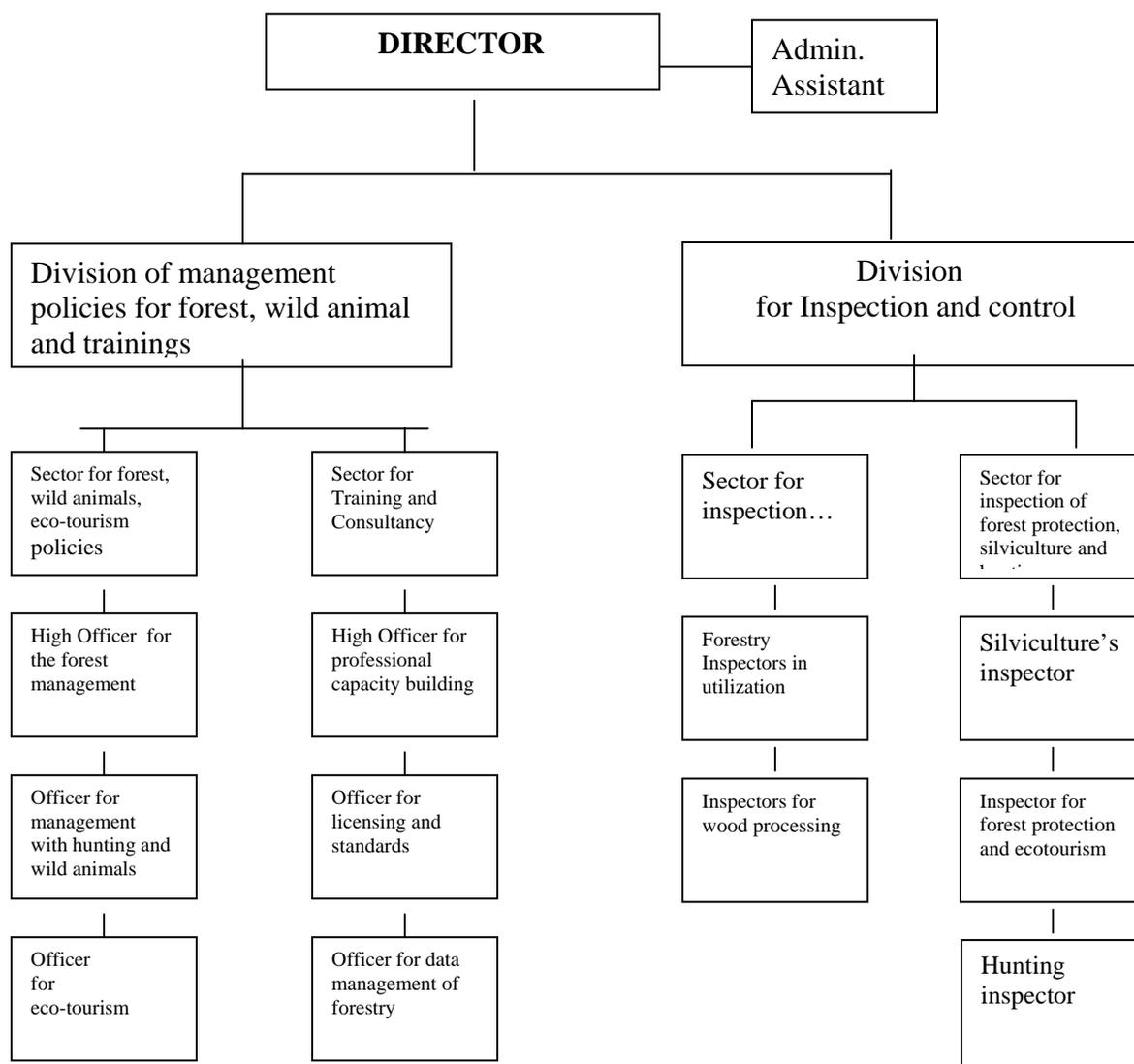
The capacity building on the forestry at present is very low. The situation regarding to the issue on question is little bit alleviated by intervention of the Swedish International Development Agency (SIDA) with his program "Support to forestry education and training in Kosovo". The execution parties of this program are MAFRD, Ministry of Education, Science and Technology (MEST). The objectives of the program are:

- Capacity building of the involved parties, including private foresters.
- Support to development of the strategy for professional education on forestry,
- Establishment of sustainable local program for professional education on forestry and creation of the possibilities for advanced education as BSc, M.sc. and Forest Engineer. Several trainings, courses and study visits to the countries in transition for the participants, are organized as well.

So far are registered and near the end of the studies as follow: 16 students/ BSc, 15 students/ Forestry Engineers and 7 students aiming to the Master Degree. Countries where the education is holding are: Albania, Croatia, Austria, Germany, Serbia, etc. The situation requires other additional coordinated engagement of all existing organizational levels of the sector. The research shows that in whole Kosovo is only one secondary school for the forestry. The school is located in Prishtina within Agriculture secondary school, where only one teacher is giving the lectures.

As per the needs of the wood processing industry by University of Prishtina, the branch in the Municipality of Ferizaj has organized the High Technical School/ Department of Wood Industry. There is also the Wood Technical training Centre in Peja/ organized and lead by German organization "GTZ" (GmbH).

Forestry Department organization structure is presented below:

CHART 1: FORESTRY DEPARTMENT ORGANIZATION STRUCTURE**b) Kosovo Forest Agency (KFA)**

The Kosovo Forest Agency is the executive body of the MAFRD and is led by Chief of Executive's. The Agency's organizational structure is build by divisions, sections, KFA's offices and municipal units, as is presented in Appendix (Annex 2.).

By the law in force, the KFA is responsible for matters relating to the regulation of private forests and the management and administration of public forests and national parks in Kosovo, except for the issues that law in particular states that is in charge other authority.

The activities and responsibilities of the Agency in detail are regulated by Administrative Directive No.07/2003.

In order to accomplish his obligations, the Agency should permanently take a care for the capacity building of his employees and provision of Extension and consulting services for the private owners of the forest.

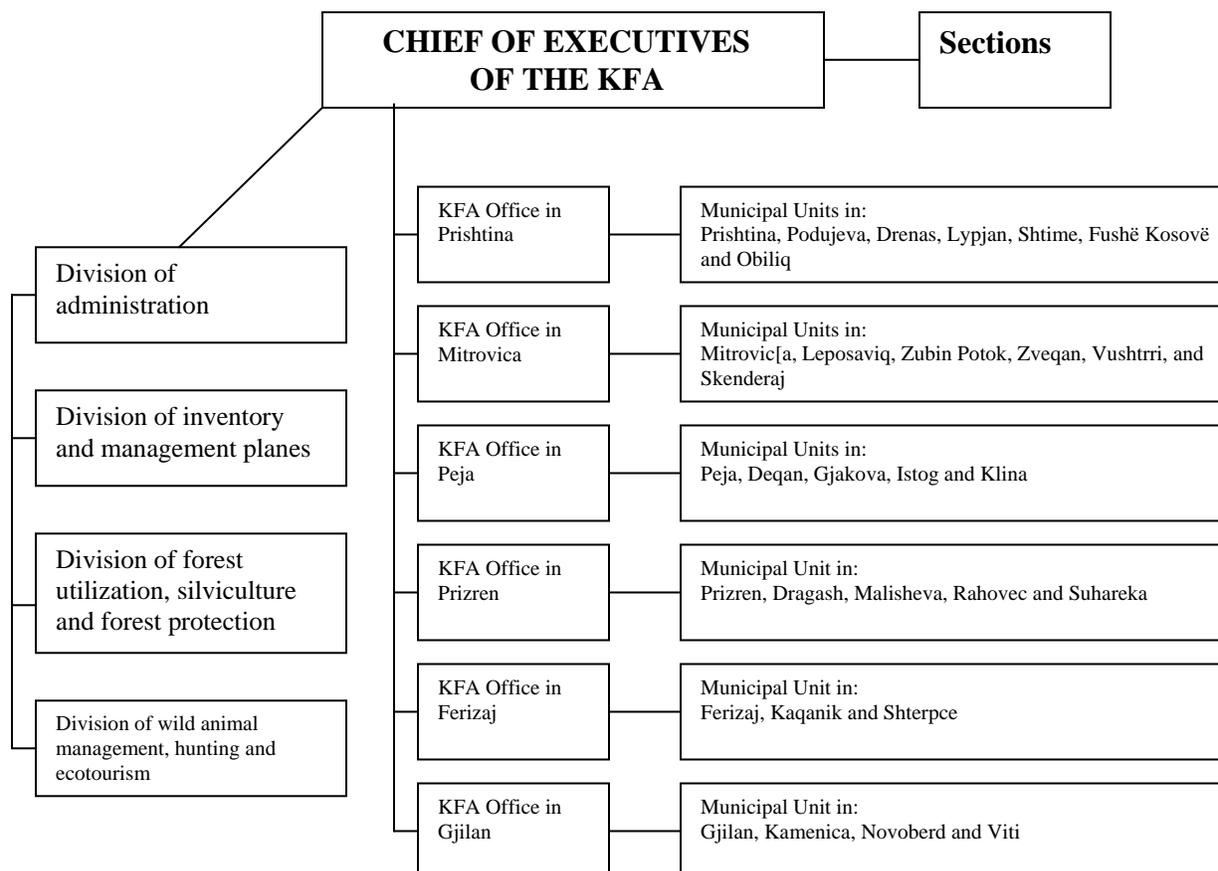
The number of the KFA's workers and other details on it are presented in the table below.

Table 3.1.1 KFA's workers and their structure

No.	Qualification	Required Number of Workers	Existing Number of Workers	Gender		Age/ years		
				M	F	20-30	30-50	over 50
1.	PhD	-	0	-	-	0	0	0
2.	M.Sc.	-	0	-	-	0	0	0
3.	Forest Engineer	60	14	14	0	0	8	6
4.	Technician	120	86	84	2	0	65	21
5.	Foresters	350	192	192	0	0	56	136
6.	Administrative	-	47	28	19	0	26	21
7.	Total		331	312	19	0	147	184

Source: MAFRD/ Kosovo Forest Agency, Administrative Division, 2007

The table above shows that low number of the workers and their age presents significant problem for the Agency. Neither gender issue is satisfactory. Capacity building of the personnel, find as very low at present, must be real permanent concern of the bodies in charge (FD and KFA). This task is stated by normative acts that regulate their terms of references too. KFA organization structure is presented below:

CHART 2: KOSOVO FOREST AGENCY ORGANIZATION STRUCTURE

Currently in the forest sector in Kosovo, as important event is introduction of the forest certification system. The project is a joint tentative of KCBS and MAFRD/ KFA to introduce and establish Forest Certification System, as important step toward sustainable forest management application.

3.1.2 Local governance level in forestry

Local self-government in Kosovo is regulated initially by UNMIK Regulation 2000/45, promulgated on the year 2000. Meanwhile some of the issues (as ownership, management etc) reckon in this law are regulated by other laws too, promulgated in addition, creating in this case the opportunities for contradictions, confusions and misinterpretation by implementers.

According to above mentioned regulation the basic territorial unit of local self-government in Kosovo shall be the municipality. The municipalities shall regulate and manage public affairs in their territory within the limits fixed by law... and “each municipality shall have its own legal status, the right to own and manage property, the capacity to sue and be sued in the courts, the right to enter into contracts and the right to engage staff.”

In practice it seems the main confusion is made by the Regulation’s sentence “the right to own and manage property”. In the sentence is a space for municipalities to interpret these as the “right to own and manage with public and social property within its territory” (the interview with municipality’s representatives has confirmed this conclusion). The absence of the Law on Property is making more complicated this situation. This kind of municipality’s approach regarding public and social property has included the “ownership” over the forest’s sector too.

As the research outcome has noticed, there is a conflict between municipalities and central government that is inherited from the past, about the right for management and utilization of the forests and forest’s land. Almost all municipalities are postulants of the right to self-manage with forests on its territory. So far this request is not supported by any of the UNMIK Regulation in force.

What happened in reality is that in the previous state system (before the year 1999), the existing Socially Owned Forest Enterprises (SOFE) recognized as “Ekonomi Pyjore” has been given by Central Government to the municipalities for the management purposes. The municipalities within their organizative structure has had (and still have), Directorates for Agriculture and Forestry that were in charge for the mentioned enterprises. Further, under circumstances that were present, **municipalities has the right to utilize** the products of the forest’s land and other forest’s public property (immovability), **to self-finance, to self-manage** the enterprise **with the right to employ and dismiss the management staff, to operate with the budget, to invest**, etc.

The “right to utilize” in that way with local forest’s resources, it seems have caused misunderstanding that have resulted with attitude of municipalities that they “own” local forests. This situation continued till the year 2003, where by entering into the force of the new Law on Forest, all above mentioned rights of municipalities, respectively the SOFE’s, were suspended. Instantly, by municipalities, is created opinion that by government is abolished their “ownership” over the forests.

By the law, the “ownership” and the “right for utilization” usually has the different meaning. A forest in Kosovo based on present law in force is “**national resource**”. The only thing that can be given and taken back in the legal way, to different governance levels is management with forest’s resources, what actually happened in the past with municipalities.

Based on the results of practical implementation of the Law in the sector, municipalities have stated that are not satisfied at all. On the contrary, this law is considered by them as key problem for a successful forest management in Kosovo. According to the interviews outcomes made by municipal representatives, the law is to be blamed why “are take over their competencies on the forest management”. They also agree with other parties that the law is not fully and in proper way covering all sectors’ issues.

Under the present law, “de jure” the municipalities with their Forest Departments don’t exist on the hierarchy of the forest management since the year 2003. “De facto” on behalf of the sector, the MAFRD/ have established official cooperation with municipalities/ Respective departments. Through annual MoU (recently as long term memorandum) signed by MAFRD, on behalf of the KFA and the AMK, on behalf of the Kosovo’s municipalities is established such cooperation.

With MoU in question are regulated following issues:

- “Information of Municipalities with draft on long term forest management planes, for the forests on private and public ownership.
- Information of municipalities with drafts of the annual forest management planes for the forests on private and public ownership.
- Cooperation for change of destination of the forest’s land
- Participation on the confiscation of the lumber and their share
- Dividing of the taxes from revenues created by licenses and all other revenues created in accordance with present Law on Forest in Kosovo (where in this case 20% belong to Municipalities)
- Cooperation and information between Municipality Units of the KFA and Municipalities.
- Engagement of the Municipalities in the Court’s work, Prosecutors, and Kosovo Police Service (KPS), in prevention of the forest damaging and undertaking of appropriate actions based on law.
- In cooperation and co-action with municipalities to give licenses for use of non-wood products (as stones, gravel, sand).
- Cooperation in the election of the responsible persons at the Municipality Units of the KFA.
- Destination of the values of the forestry’s fines to adequate budgets of the Municipalities.”

Based on municipality’s opinion, the memorandum, in practice, is not fully respected by KFA and is just formal. In further, exchange of information so far is present in direction Municipality to MAFRD/ FD and KFA, but not backwards.

Due to the present situation, the municipal opinion is that in the near future the main issue to be solved by authorities is re-definition of the municipality’s role and responsibilities in forest management, as is recommended by *FAO Report-Plane for development of the forests sector in Kosovo*.

It is well known that municipalities of Kosovo are vulnerable (poor). Having into consideration their social position, municipalities are looking at the forestry as opportunity for income generation as well as good employment opportunity. As per the income generation in forestry, currently based on law in force, all net incomes gained in the forestry (through licensing, etc.) must hand in to Kosovo Consolidated Budget (KCB). Only 20% of those incomes are returned back to municipalities (municipalities have stated that only ones that happened so far). Any dissatisfaction with current procedures of the system, it means request for change of the existing policies.

Despite the fact that municipalities have a wish to manage with forests in their territory, the municipal capacities for forest management currently are limited. Lack of adequate budget, professional staff, community awareness and all other things that are ranged for the central level in the forestry, speaks against this ambition.

3.1.3 Management of private forests

Private forestry sector in Kosova, based on the opinion of the different experts and institutions is underdeveloped. So far, no any intensive professional activity is registered in the sector.

By the 2003 Forest Law, Chapter IV, elaborates the general responsibilities, management, conversion to other uses, voluntary transfer of management authority and data collection on the Private Forest.

According to the same law, **owners of private forests in Kosova shall manage the land in accordance with this law and any rules promulgated under this Law.** Responsibilities that Kosovo Forest Agency has, regarding the private sector in forestry are provision of the Extension services as well as consulting. More serious cooperation among both sectors is on the way to be developed. The present law regarding the private forests states the following:

“As per the management activities, based on the mentioned law, the Minister (Director of the Forestry Department in MAFRD) may promulgate the following kinds of rules regarding management of private forests:

1. General standards for management;

2. Requirements to prepare or revise management plans with the advice and approval of the Forest Agency for:

- Parcels of 3 hectares or more, or for

- Parcels of any size that pose special management concerns, as defined by the Minister in a rule;

3. Requirements to follow management plans after they are approved; and

4. Schedules of fees for Government services to private forest owners.”

ANNEX 4.
Forest Harvest Availability and Revenues

4.1 Quantification of Forest Benefits

4.2 Basic Data and Assumptions

Based on the *Forest Inventory Report 2002/2003 undertaken by FAO*, we find that the total standing volume on Public and Private forestlands is estimated to be about **53 million m³**, where out of this volume the total standing volume only on public forestlands is estimated at about **33.5 million m³**. Out of this volume **25.9 million m³** are trees with a *diameter* >7 cm. On private forest the total standing volume is estimated at about **19.5 million m³** out of which **14.5 million m³** are trees with a *diameter* >7 cm. The report also found out that the total annual increment is calculated to be about **1,367,000 m³**. Out of this total volume about **1,167,000 m³** is on surveyed forestlands;

As the non-field surveyed forest (**85,600 ha**) to a large extent are located near minefields and other areas not accessible, it seems reasonable not to include this increment in the basis for annual allowable cut.

Table 4.1 Using the forest capacities at 100 %

Forest Resources	Percentage Owned	Total Annual wood increment at 100%	Using Forest resources at 100% capacity	
			Annual Technical wood increment in M ³	Annual Firewood increment in M ³
Public Forest	60%	60.33 %	43.61 %	56.39 %
	278,880 ha	704,107.14 m ³	307,084.20 m ³	397,022.94 m ³
Private Forest	40%	39.7 %	45.92 %	54.08%
	185,920 ha	462,893.52 m ³	212,545.85 m ³	250,347.67 m ³
All Forests	100%	100%	44.53 %	55.47 %
	464,800 ha	1,167,000 m ³	519,630.05 m ³	647,370.61 m ³

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

Table 4.1 reflects the total annual wood increment for both forestry sectors (Public and Private). The reflected figures show the forest capacities being used at a 100%, which according to the international standards is not sustainable.

Thus, based on the actual status of the forestry, the annual allowable cut has been estimated at **900,000 m³** corresponding to 77% (based on International standards) of the calculated increment on areas surveyed. About **700,000 m³** can be harvested in High Forest (> 16 m) and about **200,000 m³** in low forest. These estimates are gross and include tops, bark and larger branches. *"However, other evaluations regarding the annual wood increment exist, such as the evaluations made by another study, which was published almost 30 years ago⁴."* Nevertheless, Figure 4.1.1 based on the data provided by FAO, reflects the total annual harvesting volume for both forestry sectors at 77 %, and as we can see from table 4.1.1, 60.33 % of the annual increment belongs to the public forests, and the rest to the private forests.

Also according to the class quality of the forest, table 4.1.1 shows that in the public forests 43.61% of the annual wood increment is technical wood, and 56.39 % is firewood. Whereas

⁴ Šumski resursi kao sirovinska osnova za razvoj industrijske prerade drveta u Socialistickoj Autonomnoj Pokrajini Kosovo, Grupa autora, Priština, Jun 1981.

in the private forests 45.92 % is technical wood and 52.5 % is firewood. Thus, if we look at the total annual wood increment for both types of the forest we see that 44.53 % of the total annual allowable cut is technical wood and 55.47 % is firewood.

Table 4.1.1. The annual allowable cut of the forest capacities at 77 % (Management sustainable use of the forest)

Forest Resources	Percentage Owned	Total Annual wood increment at 77%	Using Forest resources at 77% capacity	
			Annual Technical wood increment in M ³	Annual Firewood increment in M ³
Public Forest	60%	60.33 %	43.61 %	56.39 %
	278,880 ha	543,013.04 m ³	236,825.78 m ³	306,187.26 m ³
Private Forest	40%	39.67 %	45.92%	54.08%
	185,920 ha	356,986.96 m ³	163,917.05 m ³	193,069.91 m ³
All Forests	100%	100%	44.53 %	55.47 %
	464,800 ha	900,000 m ³	400,742.83 m ³	499,257.17 m ³

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

However, according to the Kosovo Forest Agency (KFA), the lack of the necessary personnel and financial resources makes it impossible to plan the annual allowable cut (Lumber and Firewood) of **900,000m³**, and as a result the KFA has only been able to plan an annual allowable cut of about **265,000 m³** of firewood of public and private forest as shown in table 4.1.2 where only about 80% has been implemented.

Table 4.1.2 The annual planned harvesting of both forestry sectors, and their revenues

Year	Public and Private Forests					Total Revenue €
	Planned Harvest in M ³ ***	Technical wood		Firewood		
		Harvested in M ³	Fee Revenue in €	Harvested in M ³	Total Revenue in €	
2004	247,416	23,559	706,770	169,394	833,740	1,540,510
2005	250,169	23,931	717,930	205,085	858,725	1,576,655
2006	265,348	26,560	796,800	204,280	834,049	1,630,849
2007	240,304	20,332	609,960	171,910	730,513	1,340,473
Total	1,003,237	94,382	2,831,460	750,669	3,257,027	6,088,487

Source: Kosovo Forest Agency

Thus, according to the management plans of the KFA, we calculate that the average planned harvesting for the past four years for both forestry sectors and for both types of wood (firewood and technical wood) is considerably less than the potential annual allowable cut, which stands at 900,000 m³. The planned annual harvest by the KFA was 250,809 m³; 107,842 m³ from public forests and 142,968 m³ from private forest lands. Approx. 80% of the planned harvest was realized.

Table 4.1.3 Annual harvesting averages for both forestry sectors for the past four years.

	Planned Harvest in M ³ *	Technical wood			Firewood			Total Revenue €
		Harvested in M ³	Fee to KFA €/M ³	Sales/Fee Revenue in €	Harvested in M ³	Fee to KFA €/M ³	Sales/Fee Revenue in €	
Public Forest	107,842	23,596	30	707,865	62,677	10	626,772	1,334,637
Private Forest	142,968	n/a	n/a	n/a	124,990	1.5	187,485	187,485
All Forests	250,809	23,596	n/a	707,865	187,667	n/a	814,257	1,522,122

Source: Kosovo Forest Agency

Also table 4.1.3 shows that the average planned harvesting for firewood for both sectors stands at 187,667 m³ and for technical wood stands at 23,596 m³. After a brainstorming session with numerous experts in this field, we produced the following figures as shown in table 4.1.4. The result was that Kosova approximately has around 335,000 families, where about 50% of them, as a heating source they use firewood, and the rest of the families use other alternative energy sources as mentioned in the table below.

Table 4.1.4 The number of families in Kosova, and the type of energy that they use

Type of energy	Population %	Families in Kosovo: 335,000
Firewood	50	167,500
Electric Energy	30	105,000
Coal	10	33,500
Other	10	33,500
Total	100	335,000

Source: KFA experts, local forest engineer expert

As we can see from table 4.1.5, even though the needs of the population for firewood are only 50%, still we estimate this necessity to be about 837,500 m³, and if we use only 70 % of the annual increment (International standards for sustainable use), then we find that in a sustainable way, Kosova is not able to meet the needs of the population, in fact about 319,500 m³ falls short of meeting its population needs.

Table 4.1.5 The annual volume needs of the population for firewood at 70%

Type of energy	Firewood
50% of the Families using firewood	167,500
No of m ³ per family	5
Total firewood needed m³	837,500
Forest annual harvesting potential m ³	518,000
Firewood shortfall in m³	319,500
Estimated Annual Firewood Imported m ³	100,000
Total Firewood shortfall in m³	219,500

Source: KFA experts, local forest engineer expert

Table 4.1.5 also shows an estimated firewood import of about 100,000 m³, but without comprehensive and accurate data from Customs Dept. it is impossible to know the exact amount of firewood being imported. Also due to the lack of data, the firewood imported from Serbia is not included on these calculations. But the balance of 219,500 m³ will have to be made up from imports and/or, regrettably, by diverting technical wood to firewood, or by using the annual increment of the forest at a 100% capacity, and only then with the aid of Imports, Kosova is able to just about meet the needs of the population, but in that case it will not be using its forest in a sustainable way.

4.2.1 Current Wood Availability and Revenues

The table below also shows the revenue stream from controlled sales that are generated for the government.

Table 4.2.1.1 Government revenue stream from controlled sales of Public forest.

Year	Public Forest								
	Planned Harvest in M ³	Technical wood in M ³	Impl. M ³ (80%)	Price 1m ³ /€	Total €	Firewood in M ³	Impl. M ³ (80%)	Price 1m ³ /€	Total €
2004	114,692	29,449	23,559	30	706,776	85,243	68,194	10	1,388,720
2005	110,958	29,914	23,931	30	717,936	81,044	64,835	10	1,366,288
2006	110,793	33,200	26,560	30	796,800	77,593	62,074	10	1,417,544
2007	94,923	25,415	n/a	30	n/a	69,507	n/a	10	n/a
Total					2,221,512				4,172,552

Source: Kosovo Forest Agency

Table 4.2.1.1 also shows that KFA has only been able to plan an annual allowable cut of about **110,793 m³** (firewood and technical wood) of public forest, where only about 80% has been implemented. According to the KFA the annual allowable harvesting for the public forest is implemented by local companies through tendering procedures, and revenues go directly to the consolidated budget of Kosova (see table 4.2.1.1).

Table 4.2.1.2 Government revenue stream from issued individual licenses for the harvesting of private forests.

Year	Private forest				Afforestation	
	Planned harvest m ³	Impl. m ³	Price 1m ³ /€	Total €	Planned ha	Impl. hectares
2004	132,724	101,200	1.5	151,800	85	22
2005	139,211	140,250	1.5	210,375	23	26
2006	154,555	142,206	1.5	213,309	200	186
2007	145,381	n/a	1.5	n/a	176	146
Total				575,484		

Source: Kosovo Forest Agency

Whereas the annual allowable cut in the private forests is implemented by private owners themselves, and private owners here only pay for the license that they get from the KFA for cutting their forest, and they pay the license fee direct to the government (see table 4.2.1.2). Thus, if the government were to behave more efficiently and use 77% of its annual allowable harvesting of both forest types (firewood and technical wood), then it would generate considerable revenues, as are shown in table 4.2.1.3.

Table 4.2.1.3 Government revenue stream from controlled sales of Public forest.

Public Forest							
Planned Harvest in m ³	Technical wood in m ³	Price 1m ³ /€	Tech wood Total €	Firewood in m ³	Price 1m ³ /€	Firewood Total €	Total €
543,013.04	236,825.78	30	7,104,773.40	306,187.26	10	3,061,872.60	10,166,646

Source: Calculations by Local forest engineer expert

Nevertheless, if we look again at the average annual planned harvesting by KFA in 2006 as shown in table 4.1.3, we see that the planned harvesting for both forestry sectors is 250,809 m³, where only about 80 % has been implemented. Thus for both sectors, about 187,667 m³ of firewood has been harvested, and about 23,596 m³ of technical wood has been harvested, but none from private forests.

Table 4.2.1.4 The level of illegal exploitation of the forest in Kosovo, in both sectors (Private and Public).

Year 2006	Firewood in M ³
KFA - Harvesting at 80% in m³	187,667
Import	100,000
Illegal Harvesting	549,833
Total: (Population needs)	837,500

Source: Calculations by Local forest engineer expert

Thus, table 4.2.1.4, shows that the needs of the population stand at 837,500 m³, the KFA has only provided 187,667 m³, with import estimates at about 100,000 m³, which reflects that the annual shortfall of around 550,000 m³ in firewood needs is presumably made up of illegal harvesting of firewood from public and private forestlands. This figure could be lower due to the fact that we do not have accurate data regarding imported wood products (due to the lack of unit measurements at customs (see **Tables 4.2.2.5 and 4.2.2.6 which were provided by UNMIK Customs**)), we could not get an accurate data as to how many m³ of firewood is imported), also this figure might be lower because a lot of imported firewood comes unregistered from Serbia.

Even the project of Forest Inventory by FAO points out that 40% of public forest and 29% of private forest have been subject to uncontrolled or illegal harvesting activities. Nevertheless, by all standards these figures are very high. The situation is most critical especially in the coniferous forest where the entire existence of large forest areas is put at risk if no strong and immediate actions are taken. The inventory results also confirmed expert opinions that coppice forest, especially on public forestlands, is exposed to heavy harvesting.

Based on the interviews held with the KFA officials, several Municipalities, and various experts in this field, the court system in Kosova has to be more efficient in penalizing those individuals who are caught in illegal wood harvesting. But as the results in table 4.2.1.5 point out, that out of the thousands of criminal charges and other charges as well, the court system is very slow and very inefficient in penalizing those responsible for illegal wood harvesting, and in fact for the past four years has only been able to investigate and finish 46 cases.

Table 4.2.1.5 Court Charges and their structure for the damages in the public forests

Year	Requests for Charges	Infraction charges	Criminal charges	Volume of damage m ³	Value of damage €	Investigated cases
2004	5,415	3,729	1,652	11,997	1,465,583.00	-
2005	7,899	5,872	1,977	18,550	2,003,515.00	40
2006	8,732	6,568	2,164	20,588	2,350,532.00	-
2007	3,699	3,203	466	8,421	1,031,327.44	6
Total:	25,745	19,372	6,259	59,556	6,850,957.44	46

Source: KFA, 2007/ Annual Forest's Management Planes (for 2004- 2007)

Regarding revenues, the Kosovo Consolidated Budget (KCB) for the past four years, on average has received revenues from the sales and fees of wood harvested on Public lands of about €1,334,637, whereas from the private forest owners, it received fees of about €87,485 from selling them private licenses for cutting their forest. Under the Law on Forests, 40% of revenues (i.e. €608,850), forwarded by the KFA to the KCB, is supposed to be returned to the KFA for forest improvements, such as road infrastructure, forest afforestation and other forest maintenance tasks. (See table 4.1.3)

4.2.2 Potential Availability and Revenues from Well Managed Forests

If Kosovo's Forest resources are managed in a sustainable way, then it is not possible to fulfill most of the needs of population with firewood and possibly lumber wood as well (we do not know the needs of the population for lumber wood, because no study has ever been conducted regarding this issue). In fact, even if the forest annual increment is used to a maximum, even then Kosova forest is not able to meet its population needs for firewood without the aid of imports.

At the moment, domestic production capacities are not exploited to its maximum potential, due to the lack of management plans, lack of road infrastructure, neglect through low financial commitments to the forest by the government and the low efficiency within Kosovo's Forest Agency.

Table 4.2.2.1 reflects the annual potential for sustainable forest harvesting based on the tree species and volume. This volume reflects sustainable forest harvesting, respectively 77% of the total annual increment for the two categories of the wood quality, that of lumber (technical wood) and firewood.

Table 4.2.2.1 Distribution of annual allowable harvesting by species and ownership, for both public and private forests >7 cm (1 000 m³). Surveyed area.

Tree Species	Public Forest			Private Forest			Total / M ³
	Gross / m ³	Factor	Net / m ³	Gross / m ³	Factor	Net / m ³	
Quercus	99,000	0.50	50,000	290,000	0.55	162,000	212,000
Fagus	320,000	1.00	320,000	116,000	1.00	116,000	436,000
Other br.l	75,000	0.85	64,000	76,000	0.85	65,000	129,000
A Alba	7,000	0.50	36,000	7,000	0.80	6,000	42,000
P Abies	27,000	0.50	13,000	16,000	0.80	13,000	26,000
Pinus ssp	60,000	0.80	48,000	1,000	1.00	1,000	49,000
Other con.	6,000	0.75	5,000	1,000	1.00	1,000	6,000
Total:	660,000	0.81	536,000	507,000	0.72	364,000	900,000

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

Nevertheless, the annual allowable cut is 900,000 m³, so the potential is quite high, and as a result of exploring this potential, based on the prices quoted by the KFA for firewood and technical wood for both sectors, I have calculated the following results in three scenarios; Scenario 1 and Scenario 2 and Scenario 3.

Table 4.2.2.2 Total revenues obtained based on Scenario 1 (Impl. 60%)

SCENARIO II	Planned Harvest in M ³ \$\$\$	Technical wood			Firewood			Total Revenue €
		Harvested in M ³	Fee to KFA €/M ³	Sales/Fee Revenue in €	Harvested in M ³	Fee to KFA €/M ³	Sales/Fee Revenue in €	
Public Forest	543,013.04	142,095.47	30	4,262,864.10	183,712.36	10	1,837,123.60	6,099,988
Private Forest	356,986.96	98,350.23	3	295,050.69	115,841.95	1.5	173,762.93	468,813.62
All Forests	900,000	240,445.70	n/a	4,557,914.79	299,554.30	n/a	2,010,886.53	6,568,801.32
40% Profits returned to the KFA	n/a	n/a	n/a	1,823,165.92	n/a	n/a	804,354.61	2,627,520.53

Source: Calculations based on the report by FAO, and on the KFA data

If we assume that the level of implementation of the annual allowable cut by the KFA is at 60%, then the potential revenues generated for the government and for the KFA will be like in Scenario 1 in table 4.2.2.2. Thus revenues generated for the government will be about 6.6 million, where about 40% (2.6 million euros) of that will be given back to the KFA for forestry investments.

In table 4.2.2.3 Scenario 2 shows the potential revenues that the KFA might obtain if it operates more efficiently, and implements the planned harvesting at 80%. The total potential revenues as shown in the table below are over 8.7 million, where 40% or 3.5 million euros is returned to the KFA for forest investments.

Table 4.2.2.3 Total revenues obtained based on Scenario 2 (Impl. 80%)

SCENARIO I	Planned Harvest in M ³ ***	Technical wood			Firewood			Total Revenue €
		Harvested in M ³	Fee to KFA €/M ³	Sales/Fee Revenue in €	Harvested in M ³	Fee to KFA €/M ³	Sales/Fee Revenue in €	
Public Forest	434,410.43	189,460.624	30	5,683,818.72	244,949.808	10	2,449,498.08	8,133,316.8
Private Forest	285,589.57	131,133.64	3	393,400.92	154,455.928	1.5	231,683.892	625,084.812
All Forests	900,000	320,594.264	n/a	6,077,219.64	399,405.736	n/a	2,681,181.972	8,758,401.612
40% Profits returned to the KFA	n/a	n/a	n/a	2,430,887.86	n/a	n/a	1,072,472.79	3,503,360.64

Source: Calculations based on the report by FAO, and on the KFA data

While Scenarios one and two assume that the KFA implements only about 60 and 80% of the planned annual cut, the third Scenario in table 4.2.2.4 assumes that the KFA implements 100% of the annual allowable cut which according to FAO⁵ stands at 900,000 m³. Thus, if the KFA implements 100% of its annual allowable cut, then the KFA might generate nearly 11 million (see table 4.2.2.4), where 40% (around 4.4 million euros) is returned to the KFA for forest investments.

Table 4.2.2.4 Total revenues obtained based on Scenario 3 (Impl. 100%)

SCENARIO II	Planned Harvest in M ³ \$\$\$	Technical wood			Firewood			Total Revenue €
		Harvested in M ³	Fee to KFA €/M ³	Sales/Fee Revenue in €	Harvested in M ³	Fee to KFA €/M ³	Sales/Fee Revenue in €	
Public Forest	543,013.04	236,825.78	30	7,104,773.4	306,187.26	10	3,061,872.60	10,166,646
Private Forest	356,986.96	163,917.05	3	491,751.15	193,069.91	1.5	289,604.865	781,356.015
All Forests	900,000	400,742.83		7,596,524.55	499,257.17		3,351,477.465	10,948,002.015
40% Profits returned to the KFA	n/a	n/a	n/a	3,038,609.82	n/a	n/a	1,340,590.99	4,379,200.81

Source: Calculations based on the report by FAO, and on the KFA data

⁵ According to the FAO's "Kosovo Forest Inventory Report" dated 2002/2003, the distribution of annual allowable harvesting by species and ownership, for both public and private forests >7 cm diameter, the net allowable cut is 60.33 % Public forest and 39.67% private.

Table 4.2.2.5 Export and Import data regarding lumber and firewood products, only in m³.

Year	Export & Import	Product Description	Unit	Quantity	Custom value	Custom Fee	VAT
2004	Import	<i>Lumber</i>	m ³	228,431.11	7,803,866.58	13,186.01	1,172,557.89
		<i>Firewood</i>	m ³	20,527.80	86,835.12	535.47	13,105.59
		Total Import	m³	248,958.91	7,890,701.70	13,721.48	1,185,663.48
	Export	<i>Lumber</i>	m ³	504	70,880.79	n/a	n/a
		<i>Firewood</i>	m ³	n/a	n/a	n/a	n/a
		Total Export	m³	504	70,880.79	n/a	n/a
2005	Import	<i>Lumber</i>	m ³	114,444.23	6,984,692.58	39,977.08	1,053,700.45
		<i>Firewood</i>	m ³	2,937.50	44,333.06	0	6,649.96
		Total Import	m³	117,381.73	7,029,025.64	39,977.08	1,060,350.41
	Export	<i>Lumber</i>	m ³	884	171,021.57	n/a	n/a
		<i>Firewood</i>	m ³	n/a	n/a	n/a	n/a
		Total Export	m³	884	171,021.57	n/a	n/a
2006	Import	<i>Lumber</i>	m ³	224,473.37	11,380,018.95	339,194.70	1,757,882.05
		<i>Firewood</i>	m ³	11.80	1,625.76	n/a	243.86
		Total Import	m³	224,485	11,381,644.71	339,194.70	1,758,125.91
	Export	<i>Lumber</i>	m ³	676.13	100,916.03	n/a	n/a
		<i>Firewood</i>	m ³	n/a	n/a	n/a	n/a
		Total Export	m³	676.13	100,916.03	n/a	n/a
Until July 2007	Import	<i>Lumber</i>	m ³	47,837.84	5,333,629.95	10,121.86	801,385.61
		<i>Firewood</i>	m ³	n/a	n/a	n/a	n/a
		Total Import	m³	47,837.84	5,333,629.95	10,121.86	801,385.61
	Export	<i>Lumber</i>	m ³	25,677.51	129,162.20	n/a	n/a
		<i>Firewood</i>	m ³	n/a	n/a	n/a	n/a
		Total Export	m³	25,677.51	129,162.20	n/a	n/a

Source: UNMIK Customs Service Database for the past four years

Table 4.2.2.6 Export and Import data regarding lumber and firewood products in all unit measurements

Year	Export & Import	Product Description	Units	Quantity	Custom value	Custom Fee	VAT	
2004	Import	Lumber	1000 M ³	65,704.08	567,217.91	10,115.95	86,600.08	
		Firewood		16,676.81	26,869.53	535.47	4,110.75	
		Total Import		82,380.89	594,087.44	10,651.42	90,710.83	
	Export	Lumber		CP	183	10,748	n/a	n/a
		Firewood		CP	n/a	n/a	n/a	n/a
		Total Export		CP	183	10,478	n/a	n/a
	Total: Export & Import			GN	82,563.89	604,835.44	10,651.42	90,710.83
2005	Import	Lumber	GTO	52,595.86	294,688.88	13,003.55	46,138.62	
		Firewood	KG	566,049.42	51,031.83	86.1	7,667.69	
		Total Import	KG	618,645.28	345,720.71	13,089.65	53,806.31	
	Export	Lumber	KNE	1,050	10,415	n/a	n/a	
		Firewood	LT	n/a	n/a	n/a	n/a	
		Total Export	LT	1,050	10,415	n/a	n/a	
	Total: Export & Import		M1	619,695.28	356,135.71	13,089.65	53,806.31	
2006	Import	Lumber	M2	158,926.50	52,547.78	1,188.16	8,060.39	
		Firewood	M2	1,504,695.02	60,386.15		9,057.92	
		Total Import	MG	1,663,621.52	1,663,621.52	1,188.16	1,663,621.52	
	Export	Lumber	MTK	2,002.00	1,334.50	n/a	n/a	
		Firewood	MTK	12,000	340.00	n/a	n/a	
		Total Export	MTR	14,002.00	1,674.50	n/a	n/a	
	Total: Export & Import		PCE	1,665,623.52	1,664,956.02	1,188.16	1,663,621.52	
Until July 2007	Import	Lumber	TN	295,111.41	77,205.96	358.33	11,634.64	
		Firewood	TN	500,691.50	24,732.28		3,709.84	
		Total Import	-	795,802.91	101,938.24	358.33	15,344.48	
	Export	Lumber	-	n/a	n/a	n/a	n/a	
		Firewood	-	12,000	306.00	n/a	n/a	
		Total Export	-	12,000	306.00	n/a	n/a	
	Total: Export & Import		-	807,802.91	102,244.24	358.33	15,344.48	

Source: UNMIK Customs Service Database for the past four years

ANNEX 5.
Forest Necessary Investments

5.0 INVESTMENTS REQUIRED TO ESTABLISH WELL MANAGED FORESTS

5.1 Forest Management Plans:

One of the most urgent needs for the forest sector in Kosova, is the composition of the “Strategy and Policy Development of the Forest”. Due to the lack of a Development Strategy in the forest sector, many problems arise especially for the department of the planning management, and problems due to the lack of Strategy are inter-communicated in the whole planning and exploitation process of the forest. The cost of drafting managing plans, plans for opening new roads, the inclusion of the needs and interests of the community, and that of the wood refinement sector, all of these problems are closely linked to the development of the forest strategy. Thus, MAFRD and KFA need the technical and financial assistance of investors, in order to develop a comprehensive forest strategy.

Considering the importance and the necessity of the strategy, we consulted with our local and international partners, and it was estimated that the cost of preparing and drafting the “Strategy and Policy Development of the Forest” for the Public and Private Forests will be about 220,000 euros.

5.1.1 Investments for the Forest Management Plans⁶ (10 Year Plans)

One of the main problems of the forest management in Kosova is the lack of management plans. The whole forest area of the public sector, with an area of 278,880 ha is made up of 80 economic units (management units), and almost all of the 10 year management plans have expired. This year, the support provided by the Norwegian government, has enabled the process of beginning the development of methodology and technology for the preparation of forest management plans. The area that is covered with the management plans until now is 5,600 ha, around 1.2% of the total forest area. The lack of effective up to date management plans has a direct impact in the sustainable management of the forest, creates the opportunities for forest misuse and mismanagement, and inadequate treatment of the forest area. In order for the total forest surface to be covered with valid management plans, a serious professional and financial commitment is required.

The cost of preparing management plans changes due to the quality of the forest, its accessibility with forest roads, as well as the level of forest inclination (attainable and unattainable). In the high forest (high quality) category, the cost of preparing management plans is higher, due to the level of accuracy of data that we will obtain. Whereas, the cost of preparing management plans for the low forest (low quality) is lower compared to the high forest, because of the requirement of the level of accuracy and quality of data. The cost changes after management plans in Kosova are designed to have profitable price (Cost-benefit approach). As far as the private sector is concerned, according to the present law, they are required to possess management plans, where the criteria for having a management plan is the size of the forest parcel. For owners with small forest parcels, then for them it's sufficient to prepare operative plans which usually are one year old plans. Nevertheless, no analysis has been done regarding the cost of preparing management or operative plans for the private forest.

⁶ The Forest Management Plans contain all the plans for everyday activities for the next ten years, starting from planned forest harvesting, activities for sector development, silviculture treatment, afforestation, and forest protection (from pests, diseases, fires, human damage etc).

5.1.2 The Cost of Preparing Management Plans for all the Forest Categories

The total forest area in Kosova is 464,800 ha, out of which 278,880 ha, or about 60% is classified as state forest or public forest and the remaining 185,920 ha or about 40% is owned by private persons. Table 5.1.2 calculations include the public sector of the high and low forest, and in the price per ha is included, the work of preparing data regarding the sector, buying aerial photos from Kosovo's Cadastre Agency and the ownership data, field work and data processing (see table 5.4.2). The part of the forest which is spread out in the National Park of the "Mali I Sharrit", is mainly made up of high forest, and has an area of 25,200 ha, where the price for the preparation of the management plans for these forest has not been calculated.

Table 5.1.2 The cost of drafting Forest Managing Plans for all forest categories

Forest Category	Area in Ha	Price/Ha/€	Total Price/€
High Forest	73,200	18.39	1,346,148
National Parks	25,200	18.39	463,428
Low Forest	100,600	8.26	830,956
Under Regeneration	24,600	4 €	98,400
Total	223,600	≈ 12.26 €	2,738,932

Source: Calculation by local Independent Forest Engineer using rates in the region.

5.2 Silviculture Treatment

The results from the report on Forest Inventory of Kosovo which was implemented by FAO, shows that the annual increment changes according to the different categories of the stand origin.

Table 5.2 Forest area, mean volume per ha and mean annual increment per ha by stand origin (surveyed areas, >7 cm).

Stand origin	Public Forestlands			Private Forestlands			Total / average		
	Total Area ha	Vol m3/ha	Incr m3/ha	Total Area ha	Vol m3/ha	Incr m3/ha	Total Area ha	m3/ha	Incr m3/ha
No current stand	22,200	0.4	0	10,000	0.9	0	32,200	0.5 (-)	0
Natural seeding	89,200	190	5.5	82,000	120.4	4.2	171,200	156.7 (5.4)	4.9
Planting/artificial	1,800	103.4	4.2	(400)	(481.6)	(15.5)	2,200	172.2 (34.4)	4.2
Coppice/seeding/pl (mixed)	17,600	96.1	3.9	19,000	50.9	2.3	36,600	72.6 (11.6)	3.1
Coppice	62,000	19.9	1.0	53,800	35.6	1.7	115,800	27.2 (9.2)	1.3
Coppice with standards	10,000	57.5	2.4	11,200	77.1	2.2	21,200	67.9 (17.6)	2.3
Total	202,800	100.5	3.2	176,400	77.7	2.9	379,200	91.1 (6.1)	3.0

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

Thus table 5.2 reflects the annual increment per ha according to stand origin of the forest. From the table above, we can see very clearly that the highest annual increment is in the forest of natural seeding (high forest), followed by the forest of artificial origin (forest plantations), whereas the annual increment of the low forest is lower than that of the high forest. The low forest with standards (coppice with standards) have a higher annual increment compared to the coppice forest, thus future investments should be concentrated and focused more on the improvement of the structure of the low forest and their transfer to the forest of coppice with standards, where they will have the potential of becoming high forests. This category of the forest (coppice) is made up of a very considerable area and its structure improvement of this category is very important for the future in the light of economic development and fulfilling the needs of the country for lumber wood and firewood.

Table 5.2.1 below again stresses the urgent need for the treatment of the low forest and its structure improvement (evaluated also in the field during the project of national forest inventory).

Table 5.2.1 Private and Public forest area by treatment opportunity and stand structure (ha).

Treatment opportunity	No stand	High forest	Coppice or mixed	Unknown / no data	Total
No treatment	22,600	27,800	49,800	-	100,200
Regeneration without site preparation		2,000	1,600	-	3,600
Regeneration with site preparation	2,400	800	1,400	-	4,600
Conversion	2,200	14,400	10,800	-	27,400
Cleaning-thinning	4,600	74,400	92,800	-	171,800
Thinning		20,000	4,800	-	24,800
Clear cut, strip clear cut		1,400	400	-	1,800
Selection		17,000	4,600	-	21,600
Salvage		15,600	7,400	-	23,000
No data	400			83,600	84,000
Total	32,200	173,400	173,600	83,600	464,800

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

Considering the urgent need for silviculture treatment in Kosovo's forests, the KFA over the past four years has managed to plan and implement (100%) silviculture treatment on over 34,435 ha as shown in table 5.2.2.

Table 5.2.2 Planned activities in silviculture

No.	Year	Planned activities in Silviculture (ha)	Price per 1ha in €	Total €	Implemented by KFA %
1,	2004	10,488	≈ 150	1,573,200	100
2.	2005	6,873	≈ 150	1,030,950	100
3.	2006	6,069	≈ 150	910,350	100
4.	2007	11,005.	≈ 150	1,650,750	100
Total	4	34,435	≈ 150	5,165,250	100

Source: KFA, 2007/ Annual Forest's Management Planes (for 2004-2007)

The cost of this activity costs around €150 per ha, however most of the time this activity is done in cooperation with the local population, and as a result the local population implements this activity and at the end as a reward they take the leftovers (wood branches) of the cleaning-thinning process, and the cost to the KFA is negligible. But sometimes when the leftovers are not considered very attractive to the local population, then that is when the KFA has to engage paid workers to do this activity, where the cost to the KFA is around €150 per ha. Table 5.2.3 shows the needs of the forest for urgent treatment. This kind of treatment (cleaning-thinning) requires a lot of investments, because the volume which is extracted out of this forest area is non-commercial (dbh < 7cm). Whereas the other part of the forest area that is treated for cleaning-thinning is mainly commercial treatment (profitable).

Table 5.2.3 Private and Public forest area by treatment opportunity of high and low forest (ha)

Treatment opportunity	Area	Cost / Ha / €	Total Cost / €
Cleaning-thinning / High Forest	74,400	-	-
Cleaning-thinning / Coppice Forest dbh<7cm)	92,800	150	13,920,000

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

5.3 Forest Roads

The road network spread out in the forest is 7m/ha. The present condition of the existing roads doesn't fulfill any of the known standards and hinders most activities for using the forest. Thus, urgent investments are required for the improvement of the existing road network (such as providing the existing road infrastructure with protected walls, drainage, and other road network elements) especially in the high forest area. Over the last years, forest harvesting has been concentrated mainly on attainable areas with forest roads. The other remaining part of the harvesting volume is stretched out in areas where there is no forest road access, thus in the future harvesting should be planned and concentrated to be done in those inaccessible areas of the forest, which is in urgent need for opening up new forest roads.

In table 5.3, we see some calculations for the maintenance of the existing road infrastructure, the opening of new forest roads and their maintenance as well. These price calculations have been done by a local independent forest engineer, relying on European standards for building these roads, but these calculations were done also using the standard cost of the countries in the region these kind of activities, and we also used figures that companies in Kosovo charge to build these roads. However, the existing network of the road infrastructure and its condition requires a complete evaluation of all forest roads and their classification based on their needs for investments and maintenance.

Table 5.3 Cost of opening new forest roads, and the cost of maintaining new and existing roads

Activity	Length/m	Price/Unit/€	Total/€
Maintenance of existing roads	512,400	30	15,372,000
Open new Road	362,000	70	25,340,000
Maintenance of new road and existing road	874,400	0.5	437,200

Source: Calculation by local Independent Forest Engineer using rates in the region.

The maintenance of the existing road infrastructure has a high cost due to the fact that over the last few years there have not been any authentic investments in the road infrastructure. The opening of additional forest roads has been planned to be 12 m/ha in high forest, despite the fact that the need may be for a more densely road network, but this can be readjusted after the preparation of management plans and after the dominating forest volume of the high forest has been identified. These two investment categories are required to be done in the initial phase (only once). After the existing road infrastructure has been improved, and the opening of new roads has been completed, then every year the forest road maintenance must be done, which in total only for the high forest comes to 874,400 m.

Based on the calculations from table 5.3 we can derive the following investments of the high forest per hectare, as shown in table 5.3.1.

Table 5.3.1 Cost of opening new forest roads, and the cost of maintaining new and existing roads per hectare

Activity	m/1 Ha	Price/m	Total €/1 Ha
Maintenance of existing roads	7	30	210
New rods	5	70	350
Maintenance of all roads in high forest in the future	12	0.5	6.0
Total/ 1 Ha			566

Source: Calculation by local Independent Forest Engineer using rates in the region.

The majority of the high forest lies at an altitude of over 800 m above sea level, thus an even bigger expansion of the road network is required compared to the existing road network, and that is why the cost of opening new roads at this altitude is higher. Table 5.3.2 reflects the elevation of the public and private forests based on the altitude above sea level.

Table 5.3.2 Public and Private forest areas by stand origin and elevation (ha)

Stand origin	Elevation								No data
	200-400	400-600	600-800	800-1000	1000-1200	1200-1400	1400-1600	>1600	
No current stand	1,000	9,000	14,800	5,200	800	800	200		400
Natural seeding	1,000	9,600	58,200	46,000	16,200	15,400	11,600	12,000	1,200
Planting or artificial seeding		1,600		400		200			
Coppice/seeding or planting (mixed)	1,000	14,400	5,800	5,400	5,600	2,200	1,400	600	200
Coppice		17,800	43,400	38,600	4,600	3,600			
Coppice with standards	5,400	600	6,000	10,200	3,200	800	1,600	400	400
No data				400					81,600
Total	8,400	53,000	128,200	106,200	30,400	23,000	14,800	13,000	83,800

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

5.4 Summary of the Expenses for the Management of One Forest Hectare

5.4.1 The Management Cost of High and Low Forest.

For calculating the cost of management per hectare of the high forest, the featured data may differ due to variations of the landscape, due to the forest road access, slope of the forest, and other characteristics. Another obstacle is also the lack of data regarding the accuracy of data about the tariffs of services in Kosovo's forests. In the near future, through developing practices in the field we hope to have a forest information system with more details and more accurate. Table 5.4.1 shows the summary of above calculations for the necessary investments for the forest sustainable management per ha in Kosova (High and Low forest).

Table 5.4.1 The cost of drafting a sustainable management plan of high and low forest per ha

Activity	High forest	Coppice forest
	Price / Ha / €	Price / Ha / €
Forest Strategy and policy	0.87	0.87
Management plan preparation	18.39	8.26
Silviculture treatment	-	150
Roads	566	-
Total	585.26	159.13

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

The table below shows in more detail the calculations regarding the cost of drafting out management plan per ha, for the high and low forest of the public forestry sector.

Table 5.4.2 The detailed cost of drafting managing plans for the high and low forest of the public forest sector, per ha

Forest Type	Items	Unit	Price / €
High Forest	Field work	1 ha	14
	Aerial Photos	1 x 1 km (10 Ha)	4
	Ownership data	1 polygon (property)	15
	Data Processing	1 Ha	0.39
	Total	1 Ha	18.39
Coppice forest	Field work	1 ha	6
	Aerial photos	1 Ha	2
	Ownership Data	1 polygon (property)	15
	Data Processing	1 Ha	0.26
	Total	1 Ha	8.26

Source: Calculation by local Independent Forest Engineer using rates in the region.

The price for drafting a plan for forest sustainable management per hectare (ha) of the High Forest and Low Forest (coppice forest) could be even higher, because prices for each ownership land parcel at the Cadastre Agency of Kosovo's are very high if not extremely high. As we can see from the table above, the price for the field work for the high forest is very high, and the reason for this is that the High forest happens to be at a very high altitude above sea level and is usually associated with very rough landscape which makes it that much harder to make decent measures and this in turn increases these costs. As we can see from the table above, the cost of managing with low forest is significantly lower compared to the cost of management of high forest, due to the fact that the landscape is more favorable for undertaking the necessary measurements, and the accuracy in obtaining the data is lower in relation to the high forest.

5.4.2 Improvement of the Technology of Operation and that of Methodology

From the project of national forest inventory, one of the main objectives of the project has also been to evaluate the damage to the forest volume by walking. The causes of tree diseases have also been identified as well as the damage that these tree diseases have caused to the total volume of the forest. Table 5.7 shows the present damages in the forest of both sectors (Public and Private).

Table 5.4.2 Damages on standing volumes >7 cm (1,000m³). Surveyed area

Tree species	Type of damage									Total	Total damages in %
	No damage	Insects	Fungus	Fire	Animal	Weather	Human impact	Supres sion	Misc.		
Quercus ssp	8,675	338	168	134	26	153	99	64	18	9,675	10
Fagus ssp	13,532	268	1,010	41	2	334	430	143	203	15,963	15
Other broadleaves	3,014	24	352	23	1	79	94	7	111	3,705	19
Abies alba	1,164		69	12		82	246	4		1,577	26
Picea abies	1,169		45			43	145			1,402	17
Pinus ssp.	1,660	32	56	75		79	114	1	2	2,019	18
Other conifers	179					9	35			223	20
Total	29,393	662	1,700	285	29	779	1,163	219	334	34,564	15

Source: Kosovo's "Forest Inventory Report" by FAO, 2002/2003

The forest harvesting in Kosova is regulated by the 2003 Forest Law, and is based on tendering procedures. Mainly this activity has been done by private companies, and the technology that these companies use doesn't even come close to meeting the standards for the protection of the forest and their biodiversity. The international standards specify that tendering companies for forest harvesting must be licensed and be equipped with proper and adequate technology that is not harmful to the forest. Also the KFA needs to pursue a more rigorous control, in order to ensure the use of the forest in a sustainable manner, as well as ensuring the protection of trees that are left in the field so that they remain undamaged.

ANNEX 6.

References

6.0 REFERENCES

List 1. Studies directly focused on forest sector:

- 1.), Assessment of the Forest Sector in Kosovo, Swedish International Development Agency (SIDA), Prishtina April 2007.
- 2., Operational Plan of Activities for Forest Protection, Ministry of Agriculture, Forestry and Rural Development, Prishtina/ May 2007.
3. Përmbledhje tabelare e objektivave të planit operacional të veprimit për mbrojtjen e pyjeve, Ministria e Bujqësisë, Pylltarisë dhe Zhvillimit Rural, Maj 2007.
4. Sustainable Forest Management for Kosovo-Inception report,-Sustainable forest management for Kosovo-First Progress Report for period April-June 2007, Project Management Group (PM Group) in Consortium with Green Belt Project Management International, Project:; Thinning Program Data Collection for 2008-2012, Prishtina 2007.
5. Agriculture Master Plan for Kosovo, Agrisystems/ Ministry of Agriculture, Forestry and Rural Development (MAFRD), Prishtina 2006.
6. Memorandum of Understanding between KTA and MAFRD on Forest Management, Ministry of Agriculture, Forestry and Rural Development & Kosovo Trust Agency, Kosovo Forest Authority, June 2006.
7. Administrative Directive MA 06/2005 About Registration, Licensing of the Seedling's Producers of the Forest Materials and Seedlings of the Ornamental Trees, Provisional Institutions of Self Government, Ministry of Agriculture, Forestry and Rural Development, Prishtina 2005.
8. Administrative Directive MA 02/2005 about Responsibilities and Obligations of the Forest Guard, Provisional Institutions of Self Government, Ministry of Agriculture, Forestry and Rural Development, Prishtina 2005.
9. Karahoda.N, Roli i pyjeve për ekologjinë e Kosovës, Prishtinë 2005.
10. Forest Inventory Report 2002-2003, United Nations- Food and Agriculture Organization, December 2003
11. Data for the forestry sector, Ministry of Agriculture, Forestry and Rural Development/ Statistical Office, Prishtina 2003.
12. Sectional Analysis, KTA Privatization Team, March 2003.
13. Rule No. 2003/6, Nr.2003/3-Law for Kosovo Forest, Provisional Institutions of Self Government, Ministry of Agriculture, Forestry and Rural Development, Prishtina 2003.

14. Administrative Directive No.07/2003 Establishment, Responsibilities and Functions of the Kosovo Forest Agency, Provisional Institutions of Self Government, Ministry of Agriculture, Forestry and Rural Development, Prishtina 2003.
15. Strategy for Development of the Forest Sector in Kosovo, Ministry of Agriculture, Forestry and Rural Development/ Forestry Department, December 2001.
16. Mbi arsyeshmërinë shoqërore të shpalljes së një pjese të Bjeshkëve të Nemura në Komunën e Pejës Park Nacional, Enti Krahinor për Mbrojtjen e Natyrës, Prishtinë/ Dhjetor 1985
17. Razvoj Šumske proizvodnje Jugoslavije i zadaci centra do 2000 godine, Jugoslovenski Poljoprivredni-Šumarski Centar, Beograd, 1984.
18. Šumski resursi kao sirovinska osnova za razvoj industrijske prerade drveta u Socialistickoj Autonomnoj Pokrajini Kosovo, Grupa autora, Priština, Jun 1981.
19. Komponenta šumarstva agro-industrijskog projekta-Dokumentacija/ Knjiga II, IHTM-CTE-Study, Januar 1980.
20. SAVETOVANJE-Nacionalni i Regionalni Parkovi Jugoslavije, Pokrajinski Zavod za Zastitu Prirode, Priština, Brezovica/ 1979.

List 2. Studies indirectly focused on the forest sector:

21. Kosovo Development Strategic Plan, Provisional Institutions of Self Government/ Premier's Office, Prishtina 2006.
22. Agriculture and Environmental Statistics- Series 2, Questionnaire of Agriculture Households 2005, Statistical Office of Kosovo, August 2006.
23. Kosovo Environmental Action Plan 2006-2010, Regional Environmental Center for Central and Eastern Europe, Field Office in Kosovo, Prishtina 2006.
24. Basic Principles of Local Government in Kosovo, Ministry of Local Government of Kosovo, 2006.
25. Agricultural Statistics for Kosovo, Statistical Office of Kosovo, December 2006.
26. UNMIK/REG/2005/18, Establishment of the Kosovo Trust Agency, April 2005.
27. Ministry of Environment and Spatial Planning, Environmental Strategy and Sustainable Development for Kosovo, March 2004.
28. Ibra.M, Trade and Investment Opportunities in the Agriculture Sector, Ministry of Agriculture, Forestry and Rural Development:, Prishtina 2004.
- 29 Rural Developments in Kosovo, Riinvest Institute for Development Research, Prishtina 2004

- 30.** Law for Protection of Nature, Government of Kosovo, Ministry of Environment and Spatial Planning, Prishtina/ June 2004.
- 31.** Law No.2004/18 for Inner Trade, Provisional Institutions of Self Government-Assembly of Kosovo, Prishtina 2004.
- 32.** Administrative Directive No.2/2004, About Establishment of the Inspectorate for Environmental Protection Government of Kosovo-Premier's Office, Prishtina 2004.
- 33.** Law No. 2004/12 For Standardization, Provisional Institutions of Self Government-Assembly of Kosovo, Prishtina 2004.
- 34.** Aktivitetet e Jashtme Tregtare, UNMIK/ RREG/2003/15, Shpallje e miratuar nga Kuvendi i Kosovës, Prishtinë/ Maj 2003.
- 35.** De-industrialization and its consequences-Kosovo Story, European Stability Initiative (ESI), Prishtina-Berlin, March 2002.
- 36** Kosovo State of the Environmental Report, Ministry of Environment and Spatial Planning, April 2003.
- 37.** Kosovo Biodiversity Assessment/ Final Report, ARD-BIOFOR IQC Consortium, May 2003.
- 38.** Establishment of the Kosovo Agency for Environmental Protection-Administrative Directive No.25, No. of Protocol 22/03, Government of Kosovo, Ministry of Environment and Spatial Planning, Prishtina 2003.
- 39.** Green Book-Strategy for Sustainable Agriculture and Rural Development in Kosovo, Ministry of Agriculture, Forestry and Rural Development, Prishtina, May 2003.
- 40.** Foreign Investments-Law No.02/L-33, Provisional Institutions of Self Government-Assembly of Kosovo, Prishtina 2002.
- 41.** Inspectorate of Construction Materials-Law No.02/L-62, Provisional Institutions of Self Government-Assembly of Kosovo, Prishtina 2002.
- 42.** Strategic Environmental Assessment of Kosovo 2001, Regional Environmental Center for Central and Eastern Europe, Field Office in Kosovo,. August 2001.
- 43.** Environmental Analysis of Albania, Bosnia & Herzegovina, Kosovo and Macedonia-Final Report, SIDA/ Scandiaconsult Natura AB and Regional Environmental Center for Central and Eastern Europe Strategic, July 2000.
- 44.** Kadderitzsch.S & Veillerette.B, , Re-launching the rural economy, World Bank-Kosovo, November 1999.
- 45.** Local Economic Development Strategies of 17 municipalities prepared during the period 2000-2006, Riinvest Institute for Development Research, Prishtina 2000/2006.