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GENEVA TIMBER AND FOREST DISCUSSION PAPER 40

Forest and Forest Products Country Profile: Serbia and Montenegro

By

Mr. Branko Glavonjic, Ph.D.

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Note

Abstract

"Forest and Forest Products Country Profile: Serbia and Montenegro", a UNECE/FAO Geneva Timber and Forest Discussion Paper, presents status and trends of the forest resource, the wood processing industry, trade, consumption and prices of forest products as well as forest sector policy and institutions in Serbia and Montenegro. It includes an outlook for the forest sector in Serbia and Montenegro, and offers some forest products market information for neighbouring Croatia, Slovenia and The Former Yugoslavian Republic of Macedonia. Extensive annexes provide statistics, graphs and supplementary information on forestry and forest industries.

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In all cases, the author(s) of the discussion paper are identified, and the paper is solely their responsibility. The UNECE Timber Committee, the FAO European Forestry Commission, the governments of the authors' country and the UNECE/FAO secretariat, are neither responsible for the opinions expressed, nor the facts presented, nor the conclusions and recommendations in the Discussion Paper.

In the interest of economy, Discussion Papers are issued in the original language only. They are available on the Timber Committee and European Forestry Commission website, http://www.unece.org/trade/timber, and upon request from the secretariat. They are distributed automatically to nominated forestry libraries and information centres in member countries. Those interested in receiving these Discussion Papers on the continuing basis should contact the secretariat. Another objective of the Discussion Papers is to stimulate dialogue and contacts among specialists. Comments or questions should be sent to the secretariat, who will transmit them to the authors.

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Preface

The forest and forest products sector in Serbia and Montenegro, in common with many Balkan countries, was hard hit by the political and economic upheaval that occurred in the region, and suffered severely as a consequence.

There is now evidence to suggest that Serbia and Montenegro may be gradually regaining its previous export strength in many wood products. This is a welcome development and, if it can be sustained, may bring the much needed capital for investment in modernisation and expansion of capacity under the developing market economy.

This country profile continues a series of country forest and forest products profiles, which provide general information for the whole sector. They are intended for the use of both domestic and foreign experts, as much of this information is little known and not easy to collect. The process of preparing this profile may in itself have helped to build capacity in the country as regards collection and analysis of sector information using international standards.

Brigita Schmögnerová
Executive Secretary
United Nations Economic Commission for Europe

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The secretariat is indebted to Dr. Branko Glavonjic, Faculty of Forestry, Belgrade, member of the UNECE/FAO Team of Specialists on Forest Products Markets and Marketing, Mr. Dusan Jovic and Mr. Aleksandar Vasiljevic, Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia, Belgrade, and Mr. Ranko Kankaras, Ministry of Agriculture, Forestry and Water Management of the Republic of Montenegro, Podgorica. We would also like to thank their collaborators, Dr. Darko Motik, Faculty of Forestry, Zagreb, Croatia, Dr. Zivka Meloska, Skopje, Macedonia and Dr. Leon Oblak, Biotechnical Faculty, Department of Wood Science and Technology, Ljubljana, Slovenia. Together they have compiled a clear picture of the ongoing recovery of the Balkan timber markets.

Statistics in this paper often match those submitted to the UNECE/FAO/EUROSTAT/ITTO Joint Forest Sector Questionnaire. However, the authors have also made some estimates where statistics do not exist; for example, on illegal logging.

1. INTRODUCTION

"Forest and Forest Products Country Profile: Serbia and Montenegro", a UNECE/FAO *Geneva Timber and Forest Discussion Paper*, contains available information on forests in Serbia and Montenegro and provides an overall picture of the main categories and volumes of goods and services in the forestry sector. It presents status and trends of the forest resource, the wood processing industry, trade, consumption and prices of forest products as well as forest sector policy and institutions in Serbia and Montenegro. It includes an outlook for the forest sector in Serbia and Montenegro, and offers some forest products market information for neighbouring Croatia, Slovenia and The Former Yugoslavian Republic of Macedonia. Extensive annexes provide statistics, graphs and supplementary information on forestry and forest industries.

The data used in this profile were submitted by the Statistical Bureau (Federal and Republic). The obtained data were processed according to a common programme in the Automatic Data Processing Sector of the former Federal Statistical Bureau. Along with the statistical data, a brief analysis and outlook of the Serbian and Montenegrin forestry sector, including forest resources, industry, production, trade and prices, with relevant organisations are given. During the last 15 years, Serbia and Montenegro faced many problems, particularly political and economic (NATO campaign and international community sanctions on Serbia and Montenegro), and these had a strong impact on forestry. For this reason, some data are out of date, and require further updating. As a result of the previously mentioned difficulties, the new inventory that should have been conducted in 1999 was not.

This report considered official data published and announcements by the Statistical Bureau (Federal and Republics), Spatial Plans of Serbia and Montenegro, as well as Yugoslav Survey. Due to the fact that some data presented in this profile are based not only on official statistics, but also on research carried out by domestic and foreign experts, the accuracy of this information may be questioned, although it is considered to be the best available.

2. BRIEF HISTORICAL SKETCH

From the seventh century, the Slavic peoples began to establish their first States in the territory of today's Serbia (Raška) and Montenegro (Duklja, Zeta). At the beginning of the ninth century, Raška and Zeta in turn represented two centres of the early-feudal state. Full unity and independence of the Serb state was achieved under Stefan Nemanja by the end of the twelfth century, with the capital in Raška. Under the Nemanjić dynasty the Serbia State became territorially and militarily the biggest power in the Balkan region, and its ruler Dušan was crowned the Emperor of Serbs and Greeks in 1346. The empire spread from the Danube to the Aegean and Black Seas.

At the end of the fourteenth century, the empire fell apart following the attacks by the Ottoman Turks and the Serb population moved towards the northwest. After the struggle, which lasted several centuries, Serbia and Montenegro liberated themselves from the Turkish rule, and at the Berlin Congress in 1878 they were constituted as the 32nd and 33rd independent states in the world. The states of the Balkan alliance - Serbia, Bulgaria, Montenegro and Greece defeated Turkey in the Balkan Wars in 1912 and 1913 and expelled them from almost all of the Balkan region.

The assassination of the Austrian heir to the throne in 1914 in Sarajevo gave the Austro-Hungarian monarchy a pretext for declaring war against Serbia. Thus broke out World War I. After the collapse of the Austro-Hungarian Empire, the Slavic peoples who lived in the region of the Habsburg monarchy established the State of Slovenes. Croats and Serbs united on 1 December 1918, to form the Kingdom of Serbs, Croats and Slovenes. The Kingdom of Serbs, Croats and Slovenes inherited and kept membership in international organizations as well as in all international treaties, which Serbia and Montenegro had acceded to.

In 1929, the Kingdom of Serbs, Croats and Slovenes changed its name and become the Kingdom of Yugoslavia.

As a result of demonstrations in Belgrade in March 1941, Yugoslavia refused to join the tripartite treaty, and the Axis powers bombed Belgrade and occupied Yugoslavia from 1941 to 1945.

After World War II, the Yugoslav state continued, at first with the name the Democratic Federal Yugoslavia - DFY, then Federal People's Republic of Yugoslavia - FPRY, and then the Socialist Federal Republic of Yugoslavia - SFRY. The SFRY had six republics: Slovenia, Croatia, Bosnia and Herzegovina, Serbia, Montenegro and Macedonia. Communist regime established Vojvodina, and Kosovo and Metohija as autonomous provinces in Serbia.

On 27 April 1992, after secession by other former Yugoslav Republics, Serbia and Montenegro decided to remain in the Federal Republic of Yugoslavia. The FRY then consisted of two republics - Serbia and Montenegro. Serbia incorporates two autonomous provinces Vojvodina to the north and Kosovo and Metohija to the South.

On June 10, 1999, after two and half months of NATO bombing, the UN Security Council adopted Resolution 1244 which provides for the establishment of an interim administration for Kosovo with recognition of the sovereignty and territorial integrity of the Federal Republic of Yugoslavia. Currently, the territory of Kosovo and Metohija is under the civil authority of the UN Interim Administration Mission in Kosovo (UNMIK) and under the military authority of the Kosovo Force (KFOR).

In February of 2003, the Federal Republic of Yugoslavia became the Union of Serbia and Montenegro. By the Constitution of the Union of the Serbia and Montenegro, much of the competences of the former federal state were relegated to the decision level of the republic.

According to the current Constitution of the Republic of Serbia and Republic of Montenegro, all constitutional and legislative power belongs to the Parliaments, and executive power to the Republic's Government.

Serbia has four main regions:

- In the north lies Vojvodina, part of the Pannonian Plain, an area containing fertile plains drained by the Danube, Sava, Tisza, and Morava rivers.
- The central Serbian Sumadija area, which is hilly and heavily populated.
- In the south is the autonomous province of Kosovo and Metohija, a mountainous area dominated by the Dinaric Alps.
- and in the southeast, are the Balkan Mountains.

The Danube, which is the second longest river in Europe (total length 2850 km) and the only major European river to flow from west to east, is one of the principal transportation arteries on the continent, flowing 588 km within Serbia and Montenegro. It crosses the Vojvodina region through the Pannonian plain, runs through the Federal and Serbian capital Belgrade and exits the country through the Balkan Mountains at the Iron Gate gorge, finally flowing into the Black Sea.

The navigable rivers Sava (length 206 km in Serbia), Drina (length 220 km in Serbia) and Morava (length 308 km, all in Serbia) with the Danube, form the main water resources of the country. The Danube river basin alone covers 87% of the country's territory. The annual per capita water flow is about $1{,}600m^3$ making Serbia and Montenegro a water-poor area (less than $3{,}000m^3$/capita is water-poor). Furthermore the water flow varies seasonally, which has required the formation of reservoirs on the rivers Drina, Danube and Lim. The largest lake of the country is Lake Skadarsko (area 369.7 km^2) on the Montenegro-Albanian border.

Montenegro is divided into three regions. The Adriatic coast and lowlands in the southwest are separated from the rest of the country by mountains; Lake Skadarsko, the Zeta- and lower Moraca Rivers are situated on the central lowland plain. The inland mountain region dominates Montenegro's geography in the west.

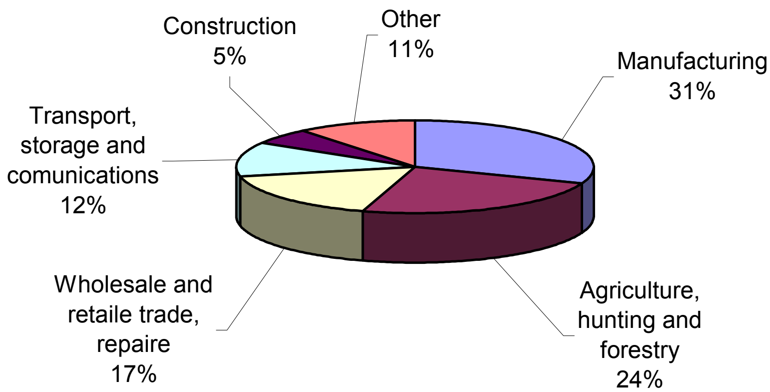
Serbia and Montenegro has several mountain ranges and its topography is dotted with high mountain peaks including 45 peaks higher than 2,000 meters. The highest is the 2,656 meter high Djeravica in Serbia in the Prokletije mountain range on the boundary between Serbia and Montenegro and Albania.
The northern part of Serbia and Montenegro has a moderate and continental climate while a Mediterranean-Adriatic climate prevails along the coast. Rainfall increases with distance from the coast, which has an average annual precipitation of 1,000 mm to 1,500 mm, while the mountain slopes receive 1,500 to a maximum of 5,000 mm on the higher peaks further inland. Average temperature ranges inland from 18 to 19 degrees Celsius in July to 2 to 3 degrees Celsius in January while the coastal area has a range from 23 to 26 degrees Celsius in July to 5 degrees Celsius in January.

3. GENERAL ECONOMIC SITUATION

The economy of Serbia and Montenegro fell into crisis as a result of UN sanctions towards Serbia and Montenegro and the surrounding wars. During the period of the sanctions, the entire economy was in crisis. There were difficulties in exports and imports, there was insufficient energy (oil, gasoline, gas) and shortage of other materials, hyperinflation, and no major investment. Recession and a decline of production were to be seen in all industrial branches. After ten years of stagnation, the economy of Serbia and Montenegro started to recover in 2000.

During 2002, the strengthening of macro economic stability of Serbia and Montenegro has continued, the process of transition has accelerated towards market economy and integration into international monetary institutions. In 2002, gross domestic production (Figure 1) increased by 4% compared to the previous year, with the greatest growth achieved in the trade sector. Over one half of gross domestic production is being achieved by processing industries (30.7%) and by agriculture and forestry (24%). The gross domestic product per capita in 2002 was $1,831. Industrial production has increased in 2002 compared to 2001 by 1.7%, with the greatest growth achieved in processing industries (2.7%) and mining (2.2%), while production of electricity, gas and water declined by 2.0%. After the significant growth in 2001 of 17.2%, agricultural production declined 2.1% in 2002.

Figure 1: The gross domestic product structure of Serbia and Montenegro in 2002



Source: Statistical Yearbook of Serbia and Montenegro, Federal Statistical Office (FSO), Belgrade, 2003.

For 2002, the overall number of employees has declined by 1.8%, while this occurred as a result of ownership transformation coupled with global economic influences. Employment in the manufacturing sector declined by 4.3%, while the overall unemployment rate was 24.7%. The positive effects of transition towards a market economy have been felt in salaries as the average salary in 2002 has nominally grown by 45.2%, with a real growth of 24.7%.

At the end of the first ten months of 2003, the federal budget deficit of Serbia and Montenegro was $3.85 billion (17.7% higher then for the same period the year before).

The liberalization of the foreign trade led to increased imports as well as a foreign trade deficit (Table 1). In 2002, exports increased by 19.5%, and import by 30.6%, reaching the record level of $6.32 billion.

Table 1: The foreign trade balance of Serbia and Montenegro

	1998	1999	2000	2001	2002
	Billion US$				
Export	2.86	1.49	1.72	1.90	2.27
Import	4.85	3.29	3.71	4.84	6.32
Balance	-1.99	-1.80	-1.99	-2.94	-4.05
Export/import balance (%)	58.80	45.20	46.40	39.30	35.92

Source: Statistical yearbooks, FSO, Belgrade.

During the first ten month of 2003, $2.1 billon worth of goods have been exported to 157 different countries, which represents an increase of 13.2% compared to the same period the prior year. Conversely, $5.95 billion worth of goods have been imported from 195 countries, representing an increase of 16.1% compared to the same period of 2002. Exports are 35.3% of imports , and it is less then in the same period of 2002 when it was 36.2%.

The chief foreign trade partners importing goods from Serbia and Montenegro during the first 10 month of 2003 were: Bosnia and Herzegovina (328 million US$), Italy (302 million US$), Germany (236 million US$), Republic of Macedonia (181 million US$), and Russian Federation (105 million US$). The export to these five countries is 54.7% of the total export value.
The main foreign trade partners exporting goods to Serbia and Montenegro during the first 10 month of 2003 were: Russian Federation (838 million US$), Germany (818 million US$), Italy (588 million US$), China (247 million US$) and Hungary (210 million US$). On the export side, the majority are manufactured goods (54.1%), followed by consumers' goods (38.2%) and business equipment (7.7%). On the import side, consumer goods are dominant (47.7%), followed by manufactured goods 39.2%, and business equipment at 11%. Other goods are 2.1%

The main export products are fruit and the fruit products (mostly raspberries), forest products (furniture and sawnwood), car tires, and sugar. The main import products are petroleum, raw materials for construction and manufacturing, cars, and natural gas.

3.1 Economic situation in Serbia

In Serbia, gross domestic product (GDP) in 2000 increased by 5.7% over 1999. Its growth continued during 2001 by 6.1% and in 2002 by 2.9% (Table 2).

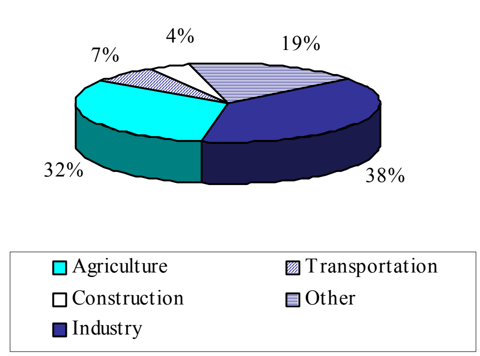
Table 2: Main economic indicators in Serbia, 1996-2002

	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
GDP (billion $)	10.9	11.7	12.0	9.3	9.8	10.4	10.7
Index growth GDP (1996=100)	100	107.3	110.1	85.3	89.9	95.4	98.2
Foreign trade (billion $)							
import	3.8	4.5	4.4	2.9	3.3	4.3	5.6
export	1.7	2.5	2.7	1.4	1.6	1.7	2.1
net trade	-2.1	-2.0	-1.7	-1.5	-1.7	-2.6	-3.5
Unemployment rate (%)	9.7	9.5	9.7	9.4	9.3	10.3	9.9
Construction (residential completions)	9 382	8 679	11 069	11 036	10 372	10 496	...

Sources: Statistical Yearbook of Serbia, 2003 and earlier issues. Serbian Foreign Trade Statistic, 2003.

The most important sectors in GDP of Serbia are: industry, agriculture, communications and construction (Figure 2).

Figure 2: Shares of GDP in Serbia, 2002



Source: Statistical Yearbook of Serbia, 2003 and earlier issues.

Production activities during 2002 took place together with positive processes of economic transition that started at the end of 2000. Among the most significant achievements of the reform process support are: receipt of three-year-long financial support from the International Monetary Fund (IMF), and the convertibility of the dinar.

The effects of the reforms had a positive impact on the growth-rate of industrial production. In 2002, it was 1.7%, (2.7% in the processing industries). Communication services increased by 5.3% and housing construction by about 1.1%. The export of goods and services in 2002 increased by 23.5%, and has continued to grow. However, together with the export increase, imports have also increased, and so Serbia increased its foreign trade deficit to a record $3.5 billion.

One of the important factors of microeconomic stability are prices. In 2002 inflation was 14.8%, significantly less compared to the expected 20%. According to the estimates for 2004, inflation should be around 10%. During 2002 foreign direct investment in Serbia amounted to around $500 million.

The forecasts for the period from 2004 to 2007 estimated annual continuous growth of GDP, is 5.2%. However, the 2002 GDP was only 51.8% of the 1990 GDP. The first quarter of 2004 was characterized by: a stable monetary system, low inflation, dismissal of price disparity, tax reform, liberalization of foreign trade, restructuring of the banking system and continuing privatization.

According to government strategic plans, by 2005 the economic development will be based on the complete implementation of a market economy, the finalization of the privatization process, the liberalization of internal economic flows, the creation of an even more favourable environment for foreign investment, and further development of small and medium-sized enterprises. The process of economic harmonization with the current systems in the EU will continue.

Construction represents a significant branch of Serbia's economy, both in terms of the number of employees and in the percentage of GDP. In 2001 there were 88,700 people working in the construction sector, and the GDP of the sector was 5.6% of Serbia's total. The construction sector in Serbia is currently in recession, despite Government investments in major projects such as roads and bridges. This recession is particularly bad in housing construction, as a result of expensive loans (high interest rates) and low salaries. According to official statistics, the lowest number of finished housing units was in 1996. In 2001, 1.1 housing units per 1,000 residents have been constructed. The real number of constructed housing units is somewhat larger then the number statistically recorded due to unrecorded housing construction by private parties.

As a result of tradition and some regulations, concrete and brick construction dominate housing in Serbia. The percentage of wooden houses is below 1% of total housing construction.

The total foreign investments in 2002 in Serbia were $475 million, of which $319 million were financial investments and $156 million were in goods. Of the total financial investment, $266 million has been invested in manufacturing, $22 million in service related industries, $9 million in the real estate, $7 million in financial activities, and $15 million in other activities.

4. FOREST RESOURCES

Forests are a resource for economic and social development. They are also habitats for flora and fauna. Their role in conserving soil, water, wildlife and plant and animal genetic wealth and diversity is of vital importance. The multiple roles of forests, spanning the entire range of environmental conservation and utilisation of forest products, are crucial for human welfare. Forests influence and are influenced by peoples needs for: work and an income, domestic and industrial fuel needs, forest products, products of agriculture, stable soils, clean and plentiful water, biodiversity, and mitigation of greenhouse gas emissions.

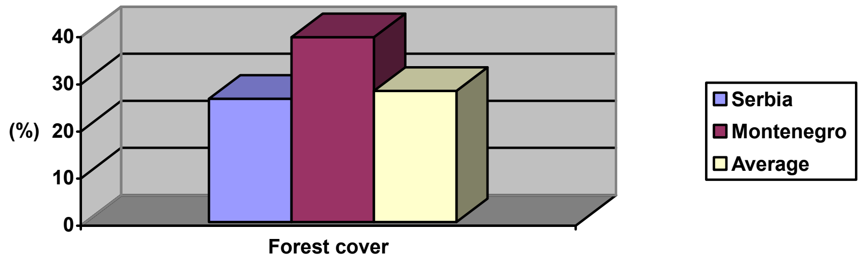
The latest forest resource inventory in Serbia and Montenegro was taken in 1979. Its aim was to collect data for use in forest resource and product planning, and deal with possible forestry problems in a scientific manner. The data were the foundation for pursuing a forest policy on forest resources and the timber industry. Data on growing stock obtained in 1979 were gathered on the basis of a common methodology drawn up by the former Federal Statistical Bureau. Forests with management plans were inventoried via their own internal statistics, while private forests or areas where internal data could not be provided were provided by assessment methods. These data were used to determine the area, wood volume, increment, types of trees, silviculture form, age, etc. Cadastral data were used for assessing forest area (where it was not otherwise determined). The inventory included forest area, wood volume and increment for all forests. In addition to forests, unstocked forest areas (managed by forests enterprises); plantations of deciduous and coniferous species; permanent communication structures; and public roads, which pass through forests were inventoried.
During the inventory, the following terms were defined:

- A forest is a forest area exceeding 0.5 ha.
- Hedgerows, municipal parks, forest nurseries and groups of trees on areas smaller then 0.5 ha are not considered forests.
- Plantations are forests raised from selected plant sources with intensive high yield measures (short rotation).
- Unstocked forest land includes land which yields the best results if forests are growing on it.

Forests cover about 2,856,000 ha, or 27.9 % of the total area of Serbia and Montenegro. In Serbia 2,313,000 ha, or 26.2 % is forest covered; in Montenegro 543,353 ha, or 39.3 % (Figure 3). It is estimated that this is about 65 % of the optimal forest cover[1]. According to the percentage of the total forest area, 81% of forests are in Serbia and 19% is in Montenegro (Figure 4). Total forests area per inhabitant is 0.31 ha (0.25 ha of forest area per inhabitant in Serbia and 0.93 ha in Montenegro) (Figure 5).

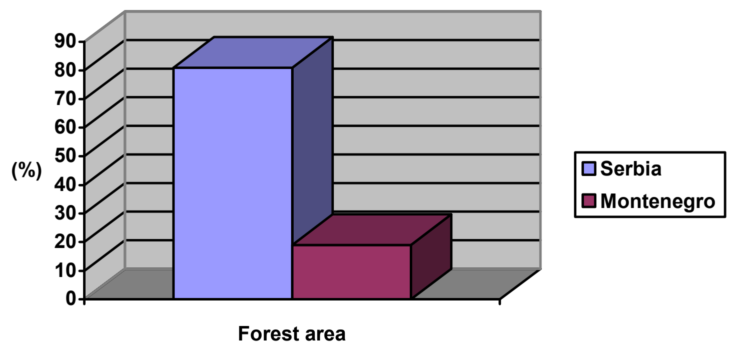
[1] Optimal forest cover consider basic parameters in harmonic correlations: ecological, social and economic parameters. Each of them present whole specter of complex natural, social and economic factors and demands which caused rise, maintenance, management and sustainable development of forests.

Figure 3: Percentage of forest cover



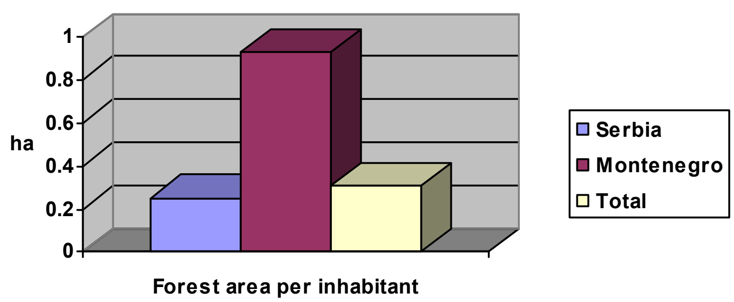
Source: Yugoslav Survey, No.3, 2000, Belgrade

Figure 4: Area under forests (%)



Source: Yugoslav Survey, No.3, 2000, Belgrade

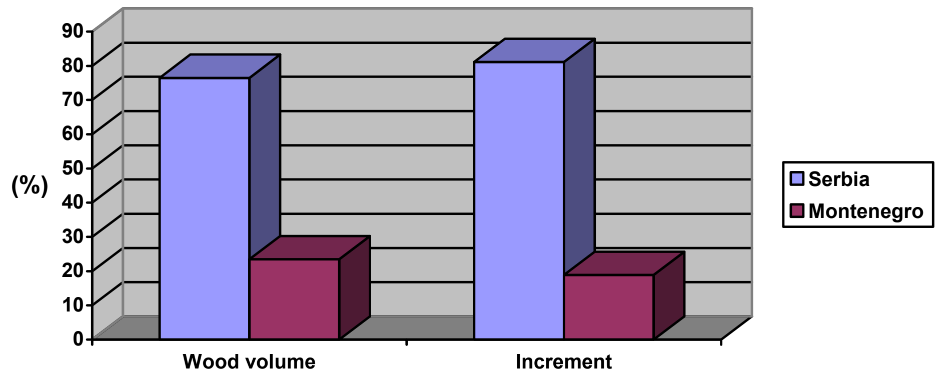
Figure 5: Forest area per inhabitant (ha)



Source: Yugoslav Survey, No.3, 2000, Belgrade

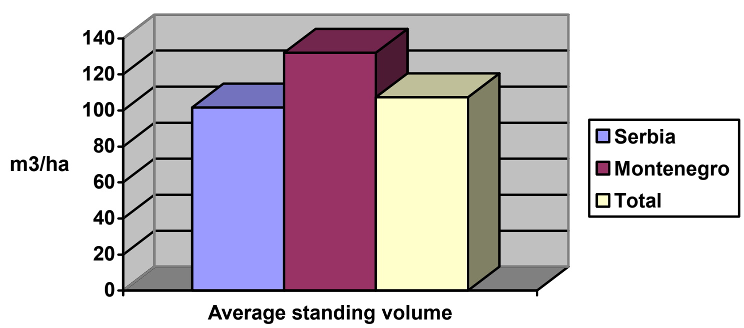
The standing volume is about 307 million. m^3 (Serbia about 235 million m^3; Montenegro about 72 million m^3) (Figure 6). The average standing volume is 107.4 m^3 /ha (Serbia 101.6 m^3 /ha; Montenegro 132 m^3 /ha) (Figure 7). The average annual increment is 2.70 m^3 /ha (Serbia 2.70 m^3 /ha; Montenegro 2.60 m^3 /ha) (Figure 8) and total annual increment 7.67 million m^3 (Serbia 6.18 million m^3; Montenegro 1.49 million m^3).

Figure 6: Wood volume and increment (%)



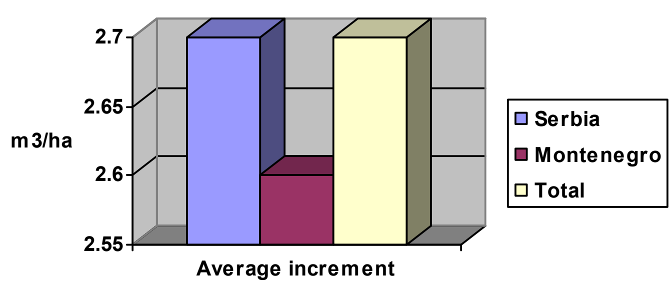
Source: Yugoslav Survey, No.3, 2000, Belgrade

Figure 7: Average volume (m^3/ha)



Source: Yugoslav Survey, No.3, 2000, Belgrade

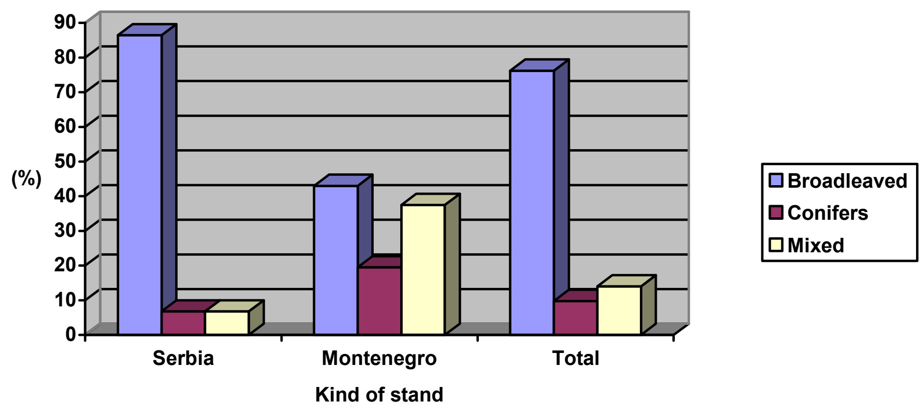
Figure 8: Average increment (m^3/ha)



Source: Yugoslav Survey, No.3, 2000, Belgrade

Broad-leaved stands represent 76.2% of the standing inventory (Serbia 86.4%, Montenegro 43.0%), coniferous stands 9.8% (Serbia 6.8%, Montenegro 19.5%) and mixed stands 14.0% (Serbia 6.8%, Montenegro 37.5%) of the forest (Figure 9).

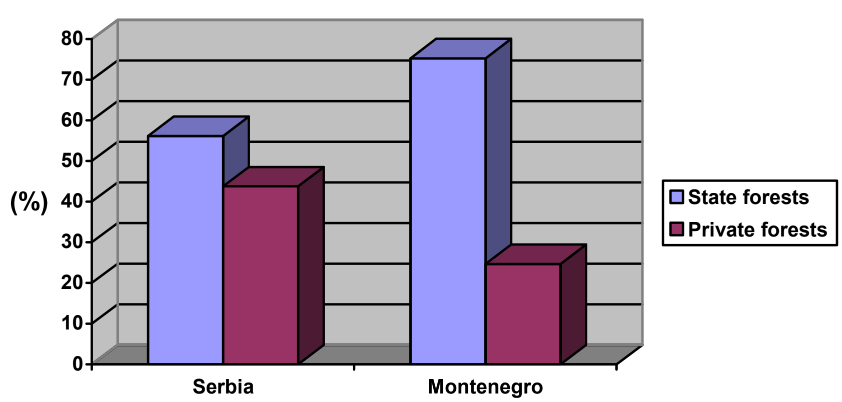
Figure 9: Wood volume by species group (%)



Source: Yugoslav Survey, No.3, 2000, Belgrade

The State owns 58.5% of the forests (1.93 million ha); of that total, Serbia owns 56.2% of their forest area (1.38 million ha), and Montenegro owns 75.3 % (543,000 ha). The remaining 41.5% of forest area (1.26 million ha) is under private ownership; in Serbia 43.8% (1.17 million ha), Montenegro 24.7 % (175,000 ha) (Figure 10).
The average size of private forests holdings is small (about 0.5 hectares). Private forests tend to contain timber of poor quality, and are largely unproductive. Due to their small size and low productivity, owners cannot afford to pay for professional management of their forests. The timber produced is used mainly for fuelwood.

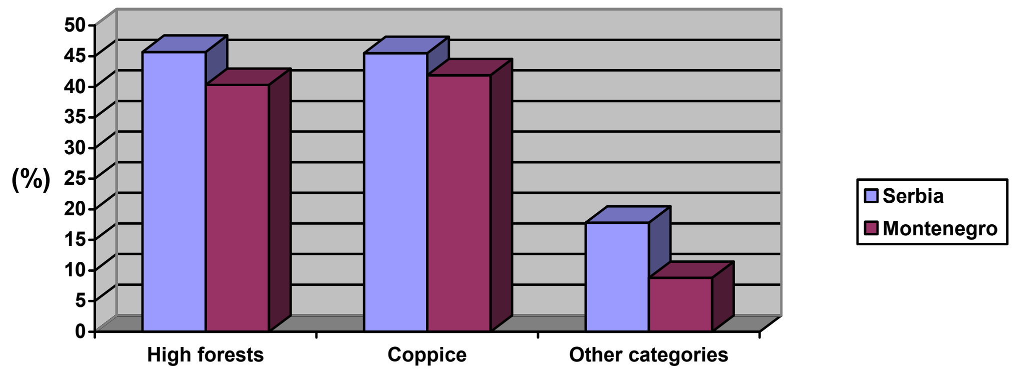
Figure 10: Forests by ownership (%)



Source: Yugoslav Survey, No.3, 2000, Belgrade

Beech is the main broad-leaf species followed by oak. In terms of area, natural high forests cover 1.36 million ha (44.4%), with Serbia having 1.07 million ha (45.7% of their total forest area), and Montenegro having 286,000 ha (40.3% of its forest area). Coppice forests cover 1.37 million ha (44.7% of the forest area) in Serbia and Montenegro, with Serbia having 1.07 million ha (45.5% of its forest area), and Montenegro having 298,000 ha (41.9% of its forest area) (Figure 11).

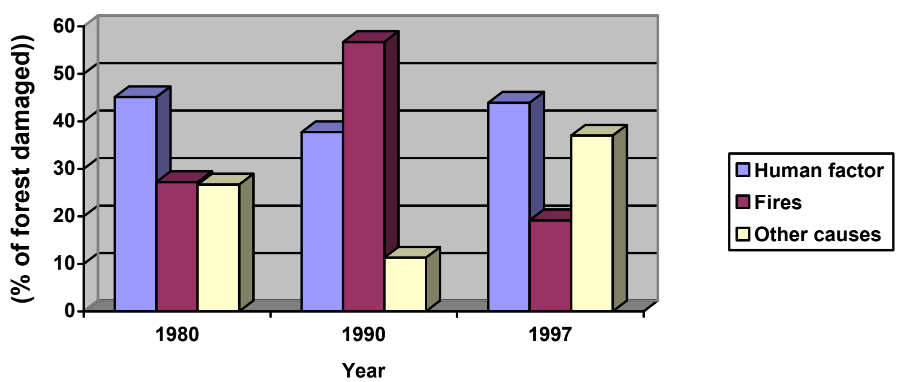
Figure 11: Forest structure by cultivation form (%)



Source: Yugoslav Survey, No.3, 2000, Belgrade

Damage in forests varies from year to year. In 2000, 300 fires occurred damaging 4,000 hectares of forest. In 2001, there were only 45 fires, which destroyed 200 hectares. Figure 12, present the main causes of damage in forests, which are grouped into three main causes: human caused factors, fires, and other causes (mainly insect and disease).

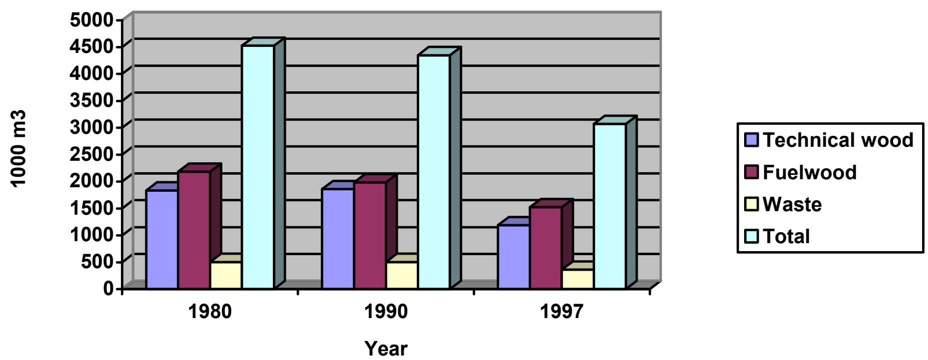
Figure 12: Damage in forests in Serbia and Montenegro (%)



Source: Yugoslav Survey, No.3, 2000, and Statistical Bulletin "Forestry", Belgrade

The annual volume of timber felled for commercial purposes is 4 million m^3, of which 2.5 million m^3 is extracted from the State forests and the remainder from private forests. There are no accurate records of timber coming out of private forests, or timber removals in Kosovo and Metohija. Figure 13 presents the fellings by assortment for selected years.
Extraction is by tractor in the plains and by skidders and draught animals (horses) in the mountains. No environmental impact assessment is carried out in harvest areas.

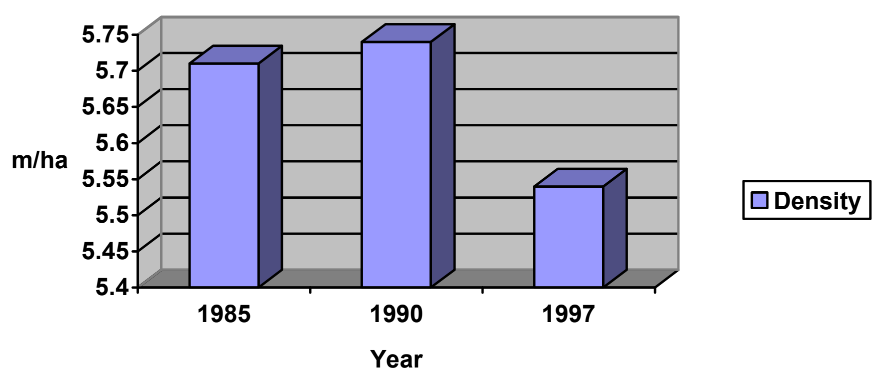
Figure 13: Fellings by assortments in Serbia and Montenegro



Source: Yugoslav Survey, No.3, 2000, Belgrade

Average forest road density is about 5 m/ha. The current plan is to increase the road density to 12 m/ha in the plains and 15 m/ha in mountainous terrain (Figure 14).

Figure 14: Forest roads density in Serbia and Montenegro



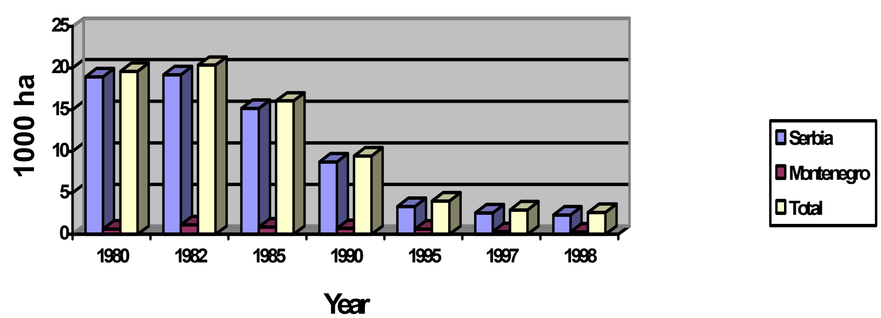
Source: Yugoslav Survey, No.3, 2000, Belgrade

The harvest of forest seeds has declined from 1,289 tons in 1983 to only 9 tons in 1996. The harvest of medicinal herbs, has also dropped, from 344 tons in 1987, to only 4 tons in 1996. However, it should be noted that statistics for these items are likely to be very much understated as much of this sector has shifted into the "grey economy". This occurred because socio-economic changes which have taken places resulted in a decline in the organized commercial collection and purchase of these products.

Within the period 1980-1999, 214,840 ha of land have been regenerated. The most productive year during this period was 1982 with 20,354 ha afforested. Afforestation was generally carried out using coniferous species, particularly in the second half of the 1990s. Afforestation levels have decreased, from the 1982 level to only 2,653 ha in 1998 (Figure 15). The decline in the scale of afforestation and the decrease of afforested areas (by about 12% a year) have been jeopardising the forestry policy objective of increasing forest area. This particularly applies to Montenegro, where only 14,681 ha were afforested from 1982 to 1998 (2.1% of the forest area). As for Serbia, 200,159 ha (8.6% of the forest area) were afforested over same time-period.

One of the main causes of the failure to increase the afforested area as planned in the forestry policy objectives was the chronic shortage of funds for such purposes. The longstanding government controls over the price of forestry products (primarily stumpage) made it impossible to generate the necessary funds for forest reproduction. Moreover, the alternative sources of funds for such purposes have gradually been removed (the Forest Fund of Serbia ceased to exist as of January 1997). Under these circumstances, it has not been possible to allocate substantial funds to the biological improvement projects (afforestation, cultivation, etc.).

Figure 15: Afforestation

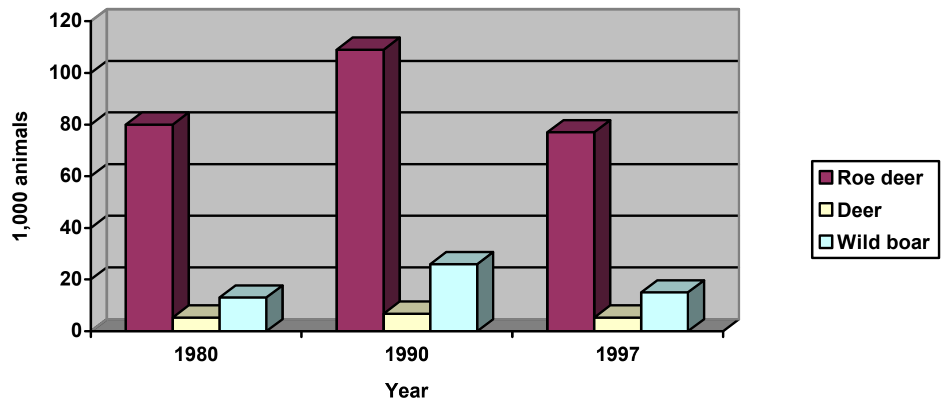


Source: Yugoslav Survey, No.3, 2000, and Statistical Bulletin "Forestry", different years, Belgrade

According to the official data, Serbia and Montenegro has 567 hunting areas[2] totalling 7.6 million ha. According to new data published by Yugoslav Survey No 2, 2001 Serbia has 321 hunting areas totalling 8.8 million ha, and Montenegro has 26 hunting areas on 950,000 ha approximately. Some of the most valuable game in Serbia and Montenegro are presented in Figure 16, with comparative charts in three periods (1980, 1990, 1997).

[2] Hunting area can be consider as land area, water, and forests, which presents natural complex and provide all ecological conditions for successful game breeding. (Law on Hunting, Official Gazette of RS, No: 39/93)

Figure 16: Number of game animals in Serbia and Montenegro



Source: Yugoslav Survey, No.3, 2000, and Statistical Bulletin "Forestry", different years, Belgrade

One of the main benefits of the national parks in Serbia and Montenegro is in preserving forests ecosystem. The forest area within national parks is 116,912 ha (Serbia 103,955 ha, Montenegro 12,957 ha). This represents 3.9% of all state forest area. Forests in the national parks of Serbia and Montenegro represent vertical diversity of forest types - from the strip of alluvial-hygrophylic forests along the banks of the Danube (national park Fruska gora) to the sub-alpine-stunted, coniferous mugho pine on Sar planina Mt. in Serbia; and from the mediterranean type of forests to the sub-alpine stunted, coniferous vegetation in Montenegro.
National parks in Montenegro cover 90,700 ha, with a forests cover of 12,957 ha, the standing volume of 1.94 million m^3, and an annual volume increment of 33,831 m^3.

Montenegro has a number of National parks: Durmitor (32,100 ha), Biogradska gora (5,400 ha), Lovcen (6,400 ha), and Skadarsko jezero (40,000 ha). There is a possibility that the following other areas will potentially become National parks: Prokletije mountain (14,000 ha), Orjen (19,000 ha), Rumija (12,200 ha), Komovi (21,000 ha), Sinjejevina sa Sarancima (42,400 ha), Maglic Bioc and Volujak (7,200 ha), Ljubisnja (7,800 ha), and Turjak sa Hajlom (14,600 ha).

The health condition of the Serbia and Montenegro's forests can be assessed as medium. The average annual number of forest wildfires is about 175, with burnt area ranging from 1,500 – 7,000 ha. About 4 % of the growing stock is in the second, third and fourth degrees of defoliation.

Serbia and Montenegro forests contain about 160 forest types, which are made up of seven forest complexes.

The major forest complexes are:

1. Alluvial - hygrophilic forest types.
2. Xero-thermophilic Hungarian oak – Turkey oak and other forest types.
3. Xero-mesophilic sessile oak and hornbeam forest types.
4. Mesophilic beech and beech - conifer forest types,
5. Thermophilic pine forests (*Orno-Ericion*) on a series of soils on basic rocks.
6. Frigoriphilic conifer forest types.
7. Subalpine shrubby conifers and broadleaves.

The inventory of forests in Serbia and Montenegro includes 78 tree species. The registered species occur in 184 stand types, with 662 variations which are also often anthropogenically conditioned.

The rare and endangered forest tree species are as follows:

Table 3: Relict, endemic and endangered tree species

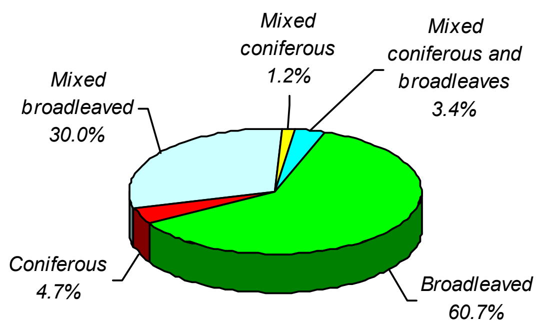
No.	Tree species		Status
1	White poplar	*Populus alba*	at risk
2	Gray poplar	*Populus canescens*	rare
3	Common elm	*Ulmus minor (glabra)*	rare - endangered
4	Mountain elm	*Ulmus montana*	rare
5	Spreading elm	*Ulmus effusa*	rare
6	Common walnut	*Juglans regia*	rare - endangered
7	European nettle-tree	*Celtis australis*	rare - endangered
8	Wild cherry	*Prunus avium*	at risk
9	Wild pear	*Pyrus pyraster*	at risk
10	Crab apple	*Pyrus malus*	at risk
11	Wild plum	*Prunus pseudarmeniaca*	rare - endangered
12	Wild service tree	*Sorbus torminalis*	at risk
13	Mountain ash	*Sorbus aucuparia*	rare
14	Common whitebeam	*Sorbus aria*	at risk
15	Sweet chestnut	*Aesculus carnea*	rare - endangered
16	Pubescent oak	*Quercus pubescens*	rare - endangered
17	Vergilius's oak	*Quercus virgiliana*	rare - endangered
18	Aspen	*Populus tremula*	at risk
19	Birch	*Betula pendula*	rare - endangered
20	Turkish hazel	*Corylus colurna*	rare - endangered
21	White ash	*Fraxinus excelsior*	rare - endangered
22	Norway maple	*Acer platanoides*	rare
23	Balkan maple	*Acer heldreichii*	at risk
24	Serbian spruce	*Picea omorica*	endangered
25	Macedonian pine	*Pinus peuce*	rare - endangered
26	White bark pine	*Pinus heldreichii*	endangered
27	Mountain pine	*Pinus mugo*	at risk
28	Planes	*Platanus sp. (orientalis)*	rare
29	Yew	*Taxus baccata*	endangered
30	Sessile oak	*Quercus petraea*	rare
31	Lombardy poplar	*Trollius europaeus*	endangered
32	Holly	*Ilex aquifolium*	endangered

Source: Medarevic M. (2003): "Forests of Serbia and Montenegro"

4.1 Forest resources in Serbia

The total surface area of Serbia is 88,361 km^2, and the total forest area is 23,129 km^2, i.e. 26.2% of the total area. The area of forestland varies according to the region: the lowest is in Vojvodina at only 6.6%, while in central Serbia it is 31.2%. In the structure of forest, high forests and plantations prevail, at 45.7%, followed by coppice forests at 45.5%, thickets at 8.3% and other at 0.5%. Hardwood species accounts for 90.7%, and softwood for 9.3% (Figure 17).

Figure 17: Broadleaved and coniferous forest area in Serbia



Source: Bulletin "Forestry", RSO, Belgrade, 2003.

Hardwood species dominate the forests of Serbia, of which the most significant is beech with approximately 47%, followed by oak at 25%, other hardwood species at 16%, and poplar at about 1%. For the softwood species, the most significant is pine (black and white) with a share of 2%, followed by spruce 5%, and fir 3%. Other softwood and some hardwood species account for a mere 1%.

The total standing wood volume on the bark in the forest fond of Serbia is 235 million m^3, of which 203.3 million m^3 is hardwood, and 31.7 million m^3 softwood (according to the most recent 1979 inventory).[3] (Table 4) The dominant wood species in the standing wood volume is beech, with a share of about 68%. The standing wood volume per hectare is 101.61 m^3.

The annual current increment in Serbia is 6.18 million m^3, and the share of beech is 34.13%. The annual volume growth per hectare is 2.6 m^3.

[3] 1979 is when the last official inventory of wood was done. Since then, there were no efforts to make an officially new inventory, so these are the only official data.

Table 4: Forest area, growing stock and increment by forest type in Serbia, 2000.

	1000 units	%
Area in hectares of which	2 313.6	100
Broadleaved	1 397	60.4
Coniferous	108	4.7
Mixed broadleaved	701	30.3
Mixed coniferous	28.6	1.2
Mixed broadleaved and coniferous	79	3.4
Growing stock in m^3 of which	**235 003**	**100**
Broadleaved	203 300	86.5
Coniferous	31 703	13.5
Annual current increment in m^3 of which	**6 180**	**100**
Broadleaved	3 662	59.3
Coniferous	242	3.9
Mixed broadleaved	1 814	29.4
Mixed coniferous	117	1.9
Mixed broadleaved and coniferous	345	5.5

Source: Bulletin "Forestry", RSO, Belgrade, 2003.

There is both public and private ownership of forests, with 56.2% of the total forest area being public forests. In Vojvodina, public forests are 95.5%, and in central Serbia, 43.7%. Almost 67% of the annual volume growth is achieved in State-owned forests and 60.3% of standing wood volume. The relatively high percentage of privately owned forests in the total forest area, but small in standing wood volume and small annual volume growth of private forests, shows that they are of lower quality than the State-owned forests.

5. WOOD PROCESSING INDUSTRY

The wood processing industry represents a significant branch of the economy of Serbia and Montenegro. The wood processing industry has had a relatively high participation in overall domestic manufacturing (1.24%) and industrial manufacturing (3.63%) as well as maintaining a positive balance between export and import since the years after the Second World War (there is an exception in the past several years). Exports from wood processing industries amounted to 4.3% of the total share of exported goods (2002), and the wood processing accounted for 2.46% of total employment in 2000.

Relative to most other industries, the wood processing industry has based its production on domestic raw materials. Serbia and Montenegro's wood-processing industry is dominated by small sized companies, which represent 98% of the total number of companies. The main activity of small[4] companies is sawnwood production, followed by window and door production, and production of packaging and veneer. The existence of the great numbers of sawmills is the result of available raw materials, but also the relatively small starting capital needed, as well as fast turnover of invested capital (compared to the production of other wood products).

In Serbia the greatest number of wood processing and furniture production companies are privately owned (about 96%) with little use of foreign capital (about 98% of the capital is of domestic source). However, forthcoming reforms in business law aim to increase the number of companies with foreign or mixed capital in the next years. In that sense, existing laws and regulations currently enable foreign investors significant preferences, such as the free duty on the import of machines and equipment, incentives for employing new workers, and different tax benefits etc. With the new law reforms, these benefits will be even greater.

5.1 Forest products industry in Serbia

The forest products industry in Serbia has a long tradition. As a result of abundant forest, sawmills in Serbia were developed in the beginning of 19th century. In 1900 there were about 80 sawmills, and as of mid 2003, Serbia had 2,365 companies engaged in wood processing with 402 companies in furniture production. The majority of these companies (1,491 enterprises) are sawnwood producers, followed by: production of wood packaging (346 enterprises), production of joinery (275 enterprises), production of other wood and cork products (170 enterprises), production of wood-based panels (51 enterprises), production of cork and straw goods (21 enterprises), and wood treatment (11 enterprises).

In primary wood processing, 96% of the companies are private, 3% are public companies, and the remaining 1% has mixed ownership. A similar situation exists in secondary wood processing. Most companies operate with domestic capital (98%), but the presence of mixed and foreign capital is also noticeable. The forthcoming legal reforms in Serbia should significantly increase companies with mixed and foreign capital and even the existing laws and regulations have stimulated foreign investment through custom free machine and equipment import. As a result of this, as well as the existence of a raw material base, qualified workers and other conditions, the first foreign investment in Serbia in 2002, of 5 million euro value,

[4] Definition of a small company according to the Accounting Law: "The small companies can be the companies that fulfill, in the business year, two of the following criteria: a) that the average number of employees, accounted by the working hours, is not greater then 50; b) that the annual income is less than 8,000 average month gross salaries in Serbia; c) that the average value of the property (on the beginning and on the end of the business year) is less than 6,000 average gross salaries in Serbia."

was the establishment with foreign capital (Spanish) for the production of parquet and furniture elements.

With a GDP of $130 million in 2002, forest products accounted for 1.3% in the total GDP of Serbia, with sawnwood, veneer, wood-based panels (plywood, particle board), furniture, joinery, parquet and wooden houses making up the most important component of the total. It should be noted that during the period from 1991 to 2000, the majority of these forest products declined compared to 1990 as a result of the political and economic changes of the period.

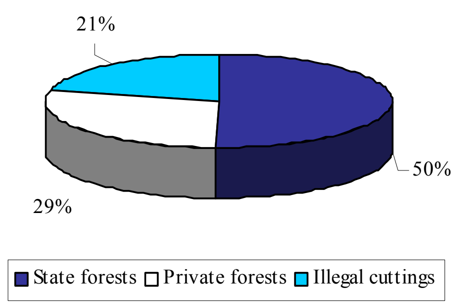
5.2 Production of roundwood in Serbia and Montenegro

5.2.1 Production of roundwood in Serbia

Roundwood production in 2002 grew by 5.7% compared to the previous year, but was still below the 2000 level of 2.7 million m^3. This reduction in roundwood production was mainly the result of structural changes in the public company "Serbia Forests" (*Srbija Sume*) which manages the State-owned forests, and has a 74% share in total roundwood production (the remaining 26% comes from the private forests).

Fuelwood accounts for 56.2% (2002) of produced roundwood, with industrial roundwood accounting for the remaining 43.8%. Almost half of the total fire wood production is from State forests, and about 28% from private forests, while the annual illegal harvesting amounts to about 300,000 m^3, according to estimates by the Faculty of Forestry in Belgrade (Figure 18).

Figure 18: Fuelwood production in Serbia by major supply



Sources: Statistical bulletin "Forestry", Statistical yearbook various years.

About 88% of the total industrial wood production comes from State forests, while the production from private forests is only 12%. Most of the harvest from private forests is for firewood The biggest percentage of industrial roundwood is used for sawnwood and veneer 86%, followed by pulpwood 11%, and other industrial uses with 3%. The most important roundwood species are beech with a 74.0% share, poplar with 16.9%, softwoods with 4.8%, oak with 2.5% and other species with 1.8% (Table 5).

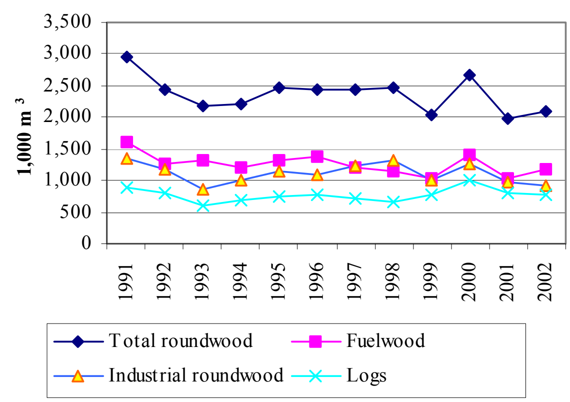
Table 5: Industrial roundwood and fuelwood production by species and assortment in Serbia, 2002 (m^3)

	Beech	Oak	Other hardwood	Poplar	Other softwood	Non-coniferous	Total
Industrial roundwood	391 631	45 829	18 874	352 708	13 928	95 459	**918 429**
Sawlogs	269 862	38 122	8 823	180 593	13 928	92 329	603 657
Veneer logs	15 163	6 548	2 722	161 410	0	0	185 843
Pulpwood	89 556	0	0	10 705		2 352	102 613
Other industrial wood	17 050	1 159	7 329	0	0	778	26 316
Fuelwood	1 156 086	6 258	4 233	1 574	748	5 105	**1 174 004**
TOTAL	1 547 717	52 087	23 107	354 282	14 676	100 564	**2 092 433**

Source: Statistical bulletin, RSO, Belgrade, various issues.

Structural changes in the public company “Serbia Forests”, outdated equipment, and insufficient construction of forest roads are just some of the reasons for decreased log production during 2001 and 2002 (Figure 19). Changes in the organization and management of “Serbia Forests” are moving toward the privatization of the forest resource sector. It is hoped that this will lead to an improvement in the condition of forest roads (giving access to the forest) and an increase of modern, mechanized harvesting equipment.

Figure 19: Roundwood production in Serbia, 1991-2002



Source: Statistical yearbook of Serbia, 2003 and earlier issues.

The increase in fuelwood production, particularly in 2002, is the result of higher demand, higher electricity prices, and the use of wood as the main source of energy for heating by a great number of households. Effective demand caused the price increase in fuelwood. Its price, €17/m^3 at the beginning of 2002, reached €22/ m^3 in mid-October (FOB[5]), and means that the consumer price in towns was between 35 and €40/m^3. Beech was the dominant fuelwood, followed by oak and other hardwood species.

[5] free on board (INCOTERMS 2001)

5.2.2 Production of roundwood in Montenegro

Montenegro has a relatively small (Table 6) production and consumption of roundwood with softwood being the largest component at 63% of the total. Of the roundwood total 55.1% was for industrial use, 26.8% firewood, with the remaining of 18.1% waste.

Table 6: Roundwood production in Montenegro, 1997 to 2001, (1000 m^3)

	1997	1998	1999	2000	2001
Montenegro	467	433	471	488	492

Source: Statistical yearbooks from each country, 2002.

5.3 Production of sawnwood

Together with furniture, sawnwood represents the most significant forest product of the wood processing industry in Serbia and Montenegro. Sawmills make up 63% of the total number of the wood processing companies, and sawnwood accounts for 37.2% of all forest sector exports. Serbia and Montenegro is the 10th largest producer of sawn hardwood in Europe.
In spite of their small number, large sawmills are responsible for 55% of installed capacity for sawnwood production. However, the degree of their capacity utilization is low as a result of financial problems, and because many of these mills have yet to make it through the process of ownership transformation (privatization). There are two sawmills whose individual installed capacity is over 30,000 m^3 of logs per year. The greatest number of other sawmills have a capacity of 3,000 to 5,000 m^3, and many mills are located in the rural areas, only operate during the warm season, and produce only 100 to 500 m^3 per year.

In accordance to the existing raw material base, most sawmills produce sawn hardwood. The annual production of sawn hardwood in Serbia and Montenegro is over 300,000 m^3, and 70% of this is sawn beech wood. The most significant, of other wood species, are poplar (11.4%), oak (8.3%) and ash (2.7%). Even with the low production, sawn fruit-wood (cherry, walnut, pear,) is significant for its high prices, which can be achieved when exported to the EU market. A record level of 398,000 m^3 of sawn hardwood was achieved in 2000. Serbia and Montenegro is the 3rd largest producer of sawn hardwood in the Balkans (after Romania and Croatia), and 2nd in the production of sawn beech wood (behind Croatia).

The annual production of sawn softwood in Serbia and Montenegro is over 120,000 m^3, with 75,000 m^3 produced in Montenegro. As softwood species form a small component of the forest fund (the Government forest management system) of Serbia (about 9%), sawn softwood represents a small percentage of forest products for which demand exceeds supply. The annual production of softwood sawlogs in Serbia is 75,000 m^3, with an additional 3,500 m^3 imported, which leads to the conclusion that production of sawn softwood is about 43,000 m^3 assuming roughly a 55% recovery ratio. Fir and spruce logs constitute about 90% of the softwood logs used, with the rest consisting of white pine, black pine, as well as other softwood species.

5.3.1 Production of sawnwood in Serbia

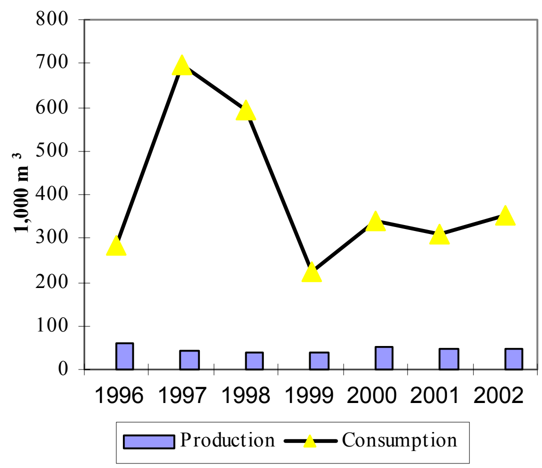
5.3.1.1 Sawn softwood

Sawn softwood production in Serbia does not satisfy the domestic demand, which is understandable, considering that softwoods only compose about 9.0% of the forest inventory.

According to official data, sawn softwood production has declined during the period 1996 to 2002. In 2002 the recorded production reached the level of 15,800 m^3, however some estimates are that it was 43,000 m^3. This estimate is based on produced and imported quantities of logs, since there was no export (Figure 20).

The greatest part of sawn softwood production capacity is still publicly owned, but is barely operating on account of the problems with liquidity. An underlying problem is the raw material (log) supply. Other problems include the maintenance of equipment, low level of employee motivation and the anticipation of privatization. Taken all together these problems negatively influence capacity utilization. The degree of capacity utilization differs from producer to producer, but is generally between 35 and 55% (2001). The degree of capacity exploitation by private producers is a bit higher (55 to 65%), depending on the products being produced.

Figure 20: Sawn softwood production and consumption in Serbia, 1996-2002



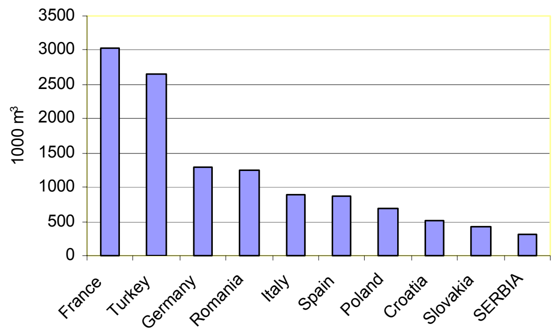
Source: Statistical Yearbook of Serbia, Serbia Foreign Trade Statistics, 2003.

5.3.1.2 Sawn hardwood

Sawn hardwood represents one of the most important products of Serbian forest products industry, as measured by the number of the companies and the quantity and value of exports.

Concerning Serbia's raw material potentials, sawn hardwood is dominant where sawnwood production is concerned. Serbia held tenth place in Europe in sawn hardwood production in 2001. Only France, Turkey, Germany, Romania, Italy, Spain, Poland, Croatia and Slovakia achieved higher production (Figure 21).

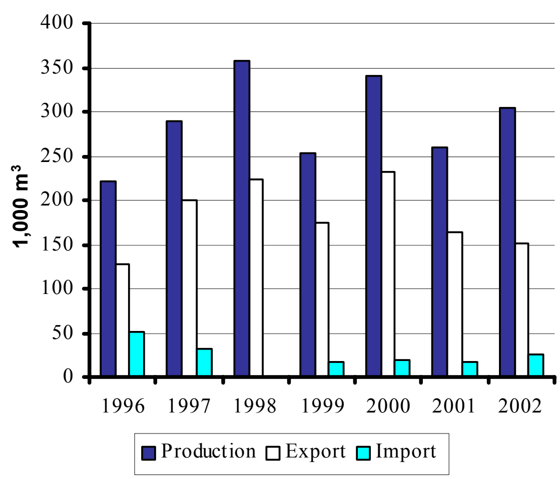
Figure 21: Sawn hardwood production in Europe, 2001



Sources: UNECE/FAO Forest Products Annual Market Review, 2001-2002. Serbian Foreign Trade Statistics, 2003.

With the exception of years 1999 and 2001, when the publicly-owned companies began their transformation, from 1996 to 2002 production of sawn hardwood increased compared to the previous year (Figure 22). The greatest increase, 23.5%, was achieved in 1998, with a production level of 357,000 m^3, which was a record level of sawn hardwood production in Serbia. The production increase is mainly the result of increased exports to meet increased demand from the EU, Arab countries and China, and to a lesser extent, domestic furniture industry consumption.

Figure 22: Sawn hardwood production, export and import in Serbia 1996-2002



Sources: Statistical Yearbook of Serbia, 2003 and earlier issues. Serbian Foreign Trade Statistic, 2003.

Beech represents the most important wood species in sawn hardwood of Serbia, accounting for 70% of the total production. The share of oak sawnwood is about 8.3%, poplar 11.4% and ash at 2.7%. Even if statistically small, the production of high quality sawn hardwoods and fruit trees (e.g. nut and cherry) is also important on account of the high export prices that they can achieve in the European Union markets (especially in Italy).

Around 2,000 companies (sawmills) are producing sawn hardwood. Most of these mills are private, however, about 55% of total installed capacity for production of sawnwood is still owned by the State. The process of privatization as started for some of these publicly owned companies.
As a result of this transition, a great number of State-owned companies hardly operated in 2001 and 2002, and, again, the main problem being liquidity and a surplus of employees. During 2001, production in these companies stopped frequently. Thus production of sawn hardwood in 2001 only reached 260,000 m^3, 24% less than in 2000. The decrease in hardwood production is mainly due to decreased roundwood availability. Since the processes of transition and transformation also included the forest resource sector, production fell by almost the same amount as the manufacturing sector (around 26% less than in 2000).

The decrease in log production coupled with the large number of manufacturers is the most significant factors in low capacity use in sawmill production (current capacity stands at 49%). Further affecting this sector is the reduced quality of wood raw material (logs), which is characterized by the high participation of II and III class logs.

5.3.2 Production of sawnwood in Montenegro

Table 7: Sawnwood production of Montenegro, 1997-2000. (1000 m^3)

	1997	1998	1999	2000
Sawn hardwood	11	8	7	9
Sawn softwood	56	50	72	76

Source: Statistical yearbook, 2002.

5.4 Production of wood-based panels

The total number of registered companies producing wood-based panels in Serbia in mid 2003, was 51. The greatest number of them produce edge-glued panels, [6] followed by peeled veneer, plywood and cut veneer. Only one company in Serbia and one company in Montenegro produce particle board, and only one company in Serbia manufactures hardboard. Most of these companies are small (80%), followed by medium (12%) and large (8%). The small and medium sized companies are privately owned. The large companies have started the process of restructuring and privatization. Most of the large companies were expected to be privatized by mid 2004, but because of the instable political situation this process is not yet completed. The successful completion of the privatization process is of great significance for the production of these products, as the large companies contain the majority of production capacity for these products.

The two factories in Serbia and Montenegro producing particle board with an installed annual capacity of about 105,000 m^3 (75,000 m^3 for the plant in Serbia, and 30,000 m^3 for the facility in Montenegro). At the end of 2002, the factory in Serbia produced only 3,900 m^3 of particle board (representing the lowest production since the factory was founded). The factory in

[6] Finger jointed edge-glued panels

Montenegro is facing similar problems, and its production in 2002 was only 7,000 m^3. Despite falling production of particle board, consumption is constantly increasing, which has led to increased importation. Compounding the interrelated challenges of financial difficulties and low production levels faced by these particle board facilities is the relative low quality of domestically processed particle board in comparison to imported product. Even given the mentioned problems, particle board production in Serbia and Montenegro is promising, as a result of increased domestic consumption and raw material availability.

With plywood production at about 12,000 m^3, in 2002, Serbia and Montenegro is fifth in plywood production in the Balkans (after Romania, Bosnia and Herzegovina, Bulgaria and Greece). Serbia and Montenegro achieved the highest production in 1989 (23,581 m^3). Serbia's share of total plywood production is 94%, with Montenegro at 6%. Besides financial problems faced by the larger companies, the export of poplar logs contributed to production decline, as poplar logs constitute 85% of the plywood raw material source. Most poplar plywood is produced in Vojvodina. As with the other sectors of the industry, the completion of the privatization process should increase production in this sector. The share of Serbia and Montenegro in the total European plywood production is 0.34%. In the group of southern and eastern European countries, Serbia and Montenegro produces more plywood than Albania, Croatia and Hungary, but less than Poland, Czech Republic and Slovenia.

Thirteen companies produce veneer, three produce only high quality (sliced) veneer, 5 rotary peeled (construction) veneer, and 5 companies produce. In accordance with raw material availability, peeled (construction) veneer has the dominant share of the total production, at about 90%. Poplar is the dominant rotary peeled veneer species at 84%, with the rest being primarily beech. Beech is the dominant species in the production of high quality sliced veneer, followed by oak, ash, walnut, maple and fruit species (cherry, and pear). Serbia is responsible for about 97% of the total veneer production, and Montenegro contributes about 3%.

The total installed capacities for production of high quality cut veneer is about 13 million m^2 per year, with most being large production plants. Given that most of these large production facilities were operated by the state, which had many financial challenges to face, capacity utilization and production have been recently very low (908 m^3 in 1998). However, production is expected to increase given demand and available resources once the privatization process is completed. Rotary peeled veneer is mainly used for plywood and packaging. Most installed capacities are located in Vojvodina, and primarily produce poplar veneer. The rest of capacities are in Central Serbia and produce mostly beech veneer. After increasing in 2000, production of peeled veneer has declined in 2001 by 25.8%, and the decline trend has also continued into 2002, when production reached its lowest level of just 11,938 m^3. The reasons for the production decline are numerous, most important are financial problems and the unfinished process of ownership transformation[7].

Of the various types of fiberboards, only hardboard is being produced in Serbia and Montenegro. There is only one factory that produces hardboard, which is located in Serbia.

The total number of *officially employed workers in veneer and wood-based panels production*, in mid 2003 was 4,688. Of that total, 93.6% of these workers are employed in large companies, 4.6% in medium, and 1.8% in small companies. This ratio is understandable, given that the technology used for veneer and wood-based panels production is very expensive, and relatively

[7] This process is being conducted by auction and tender systems. The decision which company is going to be sold by which system is made by the Agency for privatization.

large amounts of capital are required to start production. Given the long-term existence of this sector in Serbia and Montenegro, the workforce is skilled, well trained and there is great depth in expertise in the areas of technology and quality control.

5.4.1 Production of wood-based panels in Serbia

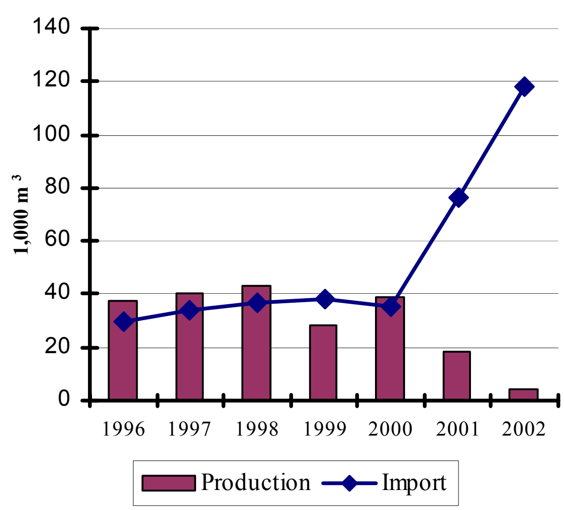
5.4.1.1 Particle board

Despite the fact that the large number of different boards have appeared, particle board has held the top position in the consumption of wood-based panels in Serbia. The most important field for use of particle board is furniture production.

The production of particle board in Serbia started in 1963. During 1975 and 1976 a new large factory was constructed (annual capacity of 75,000 m^3). Unsolved problems that concern the transformation of the plant, together with financial problems, culminated in 2002, and led to the drastic decline of production (Figure 23). Old and worn machines and equipment affected the quality of the panels, and thus affected sales negatively. According to a recent capital improvement and investment analysis, $20 million are necessary for modernization of the factory and capacity enlargement (to about 120,000 m^3 per year). Currently, the factory is faced with great debts to forestry companies and glue producers, and foreign investment is stalled because of unsolved ownership status. In addition, there has been a production decline by furniture manufacturers in Serbia, which were significant consumers of particle board. As yet, regular production of the often specified E-1 particle board (reduced formaldehyde emissions) has not occurred.

In spite of the above-mentioned problems, particle board production in Serbia has good prospects for two basic reasons: expressed domestic consumption that surpassed 100,000 m^3, and the raw material for their production. Currently, much of this raw material (sawmill residuals, very low grade logs, etc) is left in the forests, unused, or is used for heating.

Figure 23: Particle board production and import in Serbia, 1996-2002



Sources: Serbian Foreign Trade Statistics, 2003, Statistical Yearbook of Serbia, 2003.

5.4.1.2 Plywood

During the period of 1996 to 2002, there was a significant production decline for plywood, compared to the period before the implementation of UN economic sanction towards SR Yugoslavia. Production in 1996 was 12,096 m^3, 40.6% less than 1991 (20,368 m^3). After a slight increase during 1997 and 1998, production declined again in 1999. In 2000 production increased to 15,800 m^3, but resumed a declining trend in 2001 and 2002. In 2002, production hit the lowest level for the preceding 15 years. The main reasons for this decline in 2002 are:

- no production from the plant Sremska Mitrovica, as a result of financial difficulties;
- the ongoing transformation processes;
- exportation of poplar logs, which reduced the quantity of available raw material;
- decline of log quantities to domestic producers.

All Serbian plywood producers are still owned by the state and are a part of large integrated production companies.

Plywood made out of poplar represents over 85% of the total production. Of the other species used for plywood production, beech is most often used. Some lower quality poplar plywood is used in the production of upholstered furniture (mainly by factories in Italy) as it is suitable for being upholstered. The poplar plywood in "CC" quality class takes the dominant part in plywood production (about 60%). The high production of CC quality class is the result of foreign demand (again mainly Italy). The most common dimensions that the poplar plywood is produced in are: 2500x1220x18 and 20mm.
The average utilization of logs is around 44%, i.e. for 1 m^3 of plywood the consumption of logs is 2.3 m^3. Besides the relatively high consumption of basic raw material, production time is limited by machine breakdowns and malfunctions owing to dated and worn equipment. This causes increased production costs, and a decrease of capacity usage. According to at least one producer, downtime can be as high as 24%. In addition, these equipment related problems are covered via manual labour, which contributes to higher manufacturing costs.

5.4.1.3 Veneer sheets

Compared to 1990, veneer production decreased significantly from 1998-2002. This is especially true in 2002, when the production was just 13,400 m^3 (roughly 30% the 1990 level). The main cause of veneer production decrease is the reduced production in plants that are still owned by the state. This is again due to the processes of transformation and privatization (which is still in its infancy), and partly owing to the availability of raw materials. Again, the reduced availability of higher "veneer quality" logs has had a negative impact on the industry as well, and Serbia depends mainly on domestic raw materials.

Currently, construction veneer makes up about 90% of the total production, with poplar veneer the dominant species of raw material for construction veneer (over 84%), with the rest being mainly beech. The most significant veneer by value is beech, followed by oak, ash and walnut veneer.

5.4.1.4 Fibreboard

Hardboard is the most produced fibreboard in Serbia. Only one factory produces hardboard, and its annual capacity is about 40,000 m^3. As in particle board, plywood and veneer production, this factory is a part of larger production facility and is still not privatized. This factory surpasses Serbian needs, and until 1992, significant quantities of hardboard were exported to other republics of the former SFR Yugoslavia.

However, with the implementation of economic sanctions, exports stalled. After the drastic decline in 1999 of 61%, hardboard production started to increase in 2000, but still has not reached the 1998 level. This increase is the result of domestic demand increase (mainly increased furniture production). Raw hardboard dominates domestic hardboard production, which is the reason for increased imports of improved hardboard, mainly from Hungary and Germany.

5.4.2 Production of wood-based panels in Montenegro

With the exception of particle board, Montenegro imports all other wood-based panel products, mainly from Serbia. However, considering the degree of furniture production development, Montenegro does not represent a regionally significant consumer of these products.

Table 8: Wood-based panels production of Montenegro, 1997- 2001 (1000m^3).

	1997	1998	1999	2000	2001
Montenegro	15	18	17	7	8

Sources: Statistical yearbooks, 1997-2001.

5.5 Production of pulp and paper

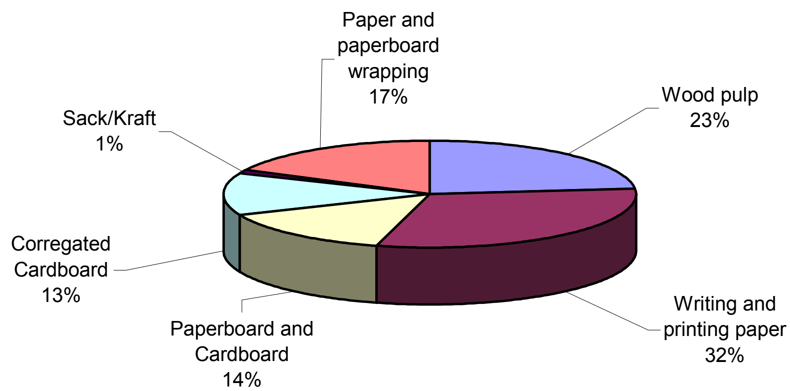
Alternating increases and declines in the production of paper and paperboard were typical in Serbia and Montenegro during the period from 1996 to 2002. There are 11 producers of paper and paperboard in Serbia, of which, three are big producers still owned by the State. The others are smaller producers, mainly privately owned. Annual production of pulp, paper and paperboard is about 330,000 m.t. The domestic pulp production is mainly used to satisfy domestic needs for paper, with just small quantities being exported.

Only one company is producing printing roto paper (newsprint made specifically for the gravure process), and it is owned by State. The majority of producers of pulp and paper are only operating at about 40% of their capacity. With such a low percent of capacity exploitation, competition from imported sources is further exacerbating the difficulties this industry is facing from past financial challenges, aged technology, and challenges in the sourcing of raw material. As a result of this situation, the paper industry urgently needs structural changes, with the aim to increase its share of the domestic market. If this does not occur, even greater problems can be expected. The first step in these changes is privatization with the financial help of the State.

5.5.1 Production of paper, paperboards and wood pulp in Serbia

The Serbian annual production of wood pulp, paper and paperboards is about 330,000 m.t., with writing and printing paper taking the dominant share (Figure 24).

Figure 24: Woodpulp, paper and paperboard participation in total production of forest products (by value) in Serbia in 2001.



Source: Statistical Yearbook of Serbia, RSO, Belgrade, 2003.

Wood pulp production is produced by sulphate treatment in the total amount of about 76,000 m.t. per year, despite the fact that production capacities are twice that. Domestic wood pulp production is mainly used to satisfy the need of domestic paper producers, and a small part is exported.

There is only one factory that produces newsprint paper (also owned by the state). Financial problems, aged technology, and difficulty with raw material procurement have limited this sector to 40% of installed capacity. This situation is exacerbated by the great number of trade companies whose main activity is the import of paper into Serbia.

Annual paper consumption in Serbia is about 350,000 m.t., with about 110,000 m.t. writing and printing paper. The annual consumption of paper per capita in Serbia (14 kg) is below that of Hungary and the EU (15).

5.6 Production of value-added forest products in Serbia

5.6.1 Furniture

There are over 15,000 employees in over 2000 companies and about 3000 workshops producing wood furniture in Serbia. The privatization process has started for many companies, and will be completed during 2005.

The greatest numbers of private companies are categorized as small (91.7%). Medium companies makeup 7.1%, and large enterprises account for 1.3% of the total. Privately owned furniture and cabinetry companies manufacture the interior cabinets and custom furniture (small furniture units, closets, kitchens). Some private companies, which belong to the medium size group, are well known for producing stylish and furniture and successfully export to the EU market. The amount of foreign and mixed capital investment in Serbian furniture companies is relatively small. The greatest monetary value of furniture production is achieved by large companies, with 47.05%, followed by small companies with 28.5% and medium companies with 24.5% (2001). The greatest concentration of small and medium companies producing furniture is in the bigger towns and cities. This is understandable, because of the proximity to consumers. Large companies, to a great degree, are orientated towards furniture export. Domestic sales from these companies are mainly orientated towards big towns and cities, and in regions of Serbia, whose citizens temporary work abroad.

Almost all categories of furniture are produced in Serbia: household furnishings, as well as furniture for shops, hotels, restaurants, and nurseries and schools, etc. There are a large number of different furniture types in each of these categories. The most important product is bedroom furniture. The leading position of bedroom furniture compared to the other categories is the result of demand from hotels in Serbia and Montenegro and also Russia. Chairs and sofas, dinning room/kitchen sets and anteroom furnishings are also important products.

5.6.2 Windows and doors

Production of wood windows and doors has a long tradition in Serbia. Over 100 companies produce windows and doors of very high quality, and significant quantities are exported to Russia and EU countries (15). Door production is characterized by the use of solid wood, most often oak, with some also made from spruce and fir. The recovery and development of individual and public housing construction will, in the great measure, influence increased demand for wood doors and windows.

5.6.3 Hardwood edge-glued panels

The annual production of hardwood edge-glued panels in Serbia was about 8,000 m^3 (2002). There are five producers, whose annual capacities are from 1200 to 2000 m^3. Besides the existing producers, preparations for building new facilities are underway, with the planned capacity of about 6,500 m^3/year. Production is dominated by edge-glued panels for stairs, bar tables, etc. The panels are mainly made out of beech.

5.6.4 Engineered wood products

Production of engineered wood products is still not developed. Plans are underway by some companies to build the facilities for production of glulam timber products.

6. TRADE

Serbia and Montenegro's forest industry is an export-orientated sector. Serbia accounts for 91.5% of the total wood industry exports, and Montenegro 8.5%. With the exception of 2002, the trade balance for wood industries had been positive since 1996.

The total value of forest sector exports in 2002 was $97 million, which represents an increase of 3.2% compared to the previous year. At the same time that exports increased, imports rose as well. In 2002, imports (especially of particle board, sawn softwood and furniture) reached a record level over the previous seven years, at $172.3 million (a 44.5% increase compared to the prior year). This increase is mainly the result of trade liberalization. For example, in the furniture branch, many foreign produces are trying to seize a market share in Serbia and Montenegro. The 2002 trade deficit in the forest sector contributed to the negative foreign trade balance of Serbia and Montenegro. Unlike 2002, the foreign trade balance for Serbia and Montenegro's forest products in 2003 was positive (+$19 million).

Furniture and sawnwood is dominant at 72% of total exports of wood industries from Serbia and Montenegro. The majority of wood imports into Serbia and Montenegro are wood-based panels, sawn softwood and furniture.

The most important markets for the forest products of Serbia and Montenegro are Italy, Bosnia and Herzegovina, Greece, Germany, the former Yugoslav Republic of Macedonia, and France. The total exports of forest products to these six countries in 2002 were $47.4 million, and represented 53.4% of the total of all exports. Furniture, sawnwood and plywood were mostly exported to Italy, furniture, windows and doors and fiberboard to Bosnia and Herzegovina, and furniture and gallantry were the main products exported to Germany.

The most important sources of wood products imported into Serbia and Montenegro are Bosnia and Herzegovina, Hungary and Italy. Imports from these three countries represent 52.9% of the total imports, with the greatest import quantity coming from Bosnia and Herzegovina. The value of imported wood products (including furniture) from Bosnia and Herzegovina, in 2002, was $37.2 million, and from Hungary $15.4 million. Sawn softwood and furniture are mostly imported from Bosnia and Herzegovina, MDF and particle board from Hungary. Furniture is mostly imported from Italy.

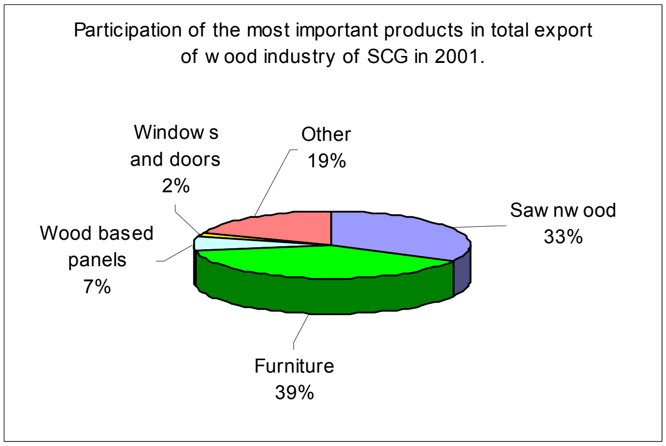


Figure 25: Participation (by value) of the most important products in total export of wood industry of Serbia and Montenegro (SCG) in 2001

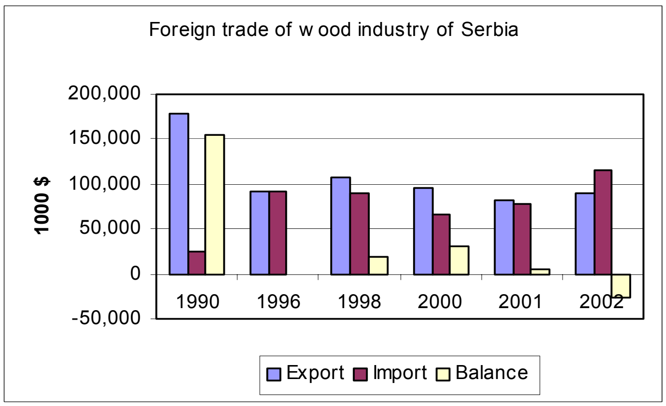


Figure 26: Foreign trade and wood industry of Serbia

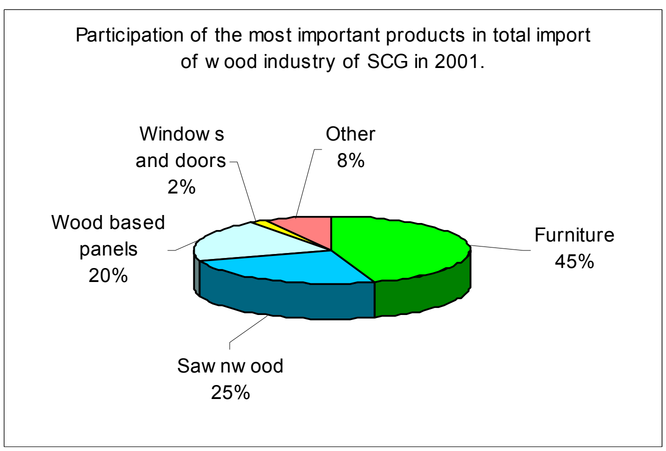


Figure 27: Participation (by value) of the most important products in total import of wood industry of Serbia and Montenegro (SCG) in 2001.

Source: Serbian Foreign Trade Statistics. RSO, Belgrade

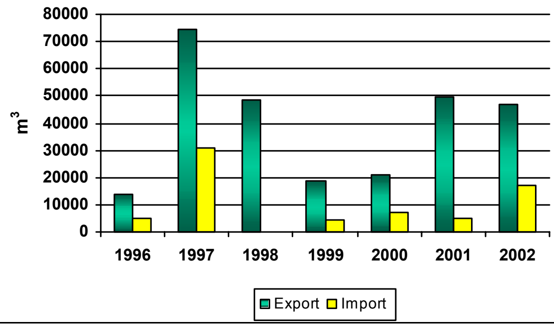
6.1 Trade in roundwood

6.1.1 Trade in roundwood in Serbia

Wood trade flows in Serbia mainly consist of poplar log exports to Bulgaria and Italy, and by imports of softwood logs. Small quantities of higher quality hardwood and pulpwood are imported from Bosnia and Herzegovina and Hungary (Figure 28). During the period 1996 to 2002, smaller quantities of firewood were imported (around 10,000 m^3). In 2002, log exports accounted for $3.1 million, which were about $0.7 million more than the export value in 2001. The average prices of poplar logs exported to Bulgaria are about €40/m^3 (EXW [8]) in I/II quality class.

[8] ex works (INCOTERMS 2001)

Figure 28: Log export and import in Serbia, 1996-2002



Sources: Serbian Foreign Trade Statistics, 2003.

6.2 Trade in sawnwood

The foreign trade balance of sawn hardwood of Serbia and Montenegro is positive. Serbia is the 7th largest exporter of sawn hardwood in Europe and 3rd in the Balkans (after Romania and Croatia). Record export levels of sawn hardwood from Serbia and Montenegro were achieved in 1998 ($55.2 million). After decreases in 1999 caused by the NATO bombing, exports again increased in 2000, only to decline again 2001 as a result of the storm salvage timber which saturated the market. However, in 2002 the value of sawn hardwood was $31.1 million (an increase of $500,000 or 1.5% over 2001). The increase in export value was caused by slight improvement in the main export markets as a result of increased demand.

In 2002, beech was the dominant component in the exports of sawn hardwood (73%), followed by oak (10%), poplar (4.6%), ash (1.7%) and other hardwood species (10.7%).

The most important markets for sawn hardwood exports from Serbia and Montenegro are Italy, Greece, Germany, Egypt and Israel. The value of exports to these five countries was 65% of total exports in this sector during 2002. Italy, Egypt and Israel represent traditional markets, but since 1996, Greece and Germany have also imported significant quantity and value of sawnwood.

Since Serbia and Montenegro is a country of hardwoods, internal production generally covers the domestic need, so import of sawnwood is relatively small compared to exports. In 2002, the import of sawn hardwood was 24,000 m^3, with half of that figure being oak sawnwood. The total value of imported hardwood was $3.1 million. Croatia, Romania, Bosnia and Herzegovina, are the most important countries of origin for the import of sawn oak wood, and sawn beech wood (mainly from Bosnia and Herzegovina).

Given the small quantities of softwood species in the forest fund of Serbia and Montenegro, utilization of these species for sawn hardwood is relatively small and mainly intended for domestic markets. Less then 5% is being exported, with a value in 2002 of $245,000, of which 38.6% has been exported to Croatia, and 24.3% to Macedonia.

With insufficient domestic production of sawn softwoods, Serbia and Montenegro import significant quantities ($27.6 million, 2002). During 2002, sawn softwood imports intensified, as a result of construction activities on roads, bridge reconstruction, and the increase of housing construction. Its increase continued into the first half of 2003, reaching $13.5 million, that is an increase of 7.1% over the same period of 2002.

Sawn softwood is mainly imported from Bosnia and Herzegovina (97%), Romania (2.5%) and Ukraine (0.2%). The average price of sawn fir and spruce wood imported from Bosnia and Herzegovina, 48mm thick, 3-6m long, in I/III quality class is \$170 /m^3 (2003).

6.2.1 Trade in sawnwood in Serbia

6.2.1.1 Sawn softwood

Given the high consumption in construction and final wood processing, and because of the lack of domestic production, Serbia imports significant quantities of sawn softwood. The import of sawn softwood represented almost 97% of Serbian importation from Bosnia and Herzegovina (2002), and the average price per m^3 was \$92 (an increase of 4.5% over 2001). However, besides the slight price increase during 2002, the prices of some elements imported from Bosnia and Herzegovina are still significantly below the prices charged by domestic producers. The sawnwood imported from Ukraine is very competitive, as far as price and quality are concerned. The average price for 76 mm thickness, 4-6 metres long, in the highest quality class is \$160 per m^3 (FOB Belgrade port on the Danube River). In comparison with domestic producers, the price of sawnwood imported from Ukraine is almost about \$10 less. However, after the problems with "Chernobyl", domestic buyers are reluctant to purchase.

Table 9: The most important countries exporting sawn softwood into Serbia

	1999		**2000**		**2001**		**2002**	
	m^3	**\$1000**	**m^3**	**\$1000**	**m^3**	**\$1000**	**m^3**	**\$1000**
Bosnia and Herzegovina	210 564	35 313	293 994	34 654	280 689	24 510	329 512	30 070
Romania	1 286	107	22 591	2 217	11 092	1 045	7 827	779
Ukraine	...	...	3 346	197	1 256	106	682	63
Other countries	218	30	1 386	125	2 678	277	1 946	358
Total	212 068	35 450	321 317	37 193	295 715	25 938	339 967	31 270

Source: Serbian Foreign Trade Statistic, 2003.

Very little sawn softwood is exported from Serbia in 2002 (about 5%, with most of this going to Croatia, Republic of Macedonia, Germany and Greece.

6.2.1.2 Sawn hardwood

With the exception of 1999, exports of sawn hardwood increased from 1996 to 2000 (Figure 22), making it one of the few products that were exported from Serbia during this time.

As a consequence of the heavy wind-damaged timber in Europe during the winter of 1999/2000, there was an oversupply of sawn hardwood in Europe. Despite this, Serbia has a held a positive trade balance. The largest of which was achieved in 1998, amounting to \$55 million (Table 10).

Table 10: Foreign trade exchange of sawn hardwood (\$1000)

	1998	**1999**	**2000**	**2001**	**2002**
Export	55 230	42 749	51 384	30 679	31 141
Import	246.0	2 755	2 703	2 288	3 374
Balance	+54 984	+39 994	+48 681	+28 391	+27 767

Source: Serbian Foreign Trade Statistic, 2003.

An increase in consumption caused an increase in production of domestic furniture, and thus a decrease in sawn hardwood exports. In 2002 exports were 151,740 m^3, 7.9% less than the previous year, however, the value increased to $31.1 million, which is an increase of 1.5% over the previous year. The increase of the beech sawnwood contributed to this value increase. Even the volume of exported beech sawnwood dropped by 35,000 m^3 (2001) and 31,000 m^3 in 2002. However, the average price of beech sawnwood increased from $176 per m^3 in 2001 to $196 per m^3 in 2002, thanks to the export of long sawnwood (2.1 metres and longer).

The most important markets to which Serbia exports its sawn hardwood are Italy, Greece, Egypt, and Israel (Table 11).

Table 11: Most important markets for sawn hardwood export of Serbia ($1000)

Country	2001	2002
Italy	10 108	9 373
Greece	5 141	5 088
Egypt	2 198	1 801
Israel	-	1 548
Russian Federation	1 853	...
Other	11 379	13 331

Source: Serbian Foreign Trade Statistics, 2003.

Italy remains the most important market for Serbian sawn hardwood. In 2002 Serbia exported almost 46,000 m^3 of sawn hardwood to Italy. Compared to 2001, this volume represented a decline for about 7,000 m^3. The value of achieved export to the Italian market in 2002 reached the level of $9.4 million. The beech sawnwood was the most exported (31,000 m^3), followed by oak (1,793 m^3) and poplar sawnwood (5,425 m^3).

The demand of sawn hardwood for use in the preparation for the Olympic games in Greece, increased exports from Serbia to Greece in 2002. Total exports reached 27,316 m^3 (1.1% more than 2001). Of that, beech sawnwood was 20,300 m^3 (12.8% more than 2001), while the export of oak sawnwood decreased from 6,200 m^3 in 2001 to 5,800 m^3 in 2002.

Owing to strong competition from Romanian exporters, beech sawnwood exports to Egypt has continued to decrease in 2002, reaching the record low level of 7,031 m^3 ($1.5 million). Unlike Egypt, the exports of sawn hardwood to Israel increased. Almost 3,000 m^3 ($600,000) sawn hardwood has been exported to this market. Besides these markets, exports of sawn hardwood to China started.

The most important hardwood species that are being exported from Serbia are beech, oak, poplar and ash. The most important markets for beech sawnwood are Italy, Greece, Egypt, Israel, and in 2002, its export to China started again. Oak sawnwood is the main species exported to Greece and Italy, with poplar sawnwood going to Italy, Slovenia and Croatia. The most important market for sawnwood of ash and fruit trees is Italy.

The quality of sawnwood that is being exported from Serbia varies from market to market. The Italian market is very demanding as to the quality from Serbia (also the former SFR Yugoslavia and Romania) requiring quality class A (both side clean; knots, light/dark heart and dislocation are not permitted), and often will file claims if the wood does not meet their expectations. The markets of Greece and Israel are less demanding (compared to the Italian market), so I/II quality class is dominant in the sawnwood export on this market. The lower quality classes of sawnwood are mainly exported to Egypt, where the “C” class participates with about 50%. Steamed beech sawnwood is mainly being exported to this market.

Serbia imports relatively small quantities of beech sawnwood, but oak sawnwood is imported in large quantities as a result of limited amounts of oak in Serbian, but also because of decreased harvest of oak. In 2002, oak sawnwood imports was 12,900 m^3 ($1.48 million). Oak sawnwood comes mainly from Bosnia and Herzegovina (85%), Croatia (5%), and Ukraine and Hungary.

Besides oak some furniture producers also import beech sawnwood (mainly from Bosnia and Herzegovina) to get lower prices. In 2002, 9,000 m^3 ($941,000) of beech sawnwood was imported from Bosnia and Herzegovina.

Prices of long, edged beech sawnwood (2.1 m and longer), 50 mm thick, 12 cm wide and wider, in "A" quality class, kiln dried, were $525 per m^3 (early 2003, CIP [9] Milan), which is an increase of roughly $25/$m^3$ over the mid-year 2002 price. The price of short (0.5 – 0.9 m) beech sawnwood, 10cm and greater wide, 25/38 mm thick, kiln dried was $150 /$m^3$ (CIP Milan). Average price of beech flitches (un-edged sawnwood), non-steamed exported to Israel, 2.0 m and longer, 16cm and wider, 38mm thick, in "A" quality class was $250/$m^3$ (EXW [10]). The price of edged beech sawnwood to China was about $390/$m^3$, for 2.15-2.4m long, clean on all four sides, 50 mm thick (CIP Romanian port).

6.3 Trade in wood-based panels

Serbia and Montenegro has a negative foreign trade balance for wood-based panels. In 2002, it reached the record level of $32.6 million. This was due to the sudden increase of particle board and MDF imports. These two products make 86.7% of the total wood-based panel imports. With the current financial problems and ownership transition issues that both of the domestic particle board plants are in, only about 5% of domestic demand is supplied from within Serbia and Montenegro.

The record level of import of particle board and medium density fibreboard (MDF) was achieved in 2002 with a volume of 118,352 m^3 ($20.8 million) With the exception of 1999, MDF imports have increased in all years. The other reason for the increase of MDF and particle board imports is the increase of furniture production, and especially of panel furniture[11], which dominates demand in the domestic market.

Particle board is mainly imported from Hungary, Czech Republic, Slovenia, Austria and Greece. The import from these five countries, in 2002, was $17.9 million, and represented 86% of the total imports of particle board and MDF. Hungary is the most important source for Serbian particle board import at 70,000 m^3 per year (about $12 million), and represents about 60% of the total import. The second most important country for particle board imports is Czech Republic, at around 11,000 m^3 ($2 million). The average import price of refined particle board from Hungary is $155/$m^3$ (18mm thick), while the price of the domestic refined particle board of the same thickness is $145/$m^3$, but of significantly lower quality.

Since there are no domestic producers of MDF, Serbia and Montenegro import significant quantities (24,200 m^3, $7.5 million). Two thirds of the MDF imported is uncoated MDF, which is mostly imported from Hungary, Germany, Czech Republic and Ukraine (coated MDF comes primarily from Germany, Switzerland and Hungary).

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[9] carriage and insurance paid to (INCOTERMS 2001)

[10] ex works (INCOTERMS 2001)

[11] Furniture made out of wood-based panels, especially of particle board.

Exports of particle board from Serbia and Montenegro are very small ($257,000 in 2002), due to poor production facilities and the increase of domestic consumption. The trend was similar in prior years, going back to 1998.

The plywood foreign trade balance of Serbia and Montenegro is positive despite a production decline. Plywood exports have been in decline since 1999, after increases in the period from 1996 to 1999, reaching a maximum level in 1999 ($3.03 million). Plywood exports in 2002 were less than a third of the 1999 level ($992,000). Plywood production reductions, intensified construction activities, and furniture production influenced the increases of imports. In 2002, plywood imports were $760,000 with indications of further increases during 2003 (since plywood plants are in ownership transformation and still operating with reduced capacities). Plywood is mainly being imported from Bosnia and Herzegovina and Bulgaria. The most important market for plywood exported from Serbia and Montenegro is Italy (which takes almost two thirds of exports), with the rest going to Macedonia, Germany and Hungary.

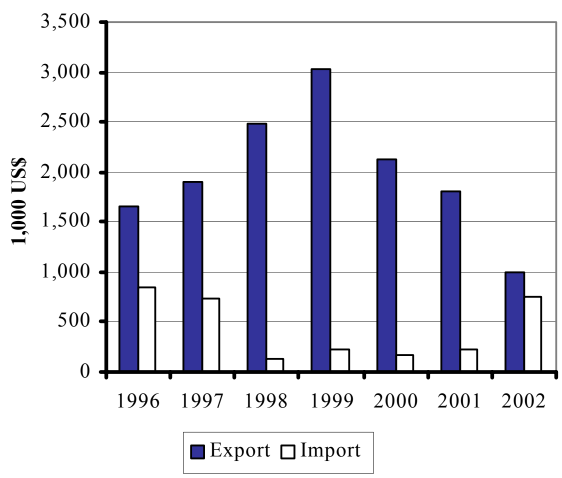
The foreign trade balance for hardboard was positive until 2001. However, since 2002, hardboard imports have increased to the level of a negative trade balance. Coated hardboard dominates imports, while uncoated dominates domestic production. Coated hardboard is mainly imported from Hungary and Germany, and uncoated hardboard is mostly exported to Bosnia and Herzegovina, Greece and Macedonia.

6.3.1 Trade in wood-based panels in Serbia

Because of the problems that the only factory in Serbia for production of particle board is facing, the import of these boards marks the big changes from year to year (Figure 23).

Foreign plywood demand is practically "unlimited". In order to meet the foreign demand, an increase of production would be necessary through privatization and modernization. Serbian plywood export has been declining since 1999, not for the lack of a market, but because of production declines (Figure 29).

Figure 29: Plywood export and import in Serbia, 1996-2002



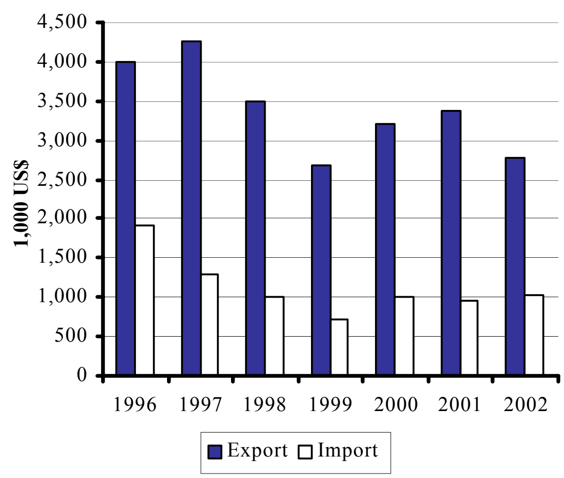
Source: ***Serbian Foreign Trade Statistic, 2003.***

Plywood from Serbia is mainly exported to Italy, The FYR of Macedonia and Germany. Total plywood exports from Serbia to Italy in 2001, were \$1.32 million, and represents 74% of the total export value. Poplar plywood is mostly exported to Italy in the following dimensions: 2500x1220x18 or 20mm and 2250x 1220x18 or 20 mm. CC quality class is dominant, and is 60% of the total. CC class of plywood is sold on Italian market for use in upholstered furniture, and in small number of cases it is overlaid with other veneer. Besides the CC class, the poplar plywood in BB/CC and BB/BB quality class (both sides clean) is being exported to the Italian market. The average prices for poplar plywood going to Italy in 2002 were: BB/BB, \$310-320/m^3; BB/C, \$285-295/m^3; CC, \$260-265/m^3. Prices are on parity, FOB (loaded on truck). The FYR of Macedonia is the second most important export market for poplar plywood, mainly construction planking, 18 and 20 mm thick, improved with thermal foil. These panels are produced with melamine glues and are waterproof. These panels have a price which is significantly higher than other panels, and is between \$400-425/m^3 (on parity EXW). Beech plywood is also exported from Serbia, most often in dimensions 2250x1220x10-20mm in BB/BB quality class.

Imports of plywood to Serbia are relatively small. Domestic consumption is about 10,000 m^3 per year, and is satisfied primarily by domestic production (the total import of roughly 500 m^3 is the result of re-export of these boards from Bosnia and Herzegovina origin to Italy and Macedonia. For example in 2000, the import was only 900 m^3, and in 2002 1,750 m^3 (\$746,000).

Veneer represents a significant product of Serbia, as almost 2/3 of the production is exported, and the net currency effect has been positive (Figure 30). The 1997 veneer export was \$4.3 million, which was a record thus far.

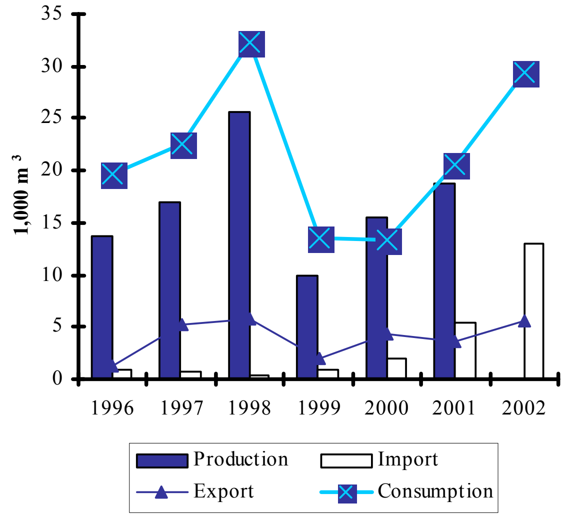
Figure 30: Veneer sheet export and import in Serbia, 1996-2002



Source: ***Serbian Foreign Trade Statistic, 2003.***

Italy is the most important market for veneer export from Serbia (in 2002, 79% of the total). The most important species that are exported to this market are oak and ash. The average export price for oak veneer from this market was \$1.20 \$/m^2, for 206 – 250 cm long sheets in I quality class (FOB). Veneer is also exported to Slovenia (oak and beech), Croatia, Greece (oak, beech) and Germany (ash). The price of beech veneer (I and II quality class, door dimensions) exported to Germany is from \$0.60 to \$0.75/m^2 (FOB). Veneer imports are not significant in the total forest product imports to Serbia (domestic production covers the demand). There is some importation of exotic species veneer.

Figure 31: Hardboard production, export, import and consumption in Serbia, 1996-2002



Source: ***Serbian Foreign Trade Statistic, 2003.***

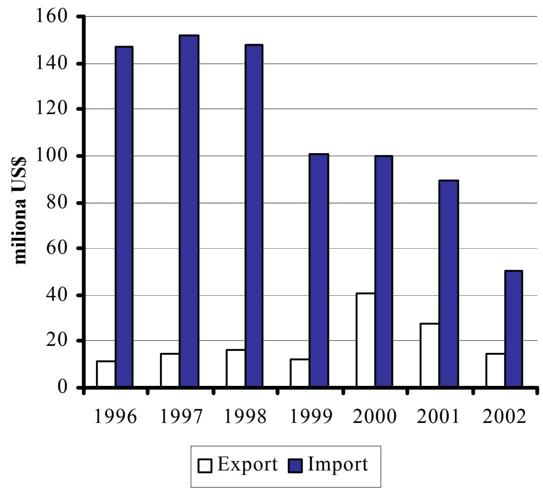
Raw hardboard is exported to Bosnia and Herzegovina, Greece and Macedonia, (mostly for door production). The price of raw hardboard, 3.2 mm thick, and 2.8 x 1.7 metres was $0.65/m^2 (EXW).
Serbia does not produce medium density fibreboard (MDF), however the furniture industry development has led to high consumption of it thus increasing MDF import (Figure 31). MDF is mainly imported from Hungary, Germany and Czech Republic. Imports from Hungary makeup 30% of the total. Of other panel types, small quantities of OSB have been imported in 2002 (Serbia does not produce OSB). As of early 2003, the prices for (2750 x 1840 x 19 mm) MDF imported from Germany (CRONOTEX) are $300-315/m^3 (CIP).

6.4 Trade in paper and pulp

Serbia and Montenegro imports significant quantities of pulp and paper as the result of decreased production and increased consumption (Figure 32). The majority is press and printing paper (46.1%), while pulp accounts for 17.4%. Sulphate pulp has been imported from Romania, Russian Federation and Sweden, and paper imported from Slovenia, Austria and Germany.

The liberalization of foreign trade resulted in competition pressure from foreign producers, which supplied better quality at a lower price. This is why the paper industry needs fast structural changes with the aim to preserve and increase its share of the domestic market. If this does not occur, greater problems, for an industry, which is of strategic importance to Serbia and Montenegro, may occur. The first step to these changes is privatization, and financial help from the State.

Figure 32: Paper, paperboard and woodpulp export and import in Serbia, 1996-2002



Source: Serbian Foreign Trade Statistic, 2003.

6.5 Trade in value-added forest products in Serbia

6.5.1 Furniture

The Serbian furniture industry is export-oriented, with a positive foreign trade balance (Figure 12).

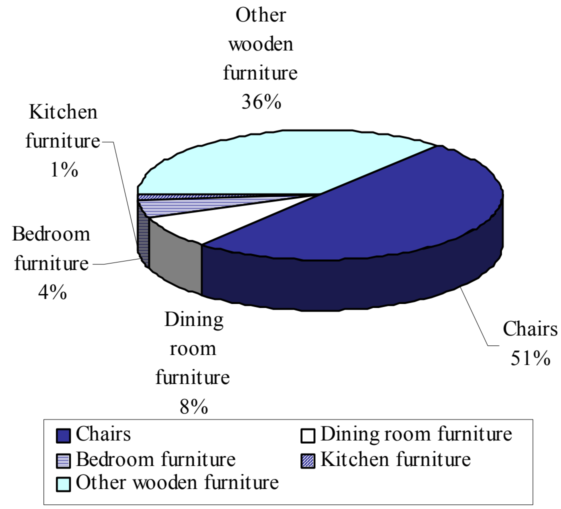
Table 12: Wood furniture production and trade in Serbia, 1996-2002 ($million at current prices)

	Production	Export	Import
1996	51.0	43.0	28.0
1997	57.0	48.0	25.0
1998	61.0	39.0	17.0
1999	44.0	28.0	11.0
2000	59.0	29.0	11.0
2001	56.0	27.0	20.0
2002	64.0	34.0	33.0

Sources: Statistical Yearbook of Serbia, 2003 and earlier issues. Serbian Foreign Trade Statistic, 2003.

The structure of furniture exports from Serbia is shown in Figure 33.

Figure 33: Production balance of furniture exports from Serbia, 2002



Source: ***Serbian Foreign Trade Statistic, 2003.***

The most important markets for furniture exports from Serbia are Italy, Bosnia and Herzegovina, Macedonia and France. Smaller quantities are exported to Germany and Greece. Living room furniture exported from Serbia is mainly of foreign design (Italy, Germany, Greece). This input of ”design know-how” is very useful to the producers for use with products that are intended for domestic and former SFR Yugoslavia Republic markets.

The majority of furniture producers in Serbia manage to satisfy the quality and precision demands of foreign customers, but with great efforts due to poor manufacturing equipment.

The main markets for dinning room furniture exports are: Bosnia and Herzegovina ($1.1 million), Germany ($0.54 million), Macedonia ($0.3 million), and Italy ($0.1 million). There is a great deal of competition in this market from producers in Poland, Romania, Slovenia, and Croatia, thus promotion is an important aspect to this sector.
Despite the high production of bedroom furniture in Serbia, its export is significantly small amounting to only 4.3% of the furniture share. The most important markets for bedroom furniture export are: Bosnia and Herzegovina ($0.5 million), Macedonia ($0.3 million), and Germany ($0.2 million).

With the aim of increasing exports, many producers have been innovative in design, functionality, and especially with the material, e.g., EU ecological furniture. The Government supports these efforts through reduction of custom taxes for new technology imports, but also through the creation of an environment to encourage foreign investment and join ventures from outside of Serbia that would enable know-how transfer.

Entering the transition process, liberalization of foreign trade and good marketing by foreign companies (or their representatives) are just some of the reasons for the sudden increase of imports in 2001 and 2002. In 2001 furniture imports hit $20.1 million (an 83.9% increase over 2000) and in 2002, a record level of $33 million was reached.

The most important categories of furniture imported are: dinning room and living room furniture ($3.9 million), bedroom furniture ($2.1 million) and kitchen furniture ($1.5 million). Other furniture categories that are significant imports are: office furniture, writing tables, closets, cabinets, and other household furniture.

The most important countries that the furniture is imported from are Italy, Slovenia, Poland, Bosnia and Herzegovina, and during 2002 also Croatia.

6.5.2 Windows and doors

The main recent characteristic of the window market is the sudden substitution of wooden windows by PVC, which has taken 45 to 50% of the total market. This is a result of many orders from the public sector (schools, hospitals, etc.), housing, and the large number of companies that are now producing this product. Besides low maintenance, great insulation capabilities and low cost, producers invest large amounts of money in marketing and distributions. The average price of "PVC window", dimensions 140 x 140 cm is about $150, compared to $ 155 to $ 185 for wood.

The window and door export is traditionally directed towards Russia, where the companies from Serbia supply the buildings constructed by domestic companies. Bosnia and Herzegovina and Germany are also significant. The total window and door export was $5.3 million, while imports reached $4.8 million.

6.5.3 Hardwood edge-glued panels

The dominant quality class of finger-jointed, edge-glued panels that are produced and exported from Serbia is A/B class. The total exports of finger-jointed wood panels from Serbia in 2002 were about 7,000 m^3, equal to $6.7 million in value, which represented about 90% of the total production.

The most important market for these panels export is Germany, followed by Slovenia and Italy.

1. Germany $5.2 million
2. Slovenia $0.7 million
3. Italy $0.6 million
4. Switzerland $0.2 million

Edge-glued wood panels exported from Serbia to Germany, 650 mm wide, 1.0-1.3 metres long, and 40-50 mm thick (staircase panels), are selling for $850 –900/$m^3$. With the depressed state of the German market for these semi-finished materials, and competition for market share coming from many other places, many edge-glued panel producers in Serbia have started to manufacture the finished products, e.g., tables, cabinets, shelves, etc.

Additional value-added gained by manufacturing furniture and interior elements from edge-glued panels will increase profitability and export value. In that sense, domestic producers invest great efforts to improve the business contacts with furniture producers in Germany and Italy, so as to gain the market share of some Arab countries.

7. CONSUMPTION

The annual consumption of sawn hardwood in Serbia and Montenegro is about 150,000 m^3, and sawn softwood is about 350,000m^3. The main consumers of sawn hardwood are the furniture producers and the producers of windows and doors; sawn softwood consumers are mainly from the construction sector and windows and doors producers. The most consumed species in furniture production are spruce and pine. For chair production, some producer use Russian yellow pine, which has been imported from Russia through compensation deals.

Particle board is the most consumed of all wood-based panels, and its annual consumption is over 120,000 m^3. The increase of particle board consumption is the result of the great number of companies, whose main activity is furniture production (especially small and medium companies). Despite consumption increases, Serbia is still on the very low-end of European list for particle board consumption. With the consumption of about 16 m^3 per 1000 inhabitants Serbia is way below the European average (61.7 m^3 per 1000 inhabitants). In the group of Southeast European countries (countries in transition), Serbia is just in front of Albania and Bosnia and Herzegovina. The leading country of this group is Poland. Particle board consumption is about one fourth the consumption in Slovenia, even though Serbia has five times more inhabitants.

MDF consumption is about 25,000 m^3. The increase of furniture and interior door production influenced hardboard consumption, and domestic production of coated hardboard does not satisfy these needs, so significant quantities of this product are being imported. The annual consumption of hardboard is about 4 million m^2.

Paper consumption in Serbia and Montenegro is about 380,000 m.t. per year, and the consumption of writing and printing paper is about 130,000 m.t. or roughly 14 kg per capita, which is below Hungary and the EU (15 kg per capita average).

7.1 Consumption of forestry products in Serbia

Domestic production of roundwood almost satisfies current consumption, as many factories, which are still owned by the State, work with very low capacity, and are often incapable of paying for the raw material. However, the installed capacities are way above the annual roundwood production, especially the capacities for pulp and paper production, and production of particle board and hardboard.

Beech and oak are the most consumed species in furniture production, while poplar is used in the production of peeled veneer for plywood. Softwoods are mostly used in construction, and to a small extent in furniture production and the production of doors and window frames. Laminated elements are being increasingly used in the production of windows.

Wood is also used in Serbia for the production of wooden houses. Softwoods (spruce and fir) are mainly used for this kind of production. Wooden house production has increased greatly in the past ten years because of programmes of several humanitarian organizations (to solve the accommodation problems of refugees coming from various regions of the former SFR Yugoslavia).

8. PRICES

The period from 1990 to 2001 was characterized by a State run system that set the prices of wood and forest products. Prices in Serbia for the most valuable elements of roundwood (such as veneer logs) were set by the administration of FR Yugoslavia; prices for sawlogs and some other categories were set by the Republic of Serbia administration, while the prices for less valuable elements (such as firewood, pulpwood, mining wood etc.) were set by the local forest administrations. Harvest, reforestation, and silviculture were planned and carried out as needed by local forest management. In these areas, State influence was not so big. However, wood exports in that period were limited by the exporting quotas, which were very low from the forestry point of view given its needs. By exporting logs and other forest products, local forest managers were provided the necessary foreign currency that they used to purchase foreign made machines and materials. The formation of the public owned company "Srbija sume" (1991) established a new organizational system in forest management in Serbia, and concentrated authority and competencies with the administrative board. Also, significant control through this company was established over privately owned forests.

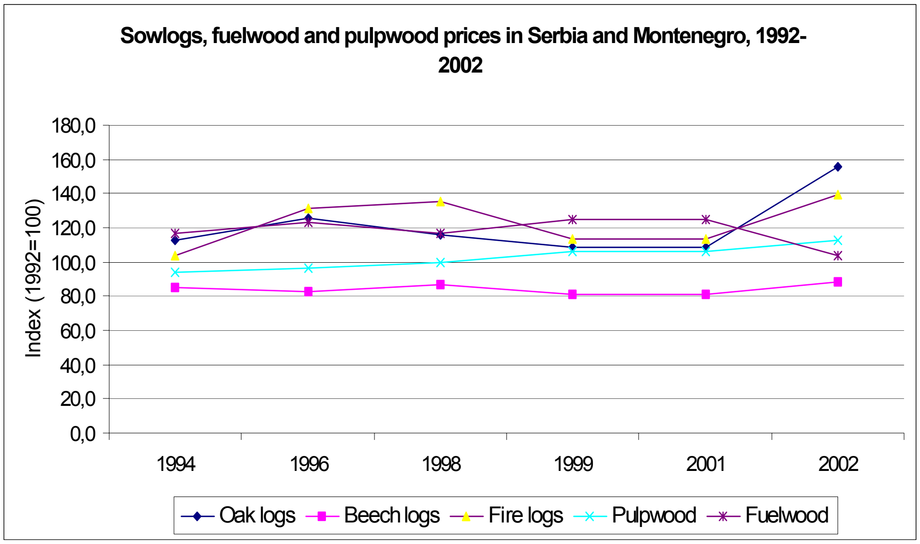
Minimum prices for sawnwood exports were regulated, and were different from market to market. Besides the previously mentioned limitations, problems resulted from the system of purchasing foreign currency. There were no free financial markets, and the greatest part of foreign currency selling and buying was controlled by the State. Exporters were obliged to sell certain amount of the export value to the State, by the official exchange rate, which was much less than the real exchange rate. The greatest part of this problem does not exist anymore, wood prices are under the administrative boards of the public companies "Srbija sume" and "Vojvodina sume", and obligated to report to the Republic Ministry. The system of market economy has been initiated, by starting the privatization process, liberalization of foreign trade, and establishing financial markets and macroeconomic stability.

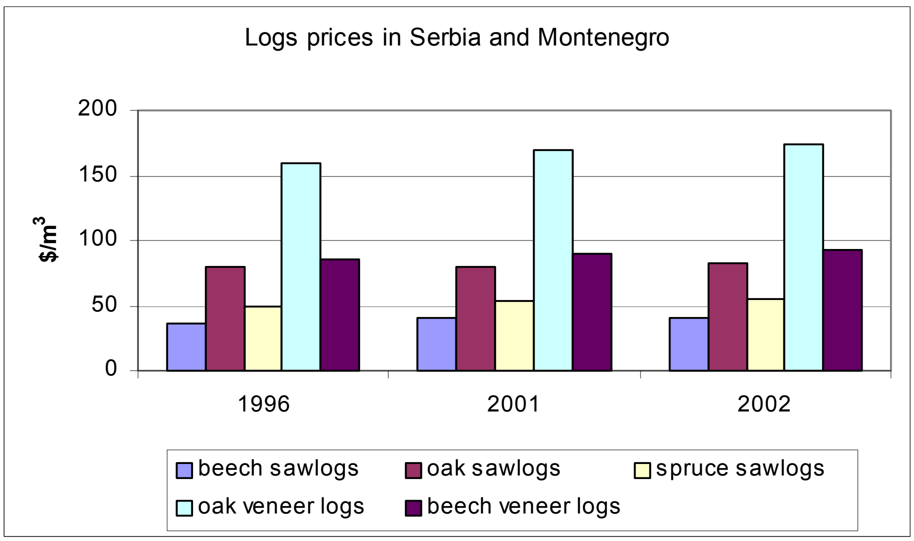
Despite the great monetary disorders in the period from 1992 to 2000, the prices of logs, firewood and pulpwood were relatively stable (Figure 34). The price stability was the result of its link to the German mark. The occasional price growth was the result of demand by the wood processing companies, but also of adapting the prices in Serbia and Montenegro with the wood prices in surrounding countries, namely Romania and Croatia.

Price increases of raw materials had a negative influence on the business affairs of wood processing companies, since these increases did not yield downstream benefits such as better quality logs or higher priced products. It is confirmed by data that in the total production of logs for sawnwood and veneer, the lower quality class logs are dominant (II and III).

Serbia and Montenegro initiated a bid process for selling roundwood at the end of 2001. This process has continued during 2002 and 2003. Participation was at first low, but during 2003, the number of participants has significantly increased, and future growth in participation is expected. Compared to Bosnia and Herzegovina and Romania, the prices of logs in Serbia and Montenegro are slightly higher. The establishment of a trade group of Balkan countries would significantly influence and put in order the wood prices in Serbia.

Figure 34: Sawlogs, fuelwood, pulpwood and logs prices in Serbia and Montenegro





Source: Public Enterprise "Srbijasume", Belgrade

8.1 Prices in Serbia

In Serbia the sale of roundwood a price list has been dominant, but from 2000 auctions have started (Table 13). Auctions as a way of selling are becoming an increasingly important part of wood sales, especially in Vojvodina, where the sales of oak and poplar are dominant. In the private forest, wood is most often sold by negotiation between seller and buyer.

During 2002 there were problems with the consumption of hardwood logs, especially of oak, maple and ash logs. All of them have been imported in significant quantities, mainly from Bosnia and Herzegovina. An additional problem was the export of poplar logs, which reduced domestic availability, quantitatively as well as qualitatively, since the best logs are being exported and only the lower quality logs are being offered to domestic producers.

Besides the great monetary disturbances during the period from 1992 to 2000, prices of logs, firewood and pulpwood were relatively stable.

Table 13: Roundwood prices in Serbia, 1996-2002, ($/m^3)

	1996	2001	2002
Sawlogs (class II)			
beech	36.50	40.00	41.03
oak	79.50	80.00	82.05
fir/spruce	50.00	53.00	54.40
Sawlogs (class III)			
beech	31.20	30.00	30.77
oak	63.20	55.00	56.41
fir/spruce	38.50	39.50	40.50
Veneer logs			
oak	160.20	170.00	174.40
beech	85.20	90.00	92.30

Source: Public enterprise "Srbijasume", 2003.

9. INSTITUTIONS

Institutions and organizations play a pivotal role in the achievement of policy goals and implementation of forestry strategy and programs. Recent changes in the demand for goods and services from the forests, and adoption of appropriate measures to satisfy them have necessitated changes in forestry institutions. Further changes are likely to ensue as a result of changes in the political and economic system and preparations for accession to the European Union.

Ministries carry out tasks of state direction, i.e. apply laws and general regulations and official documents of Parliament and Government, as well as official documents of the President of the Republic. Ministries also carry out administrative monitoring and other administrative tasks defined by law. Ministries' independence is determined by the Constitution and by competences defined by law.

9.1 Institutions in the Republic of Serbia

9.1.1 Ministry of Economy and Privatization

This Ministry performs all duties concerned with: economy and economic development, business and financial restructuring of enterprises, privatization, structural adaptation of the economy, etc.

9.1.2 Ministry of Agriculture, Forestry and Water Management

The responsibilities of this Ministry includes: agricultural development and protection, usability and promotion of agricultural areas, forestry and water, flora and fauna; rural development; the food industry; water economy and water management (except water distribution); as well as other activities specified under the law.

This is also the key Ministry responsible for forestry through the Directorate of Forests. Responsibility for forestry has recently been transferred from the former Ministry for Protection of Natural Resources and Environment to the new *Ministry of Agriculture, Forestry and Water Management.*

According to the *Law on Ministries*, the Directorate of Forests, as an administrating organ within the Ministry of Agriculture, Forestry and Water Management, executes tasks of the State regarding:

- Forestry policy.
- Improvement and use of forests and game.
- Execution of measures for protection of forests and game.
- Control of seeds and seedlings in forestry, as well as other tasks determined by law.

The Directorate has normative and regulatory function, operating through two departments:

- Department for Inspection Coordination
- Department of Forestry and Hunting

Territorially, forests are divided into 28 forest districts (six of which are in Kosovo and Metohija). They include State-owned and private forests. State-owned forests that are not included in the forest districts and belong to national parks are managed by special public enterprises. Two Public Enterprises “Srbijasume” and “Vojvodinasume” are responsible for management of state-owned forests and to provide maintaining of private forests.

9.1.3 Ministry of Science and Environmental Protection

The Ministry was established in March 2004 as result of institutional rationalisation, merging Ministry for Protection of Natural Resources and Environment and Ministry of Science and Technology.
The responsibilities of the Ministry comprise the system of environmental protection, which means nature protection; protection of environment from pollution; protection against ionizing and non-ionizing radiation; noise and vibration; production, sale and disposal of hazardous substances, etc, through the concept of effective ecological support to the economic reforms and development, privatization and infrastructural projects.
The Ministry did assume part of the responsibilities and staff connected to environment protection from the former Federal Institutions, which were remitted by adoption of the Constitutional Charter of the State Union of Serbia and Montenegro, and with the changes and amendments of *Law on Ministries*[12].

9.1.4 Public Enterprises (PE) for Forest Management – Srbijasume and Vojvodinasume

The State owned forest area in Serbia is about 1.384 *million* ha, divided between eight public enterprises (*PE Srbijasume, PE Vojvodinasume, 5 PE National Parks and PE Beli izvor*), as well as several waterworks and agricultural organisations, and educational research bases of the Faculty of Forestry-Belgrade.

PE “*Vojvodinašume*” is a new public enterprise, which was created by a law enacted in 2002 (*Official Gazette of RS, No. 6/2002*), and became operational in January 2003.
It is responsible solely for the management of state forests in Vojvodina and is administered along with PE “*Srbijašume”* which manages the rest of Serbian state forests.

[12] *Official Gazette Nr. 35/2003*

Under the provisions of the Republic of Serbia Forest Law, Srbijasume and Vojvodinasume manage all forest districts. Its responsibilities include:

- Cultivation, protection, conservation and utilization of forests.
- Raising and utilization of game.
- Engineering, construction and maintenance of forest roads.
- Preparation of management programs and plans.
- Technical operations in private forests.
- Advancement and utilization of public-beneficial functions of forests.
- Wholesale and retail trade in forest products.

Public enterprises are entrusted under the Forest Law with the performance of professional and technical operations in the management of private forests. Prior to the enactment of the Forest Law of 1991, municipalities were responsible for these operations. Private forests are now managed in accordance with the general principles and programs of private forest management laid down in the annual schedules of management.
Srbijasume and Vojvodinasume are organized at three levels:

1. Head office in Belgrade and Novi Sad
2. Forest Estates
3. Forest Management Units (Field Units)

9.1.5 Public Enterprises of National Parks

Public enterprise (PE) National Parks of Serbia was formed pursuant to the National Parks Law of 1993.
JP "Nacionalni parkovi" (Public Enterprise “National parks”), covers 5 national parks with a total area of 159,525 ha.

- PE National Park “Fruska gora”: 25,393 ha, established 1960;
- PE National Park “Tara”: 19,715 ha, established 1981;
- PE National Park “Kopaonik”: 11,809 ha, established 1981;
- PE National Park “Djerdap”: 63,608 ha, established 1988;
- PE National Park “Sar – planina”: 39,000 ha, established 1993.

The forests in national parks are managed in accordance with special programs of protection, based on the Republic Spatial Development Plan.

9.1.6 Institute of Forestry - Belgrade

The Institute of Forestry was established in 1946 as an independent scientific research organization. In 1998 it became part of Srbijasume. Its main function is to conduct basic, applied and development studies which correspond to the needs of users. In addition to research in forestry, the Institute is involved in scientific research and engineering in horticulture, wildlife management, erosion control, forest utilization and wood processing.

The Institute is organized into six departments:

- Breeding, seed processing and nursery production
- Silviculture
- Forest protection
- Management of forest and other resources
- Environmental protection
- Engineering

Scientific research and applied developed work at the Institute is focused in the following activities:

1. Forest utilization with management and hunting;
2. Seed, nursery management, meristem and genetics
3. Protection of forests
4. Bioecology – pedology and plant nourishment, phytocenology and microbiology
5. Environmental protection and improvement , spatial planning
6. Management of forest and other plantations, erosion protection
7. GIS application in forestry and environmental protection

9.1.7 Institute of Lowland Forestry and Environment in Novi Sad

This Institute was established in 1958, as Poplar Research Institute. It is an economically independent organizational unit of the University of Agriculture in Novi Sad.
Research is focussed on five tree species: Genus Populus, Genus Salix, Robinia pseudoacacia, Quercus robur and Fraxinus angustifolia.

Research is conducted in the following areas:

- Genetics, breeding and physiology
- Phytopathology
- Entomology
- Medicinal plants and herbology
- Silviculture
- Soil science,
- Mechanical and chemical wood processing
- Game management
- Forest management planning (GIS)
- Phytoremediation

The Institute is a member of IUFRO. It is also involved in the activities of EUFORGEN and FAO International Poplar Commission. Since 1990 the Institute has had no research projects based on bilateral or multilateral cooperation.
Recently the Institute was changed the name into the Institute of Lowland Forestry and Environment, according to new demands and approach in forestry science and practice.

9.1.8 Institute for Nature Conservation of Serbia

The Institute for Nature Conservation of Serbia was established in 1948 in Belgrade, as a government institution, to research, study and monitor nature.

The work of the Institute, with modern, integrated and interdisciplinary approach to nature conservation, sustainable development and biodiversity protection is organized within four sectors:

- Protected Areas;
- Biodiversity;
- Development and Science;
- Education, Promotion and Communication.

The Institute for Nature Conservation of Serbia has a very important role to play in the environmental sector. It is responsible for the establishment of protection systems on national and natural parks and other protected areas, as well as protection of wild fauna and flora.

This is a public authority responsible for implementation of nature protection policy, particularly:

- Protected area documentation.
- Terms of nature protection (physical plans, technical documents etc).
- Analyses of activity impacts on nature.
- Issuing licenses for species collecting.
- Preliminary (one year) protection of particular area.
- Expert control (supervision) on protected areas (in coordination with environment and forest inspectors).
- Monitoring, etc.

9.1.9 Chamber of Commerce of Serbia

The Chamber of Commerce is composed of 15 associations from different branches of industry. The Association of Forestry, Wood Processing, Cellulose and Paper Industry is one of its constituent organizations. Most of the members from the forestry sector are state organizations, and members from wood processing sector are private firms.

9.1.10 The Association of Forestry, Wood Processing, Cellulose and Paper Industry is organized through several groups:

1. Group for forestry.
2. Group for primary wood processing.
3. Group for final wood processing.
4. Group for paper and cellulose production.
5. Group for export.

The basic activities are: analyzing the work of these five groups, following the economic policy measures and their influence on the work of these groups, and making suggestions to the relevant ministry (in the area of customs regulations, protection of minimum prices of sawn timber, determining the premiums for companies oriented towards export, etc.).

9.2 Institutions in the Republic of Montenegro

9.2.1 Ministry of Economy

This Ministry performs all duties concerned with: economy and economic development, business and financial restructuring of enterprises, privatization, structural adaptation of the economy, etc.

9.2.2 Ministry of Environmental Protection and Physical Planning

The Ministry of Environment and Physical Planning was established in December 1991, with a mandate of environmental protection. It is also responsible for biodiversity protection and management, including protected areas. It consists of two Sectors: one for Environmental Policy and Information Systems, and one for Quality of Environment (which is also in charge of species protection and protected areas), and includes the Ecological Inspection Unit.

9.2.3 Ministry of Agriculture, Forestry and Water Management

The Ministry of Agriculture, Forestry and Water Management is partly responsible for protected areas included in the forest management plan. Its responsibilities overlap with those of the Ministry of Environment and Physical Planning in the areas of control of wild species collecting and trade, fishing and hunting, and protected areas where these activities are allowed. The Forest Division within the Ministry of Agriculture, Forestry and Water Management is responsible for forest policy.

9.2.4 Ministry of Tourism

The Ministry of Tourism is authorized to carry out visitor evaluation of national parks and control use and services in national parks (such as hotels and restaurants).

9.2.5 Forest Directorate of Montenegro

On the basis of the program of transformation, the public enterprise ″ Crna Gora Sume ″ has been restructured into a main office (directorate) and 14 new subsidiary forest firms. This was done in anticipation of the transformation process and in order to accomplish the vital functions of silviculture, protection and utilization of Montenegrin forests.
The Directorate is the state administrative organ that manages the forests in the name of the State. The headquarters is in Pljevlja and will have forest administration centres in every township community (like the public enterprise ″ Crna Gora Sume ″ did). This new Directorate will direct its activities in three areas: managing, protection, and silviculture. A key management responsibility of the Directorate is the awarding of contracts on forest utilization.

9.2.6 Forest Utilisation Enterprises

The Forest Utilisation Enterprise was established by the new Forest law of 2000, with fourteen forest management services, located in municipalities. The Enterprises manage state-owned forests and also provides services for private forests. Forest Utilization Enterprises (previously a part of Crna Gora Sume) are in the process of privatization.

9.2.7 Public Enterprise – National Parks of Montenegro

The public enterprise Nacionalni parkovi Crne Gore (Public Enterprise "National parks", situated in Podgorica), was formed pursuant to the National Parks Law of 1991, and is responsible for managing the following national parks:

- Durmitor (with river Tara): 39,000 ha, established 1952;
- Biogradska gora: 5,400 ha, established 1952;
- Lovcen: 6,300 ha, established 1952;
- Skadarsko jezero: 40,000 ha, established 1983.

The National parks are regarded as "special-purpose" forests pursuant to the mentioned Law. The forests in national parks are managed in accordance with the special programs of protection based on the Republic Spatial Development Plan.

9.2.8 Biotechnical Institute - Podgorica Centre for Forestry

The Main function of the Institute is to conduct basic, applied and development studies which correspond to the needs of users. In addition to research in forestry, the Institute is involved in scientific research and engineering, as well as protection of forests.

9.2.9 Institute of Forestry - Podgorica

This Institute is responsible for preparing the forest management plans and programs.

9.2.10 Nature Protection Institute - Podgorica

The Nature Protection Institute (in Podgorica) is responsible for the implementation of the nature protection policy, primarily by keeping inventories of protected areas (objects of nature) and providing research services. The Montenegrin Museum of Nature was founded in 2000. It keeps an outstanding collection of flora, fauna and geological samples, and provides expertise in biodiversity research as well. The Republic Administration for Urban Planning, in drawing up plans for national parks, also has some responsibilities for biodiversity protection.

9.2.11 The Chamber of Commerce of Montenegro

The Chamber of Commerce of Montenegro was founded more than seventy years ago as a support for Manufacture and Trade in Montenegro. The reason for its founding was to give professional help to the business people and their enterprises. Their services include advice and direction on new markets and technologies, and generally, to further development of Montenegrin society. They also closely follow economic policy measures and their influence on the business community, and make suggestions to the relevant ministry, etc.

9.3 Forestry education in Serbia and Montenegro

Professional forestry education in Serbia and Montenegro is given at: the Faculty of Forestry in Belgrade; the Forestry School in Kraljevo (technical); High School for Nourishment, Forestry and Chemistry in Sremska Mitrovica in Serbia; and Forestry School in Berane, Montenegro.

9.3.1 Faculty of Forestry

The Faculty of Forestry was established in 1920 as a division of the University of Agriculture in Belgrade. In 1949 it became an independent faculty of the University of Belgrade. The Faculty has four specialization courses in:

- Forestry
- Wood Processing
- Landscape Architecture
- Erosion Control

Post-graduate courses and programs at M.Sc. and Ph.D. levels in all four areas of specialization are also available.

The Faculty is divided into the following 19 departments:

1. Department of Seed and Nursery Management, and Afforestation.
2. Department of Forest Ecology.
3. Department of Tree Breeding and Improvement.
4. Department of Protection of Forests, Timber and Ornamental Plants.
5. Department of Forest Utilization.
6. Department of Forestry Planning and Management.
7. Department of Primary Wood Processing.
8. Department of Mechanical and Chemical Wood Processing.
9. Department of Product Engineering.
10. Department of Final Wood Products.
11. Department of Management and Economics of the Wood Industry.
12. Department of Ornamental Plants Production.
13. Department of Establishment and Maintenance of Green Areas.
14. Department of Planning and Elaboration of Projects in Landscape Architecture.
15. Department of Amelioration.
16. Department of Hydrology and Erosion
17. Department of Erosion Control Geology
18. Department of Foreign Languages
19. Department of General Topics

The Faculty manages an experimental station consisting of 6,000 hectares of forest, two sawmills, a forest nursery and a centre with facilities for meetings, seminars and other similar functions.

10. FOREST SECTOR POLICY

Current regulations i.e. the Forest Laws (Serbian, as well as Montenegrin), prescribe that "*…forests as public welfare must be maintained, regenerated and utilised in such a way that their values and multiple benefits are conserved and increased, sustainability and protection is ensured, and increment and yield are permanently increased"*. With this aim, forest regions were formed by the same Laws "*…to carry out rationally the measures of management in forests, woodland and other forest potentials in a defined territory*". They include both state-owned and private forests. In this way, all forest management operations and tasks must be equally implemented in all forests, disregarding the category of ownership.

Due to recent political and socio-economic changes, a new urgent requirement has arisen, namely the establishment of a system of forestry extension and consultancy to ensure that the basic principles of sustainable management are observed and applied in the practice of private forestry in accordance with the Forest Law. The organs and organisations of the public forest sector will provide extension services according to their particular professional competence. These will include technical guidance and advice, market information, supply of services needed by owners, training, and publication of manuals (for use by private forest owners dealing with correct field practices), forest policy, legislation and other relevant issues related to private forestry.

The objective of forestry policy in education is to prepare qualified employees for the forestry sector capable of carrying out their tasks efficiently and effectively. These tasks are aimed at sustainable management and development of forest resources, with due consideration being given to environmental, social, cultural and economic impacts. The state will be responsible for the development, organisation and maintenance of the national forestry education and training system. It will create suitable conditions for the education and training of the requisite number of qualified employees for all forms of forest ownership.

The curricula of the forestry schools, at the professional, technical and vocational levels, will be adapted to the needs of forestry practice in the changing socio- economic, scientific and technological conditions, particularly with regard to acquisition of new knowledge in ecology, social and cultural functions of forests, forestry legislation, economics, forest business management, competition in international timber trade, labour, and forest products. Attention will be paid to the special needs of private forest owners.

According to the new organisational structure in Montenegro, the Forest Directorate has the right and obligation to give concessions on forest utilization. The Directorate will carry out all preparations needed in order to give concessions, e.g., overall land management plans, timber harvest plans (logging prescription and restrictions), and contract terms. Basics of these new relationships are market conditions that are the most favourable supply and most quality utilization of the concessions from the side of the companies that are in forest business. Bidding for the concessions is open to the public, but in the first and second years of implementation of the law, certain privileges will be granted to the newly founded forest companies (former public enterprises). At the beginning, concessions will be for a one-year period, with the possibility that concessions can be awarded over a longer period of a time.

One of the priority needs of multi-purpose forest resource management planning is a sound and reliable database, which is presently lacking. The existing forest resource database is old and incomplete for state forests, and completely unreliable for privately owned forests. The system should not only accommodate forest resource data, but also all other data that would facilitate planning. It is further important that the new system should be in harmony with the European Forestry Information and Communication System.

A new approach to multi-purpose forest resource management and planning would call for capacity building, and appropriate institutional and organizational restructuring that would facilitate an emerging operational environment. Present institutions and organizations would be required to adopt themselves in a way that would enable them to respond to these new requirements. In this respect, both the Faculty of Forestry and forestry schools may also need to reorient their education and training. All these institutions appear to have limited instruments and suffer the lack of financial means, creating a gap, which could possibly be filled via external donor support.

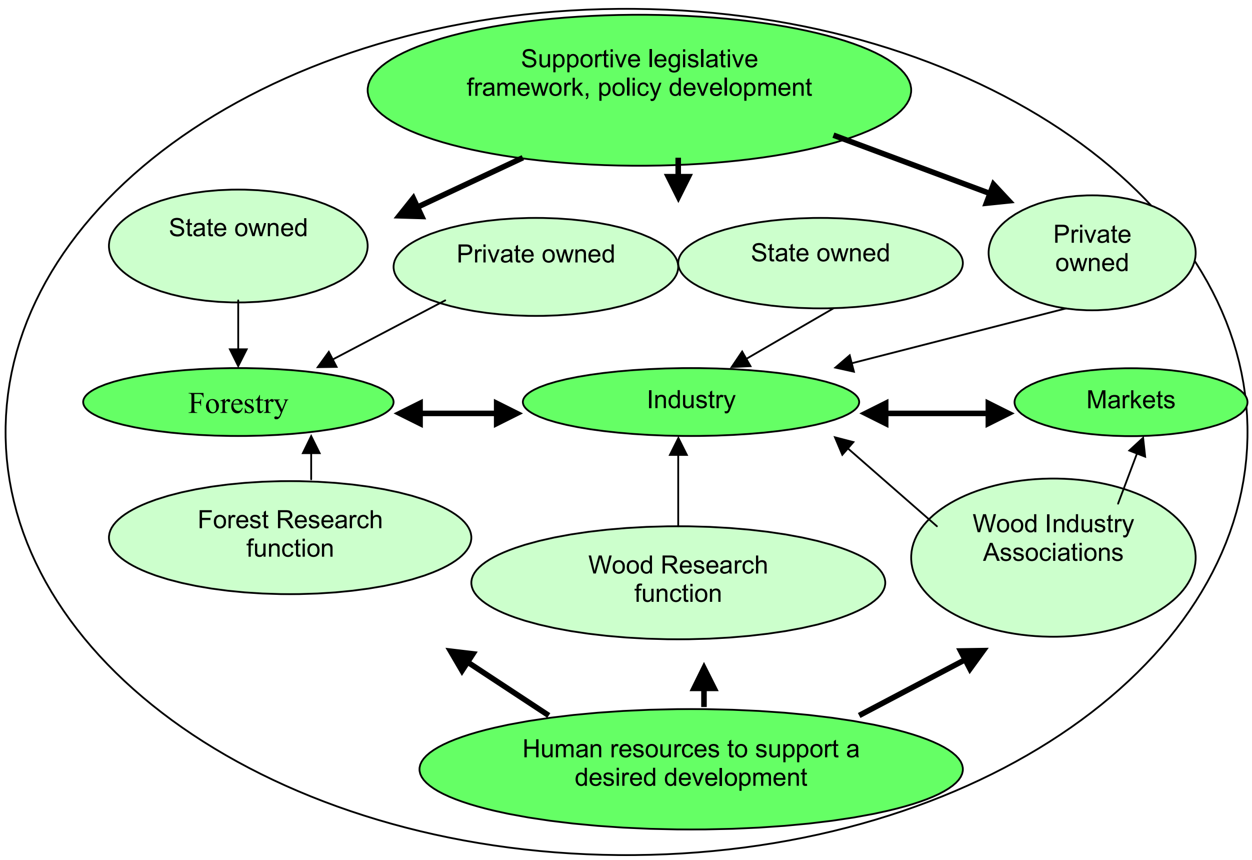
The forestry and forest industry sectors are important elements of the economy. The current contribution to the national economy is 1.3%, but could be in the order of 4-8 % considering the values of non-wood products, and multiplier effects. The potential of the sector as a provider of employment is even bigger, and has the potential to account for as much as 6-8% of the total labour force. In areas rich in forests, the percentage could go as high as 15-20%. This places Serbia and Montenegro in a category of countries where the sector should be given high priority. For this reason, strong and coordinated development efforts should be taken, not only to restore the former importance of the sector, but also to provide for further expansion. The basis for this positive development scenario lies in: (i) well developed infrastructure, (ii) a skilled labour force, (iii) a tradition as exporter of high quality wood-based products and (iv) access to a unique forest resource base.

Forest sector development programs must take into careful account the function of the entire supply chain, including all elements and support functions. In Serbia and Montenegro, and in other countries where the sector plays an important role, the function and effectiveness of the following elements determines the strength of the sector:

i) a legislative framework
ii) a skilled workforce
iii) private forest owners associations
iv) restructuring the public enterprises
v) research institutions

As Serbia and Montenegro have been isolated for a long time, activities aimed at improving the performance of the forest sector will have to deal with all the elements shown in Figure 35.

Figure 35: The supply chain and main elements of forestry and forest industry sector



Source: FAO, (2003)

A number of projects have already been presented to various ministries. For this reason, and considering the need for coordination of projects, it might be important to define and allocate sector development work to potential contributing organizations. The following are the various projects that to a great extent are in line with the needs expressed by the Forest Departments and the interest of some donor organizations:

- *Sector development*
- *Institutional development and capacity building*
- *Forest Inventory, GIS and management planning*
- *Forest Industry Development*
- *Functions of State Forest Companies*
- *National Parks Development, non-wood products*

10.1 Wood industry outlook

The official strategic development plans for the wood processing industry of Serbia by 2010 are divided into two groups. The first group aims to satisfy the domestic market needs and develop newer products (wood flooring, LVL , laminated beams etc.) The second group aims is to reach $120 million in forest sector export by 2005 and $270 million by 2010. The main forest products for achieving this aim are: furniture and furniture parts, sawnwood and residuals, plywood, pressed pieces for furniture, edge-glued panels, veneer, and other final products (windows, doors, floors, packaging, mouldings).

10.1.1 The furniture export strategy

The strategic aim of furniture export from Serbia is to reach the export of $50 million by 2005, and $150 million by 2010. The key measures for achieving these aims are:

- Production of wood furniture, with an emphasis on seating, dining room furniture and bedroom furniture, for markets in western countries.
- Production and export of furniture components (doors for cabinets, seats for chairs, etc.).
- Fundamental changes to design, functionality, quality and use of new materials.
- Specialization and integration of the large number of small and medium companies.
- Restructuring program based on the principles of specialization.
- Implementation of ISO quality standards.

Target markets for furniture export from Serbia are: Germany, Greece, Great Britain, France, Italy and Russia.

10.1.2 Export strategy for sawnwood and elements

The main aim regarding sawnwood exports (namely hardwood) is a reduction to about 200,000 m^3 per year, but with improved quality, better packaging, sorting, labelling and respecting delivery deadlines, enable exports of about $80 million by 2010. The key measures to achieve the set goals are:

- The structural change of elements for export.
- Export of dried finished sawnwood, which get prices that are about $100 per m^3 higher than the semi dry and raw sawnwood that is currently being exported from Serbia.
- Forming an association of exporters, for mutual representation to foreign markets and the elimination of mutual competition, which is currently very present.
- The return of beech sawnwood exports to the Great Britain market.
- Increase exports of sawnwood to Italy, Greece, China, Scandinavian countries and Great Britain.

10.1.3 Export strategy for plywood and pressed furniture pieces

Serbia has a tradition in plywood production, the necessary raw material to produce it, and relatively good production capacities for its production. Considering these facts, the strategic aims in production and exports of plywood are the production of about 30,000 m^3 and export of about $6.5 million by 2005, and an increase to 50,000 m^3 and exports of about $10 million by 2010. The key measures to achieve these goals are:

- Production and export increases of beech plywood (a much higher valued product then the dominant poplar plywood).

- Structural change in the export of poplar plywood with the tendency to reduce the production and export of CC grade in favour of AA and AB grade plywood production.
- The production and export increase of external use grades of plywood.
- The development of softwood plywood.

The targeted markets for plywood export from Serbia are: Italy, Germany and Austria.

10.1.4 Export strategy for veneer

Veneer exports are significant in the total exports of wood products in Serbia. The set goals for veneer exports are 50,000 m^3 and \$10 million by 2005, and 80,000 m^3 (\$20 million) by 2010, with an overall aim to increase the share veneer holds in the total wood exports. The key measures for achieving these goals are:

- Processing of F and L quality class logs into veneer, not to sawnwood.
- Increased production and export of high-grade veneers in the total veneer production, especially of oak and ash
- Improved sorting and packaging of veneer.

Targeted markets are Italy, Germany, Belgium, Holland and Great Britain.

10.1.5 The export strategy for edge-glued panels

Solid wood panels represent a wide range of products, which have a high demand, especially in the German market. The strategic aim of Serbia in this area is to reach production levels of 10,000 m^3 and exports of \$10 million by 2005, and production of 20,000 m^3 with exports of \$20 million by 2010. The measures for achieving these goals are:

- Processing of short sawnwood (1.0-1.7m) into edge-glued panels (instead of low valued exports).
- Coordination of Serbian standards with EU standards.
- Reduction of custom taxes for the import of manufacturing equipment.

The target markets for laminated wood exports from Serbia are: Germany, Italia and Austria.

10.1.6 Export strategy for other wood industry products from Serbia

The strategic target of Serbia for other wood products is to reach exports of about \$40 million by 2010. Key products for achieving this goal are: joinery (windows and doors), packaging, wood floors, hardboard and wood mouldings. The basic measures that should be taken for achieving these targets are:

- Market access into Russia and Arab countries with wood for interiors, windows, doors, floors and furniture.
- Export of wood packaging and hardboard.
- Export of wood moulding and wood toys for children.

Targeted markets are Russia, Arab countries, Germany, Greece and Italy.

10.1.7 Prospect for Serbia's wood market

The forest industry in Serbia is in the process of transition, as is the total economy. The first and most important step in this process is the accomplishment of privatization in the sector of forest exploitation and in the wood-processing sector. Like other countries, the construction sector will still represent an important factor in forest industry development. In that sense, the newest law has simplified and facilitated the process of gaining permits for housing construction. The expectations are that housing construction, renovation of businesses and multi-family housing, will significantly increase in the second half of 2004 and continue its growth in the incoming years. This will doubtlessly influence consumption increases thus increases of forests product production in Serbia.

Government efforts are directed towards the creation of a positive investment climate for direct foreign investments in the wood processing sector, so as to encourage the establishment of joint ownership between foreign and domestic companies. During 2002, some very strong multinational companies opened offices in Serbia, and during April 2003, the preparations for building a new factory for laminated parquet as a joint venture between companies from Serbia and Sweden has started.

Continuation of the reform process, a stable macroeconomic situation, and increased consumption of products made out of natural materials, such as wood, will very much influence the further production and increased export of wood furniture from Serbia. In that sense, certain suitable programs for stimulating the producers/exporters of wood furniture have been proposed to the Government. The increase of housing construction and the renovation of existing buildings will additionally increase furniture consumption domestically.

Furniture production increases will increase demand for sawn hardwood, and thus decreased exports can be expected in the coming years. A program for reducing export of sawn hardwood while increasing domestic processing into value-added products has been presented to the Government. Increased construction activity will increase consumption, and by that the import of sawn softwood.

The completion of the privatization process in factories for plywood, hardboard and veneer production during 2003 will create a good starting point for stabilization and increased production of these forest products during 2004 and further. The demand for these export products is satisfactory. The problems with particle board production will may also be present in the near future given the many problems that are present.

The transformations initiated (privatization) in the forest exploitation sector will improve the wood selling system and its production, which will create the basic conditions for production increase for all forest products.

11. FOREST PRODUCTS MARKETS OF SOME OTHER FORMER SFR YUGOSLAVIA REPUBLICS

This part contains information on the most important segments of forest products markets of some former Yugoslav republics, specifically Croatia, Slovenia and Macedonia.

11.1 Roundwood market

Croatia is the greatest log producer in the region of former SFR Yugoslavia, with an annual production of over 4.0 million m^3. Serbia and Slovenia also produce large quantities of logs, while Macedonia has a relatively small production and consumption of wood. Croatia is mainly a hardwood producer (87%), while Slovenia is heavier to softwood (56% in 2001). Hardwoods prevail in Macedonia.

Table 14: Roundwood production in Croatia, Slovenia, Macedonia and Montenegro, 1997 to 2001,

(1000 m^3)

	1997	1998	1999	2000	2001
Croatia	2 976	3 502	4 228	4 201	4 105
Slovenia	2 567	2 470	2 396	2 609	2 614
Macedonia	809	707	781	764	593

Source: Statistical yearbooks from each country, 2002.

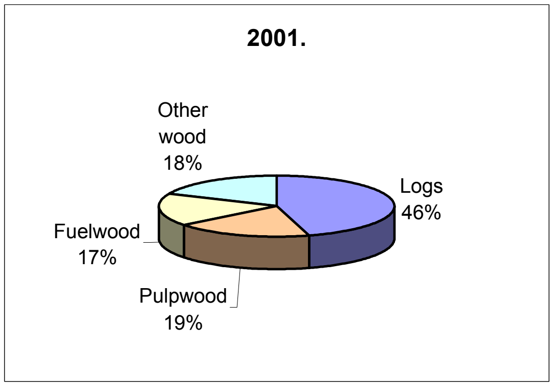
Table 15: The achieved log prices on the auction in Croatia, 2003.

Wood species	Class	Diameter (cm)	Price (€/m^3)
Oak	I	30-39	108
Oak	II	25-39	83
Beech	I	30-39	67
Ash	I	30-39	98
Ash	II	40-49	82
Maple	I	40-49	267
Maple	II	40-49	75

Source: Croatia Forests, 2003

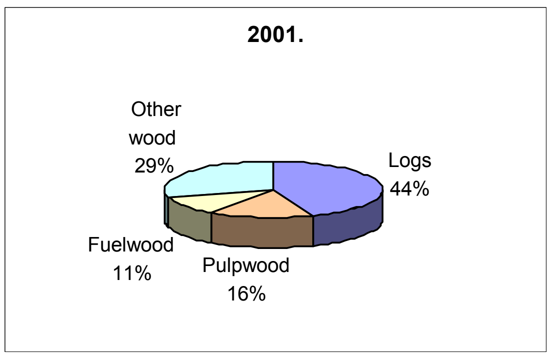
An important characteristic of the Croatian log market is that the great quantity of the harvested logs originates from certified forests. Certification by FSC system is almost completely implemented for the state owned forests. A significant part of logs in Croatia are sold by auction to domestic customers and to foreign buyers as well. As a result, Croatia annually exports over $4.0 million of roundwood. Sawlogs make up some 90.4% (2001) of the total, with the rest firewood. The most important markets for roundwood exports are Italy and Slovenia. The prices of oak, beech, ash and maple logs achieved from auction in the beginning of May 2003 are shown in Table 15

Figure 36: The participation of certain elements in Croatian roundwood production, 2001, (%)



Source: ***Statistical yearbooks from each country, 2002.***

Figure 37: The participation of certain elements in Slovenian roundwood production, 2001, (%)



Source: Statistical yearbooks from each country, 2002.

11.2 Sawnwood market

With the annual production of about 600,000 m^3, Croatia represents the leading producer of sawnwood (87% hardwood) in the region of former SFR Yugoslavia (Table 16).

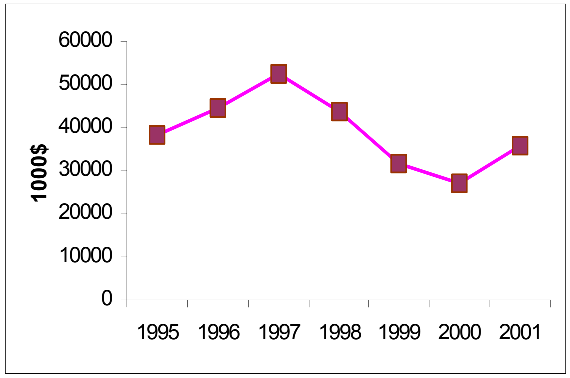
Table 16: Sawnwood production of Croatia, Slovenia and Macedonia, 1997-2001 (m^3).

	1997	1998	1999	2000	2001
Croatia					
Sawn hardwood	461 927	424 671	426 629	531 811	519 866
Sawn softwood	98 924	105 520	87 805	94 746	78 863
Slovenia					
Total sawnwood	617 000	555 000	506 000	527 000	453 000
Macedonia					
Sawn hardwood	26 020	17 523	20 827	24 934	…
Sawn softwood	6 454	5 975	10 863	11 901	…

Source: Statistical yearbooks from each country, 2002.

Beech is the leading sawn hardwood, at 51.5% of the total, followed by oak with 35.2%. Besides the leading position in production, Croatia is the leading country for sawnwood exports in this region, with the annual export of over 400,000 m^3, whose value exceeds $35 million (Figure 38).

Figure 38: Sawnwood export from Croatia, 1995-2001



Source: Croatian Foreign Trade Statistic, 2002.

Croatia exports over 75% of its sawnwood production. The most important markets for sawn hardwood from Croatia are Italy, Slovenia and Austria. The value of exports to these three countries exceeds 75% of its total sawnwood export.
Slovenia takes second place in sawnwood exports. In 2000, its export of sawn softwood reached $20.7 million. The most important markets for sawn softwood export are Italy, Croatia and Germany. Beech dominates sawn hardwood production in Macedonia, with 99% of the total.

11.3 Wood-based panels

Slovenia is the leading country in the region of former SFR Yugoslavia for production of wood-based panels (Table 17). Particle board accounts for 81.2% of the total. Slovenia exports 25.4% (2000) of its annual production with a value of about $10 million. The most important markets for particle board exports is Croatia, and the annual export to this country are about $4 million.

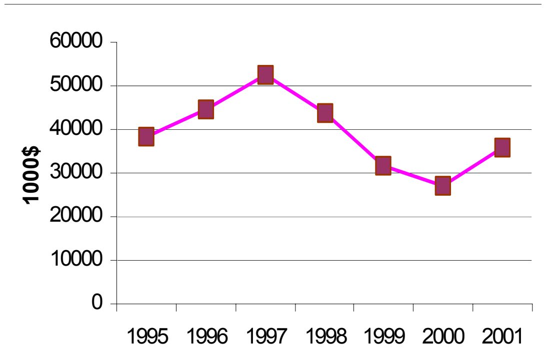
Table 17: Wood-based panels production of Slovenia, Croatia, Macedonia and Montenegro, 1997- 2001 (m^3).

	1997	1998	1999	2000	2001
Slovenia	417 000	457 000	424 000	468 000	437 000
Croatia	80 554	83 661	76 618	77 269	81 718
Macedonia	605.0	153.0	455.0	357.0	...

Sources: Statistical yearbooks from different countries

Slovenia exports over 25% of its plywood production, with a value of about $4 million. The most important markets are Italy and Austria. Italy also represents the most important market for veneer export from Slovenia, whose total export amounts to about $23 million.

Figure 39: Wood-based panels export from Slovenia, 1996-2000

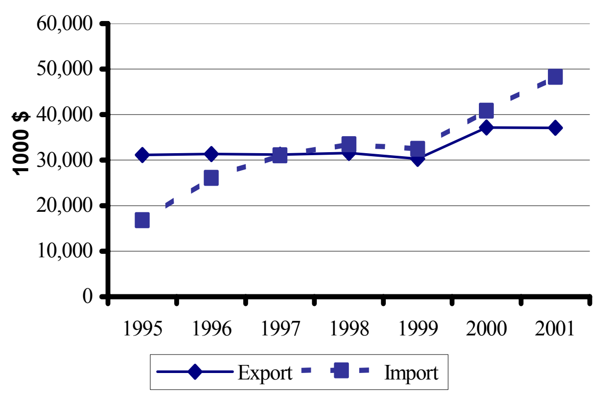


Source: Slovenian Foreign Trade Statistic, 2003

In the total Slovenian import structure of wood-based panels, veneer makes up 35.3%, particle board 33.7%, hardboards 13.2%, plywood 2.6%, and MDF with 5.2%.

The Croatian foreign trade balance of wood-based panels has been negative in the past years. The deficit in particle board amounts to about $31 million. In the export structure, the dominant part is taken by veneer with 66.5% ($25 million). The most important markets for veneer export are Italy, Belgium and Germany with over 55% of the total veneer export going to them.

Figure 40: Wood-based panels export from Croatia, 1995-2001



Source: ***Croatian Foreign Trade Statistic, 2003.***

Macedonia does not represent the significant exporter of wood-based panels, and they import some, mainly from Serbia.

12. CONCLUSIONS

Forest resources have a significant role in sustainable development in Serbia and Montenegro. Yet, many of these potentials are not fully realized. Much of the existing industrial wood processing capacity is not currently being utilized. Besides timber production, other natural resource values of the forest could be used more. Management of natural resources has a direct impact on production and employment.

Though human capital is enhanced, present organizational structures are inefficient. Management, planning and control of natural resources are still limited. There are no new forestry laws to support reforms in the forest sector, which creates a lack of a clear forestry policy.

The low technical levels in all activities connected to forestry leads to low productivity levels and high costs. The low level of technology is a consequence of, among others, a lack of domestic capital, foreign investments, cooperation between enterprises, and low worker motivation. An underdeveloped infrastructure presents a barrier for intensive use of equipment. The low quality of forest roads complicates transporting timber. Also, safety standards and labour laws are far below western standards.

The condition of private forests in Serbia and Montenegro is characterised by insufficient amounts of high forests and a very high percentage of coppice forests, scrub, and brushwood. Still, it is thought that "*despite some unfavourable management characteristics of private forests (such as small area, a great number of plots scattered over a vast area, insufficient timber supply), their potential can be almost twice as large as that realised nowadays*" (Nikolić S.,1986).

The forest ownership structure is the biggest problem for efficient management of the forests. Private forest holdings are small, averaging 0.5 ha. Owners have little or no cooperation. Government support policies are inadequate and seldom are management plans made. Support to the inspectors of the Ministry and "on the ground" control is provided by forest engineers from Public Enterprises (PE). This practice constrains future development as tasks regarding extension, management plans, control and inspection should be properly identified and become a duty of independent stakeholders.

Unless owners organize themselves into voluntary organizations like unions, associations or Chambers to defend and present their interests, improvements in the sector are unlikely to materialize. Good cooperation and partnership between private enterprises and private forest owners is the only way to improve management of forests. International cooperation is still very restricted. However, the wood-processing industry did make some cooperation contracts with foreign companies, mainly Italians, focused on the sawmill industry.

Due to 15 years of isolation from the international community, the forestry sector in Serbia and Montenegro is not yet in a position to track international development. New concepts and holistic approaches in managing economic, ecological, social and cultural sustainability are relatively unknown. The same situation holds true with research in forestry and technical applications. War and the consequences of social disruption resulted in a decrease of production and processing of wood, increasing unemployment in forest regions. Private enterprises exploited the situation with refugees, by giving them low salaries and neglecting payment of social security and taxes.

There is a need for improving knowledge of non-wood forest products utilisation, like ecotourism, collection and trade of berries and mushrooms, etc.

From an environmental perspective, various types of pollution are a problem, especially in national parks and protected natural areas. Large amounts of waste are left along roads and in the woods, damaging flora and fauna, soil and water. This problem is especially serious around tourist sites. Additionally, emissions from old machinery used for logging have polluted soils and brooks. The main user groups in forestry, and forest industries have changed their business philosophy[13] and become more market oriented in the past 10 years. Unemployment and social instability increased in rural areas and were influenced by factors outside of the forest sector.

Biodiversity can be increased and protected, both in protected areas and in managed forests. The greatest threat for the maintenance of preservation areas is a lack of funding. National parks as public utilities are increasingly forced to sell timber from their forests in order to meet financial needs.

In some national parks, the pressure of increased tourism is threatening biodiversity. Municipalities are contributing to this through liberal land-use planning, construction permits, etc. in order to increase economic activity in the depressed rural communities.

Growth and protection of biodiversity has not been taken into account in forest management. The lack of education and the limited awareness of biodiversity are evident at all levels of organisations, both in state and in privately owned forests.
There is probably great potential to increase and protect biodiversity in private forests. However, there are no relevant data available, since the inventory of private forests was stopped by the period of international isolation, which started in the 1990s. Harvest and management in general, has been limited in private forests during the last decades.

Most of the institutional shortcomings in the forestry sector derive from the lack of a visible forestry policy, an outmoded legislative framework, an overly optimistic forestry development plan, and forestry institutions that are not structured, organized and equipped to deal with the challenges that emerge in the sector as the country makes sustained efforts to achieve its major foreign policy goal of accession to the European Union.

There is an obvious imbalance regarding need, plans, number of employees and prescribed obligations for each forestry authority. All of them have an immediate need for the updating of information systems, coordination between each other and related institutions, as well as for decreasing the number of employees. Employees need initial and additional education, which is constrained by, among other things, a lack of programmes within educational institutions themselves.

[13] In the socialistic period, large combines with huge capacities were almost the only relevant economic potential in the forest industries. Nowadays these large combines are not efficient and they have major problems to adapt themselves to new market demands and to activate all their capacities. Also there is a problem of surplus of employees, outdated equipments, etc.

The following tasks are priorities:

- Adequate and competent analysis of education programmes;
- Restructure ecological education programmes to include elements and concepts of sustainable development.
- Introduce the concept of sustainable development to all other education segments in which ecological education has been absent.

Despite recognition of the multiple dimensions of forest resources, forestry continues to be dominated by a narrow emphasis on timber production. Accordingly, management plans for these areas nearly always focuses on wood production as the main objective, with only an insignificant portion allocated to other primary uses. This single focus comes in marked contrast to:

- Rapidly growing "new" demands for environmental and biodiversity conservation, and other forest values from national and international communities.
- Recognition of the need for greater sensitivity to the needs of poor rural population to supplement their incomes derived from forestry and related activities.
- Commitments by the Government, through agreement and resolutions, to protect the global significance and values of forests.

Forestry in Serbia and Montenegro has the potential to make an important contribution to the country's economic and social development. There is an overwhelming difference between what the forest resources are presently providing, and what they could provide. In spite of this, the sector is not receiving the emphasis it deserves. It needs higher emphasis and support in order to mobilize all available resources and means for its development. In order to justify adequate emphasis and support as well as to perform effectively, it is essential that:

- The forestry administration and management respond to the requirements of the emerging market economy, new demands on the forest resources and make structural adjustment accordingly.
- Attempts are being made to produce supporting information to promote forestry development such as:
  - Supply and demand prospect; to determine possible gap or surplus.
  - Non-wood forest products (NWFPs) potential, market prospect, training, and organizational requirements.
  - Rural dependence on forest resources, subsistence forest production, employment, and community- resource relations.
  - Plantations; economics of plantations, type of plantations required, incentives, promotion and organizational aspects.
  - Government forest revenues; stumpage/royalty fees.
- Private forests are revitalized so as to prevent nearly 40% of the country's forest resources sitting idle and vulnerable to further deterioration.
- Rural community involvement in forest development is promoted to ensure additional income.
- Privatization is effectively used as a vehicle to relieve management organizations, which are ill-equipped to perform all functions.
- Rural forest communities are organized and trained to take an active role in privatizing forestry activities e.g. logging, NWFP.
- Possible NGO involvement in forest communities to fill the lack of forestry extension service.
- Forest management planning is reformulated and upgraded to become "Multi-purpose Forest Resource Management and Planning".
- Forest information system developed and established to ensure adequate database for planning.
- Institutions and organizations adopt multi-purpose forest resource management planning and implementation.

It is apparent that there are several issues with regard to forest resource management and its financing that require consideration and commitment. First of all, the unbalanced approach to forest administration and management policy that gives higher emphasis to the state forest and forestland needs to be addressed and corrected. It is believed that private forests, with the potential they have, deserve at least equal emphasis.

There are various areas where investments are required. The investments pertaining to institutional strengthening and capacity building should have priority. There are a number of donor-funded projects that would support institutions and provide a sound basis for development. Additional donor funded projects need to be sought, to relieve the government from the heavy financial burden.

At present, forestry is not regarded as one of the priority sectors. For this reason, any significant budgetary increases of government funds is unlikely in the immediate future, meaning the sector will have to rely heavily on the resources that can be generated from within the sector.

In order to realize improvements to: forest resource administration and management, sector financing, and the overall socioeconomic and environmental objectives, it is important that the following issues are seriously considered and addressed:

- Field administrative and supervisory capacity of the Ministry is strengthened.
- Forest administration and management policy is adjusted to give equal emphasis to the private forests.
- Attempt is made to accelerate the preparation of forest management programmes for the private forests.
- Possibility for the establishment of a unit within the Ministry for specifically dealing with all matters related to private forests.
- Possibility of having forest management plans prepared by a unit independent of the forest enterprises.
- It is ensured that the forest management plans and programmes of the private forests are prepared with multi-purpose objectives, incorporating economic, social and environmental dimensions on a sustainable basis.
- Attempt is made to calculate standing value of wood in the forest so as to derive the stumpage price.
- Additional donor support is sought to cover investments that the government is unable to meet.
- Necessary measures are taken to facilitate local community involvement in forestry income generating activities.

The forest industry in Serbia and Montenegro is in the process of transition, (as is the total economy). The first and most important step in this process is privatization of forest harvest and wood-processing. As in other countries, the construction sector will play an important role in forest industry development. In that sense, simplified regulations have facilitated the process of permitting for housing construction. Expectations are that housing construction and renovation of residential and office buildings will increase significantly in the second half of 2003, and continue in coming years. This will undoubtedly increase consumption and production of forests products in Serbia.

Government efforts are directed towards the creation of a positive investment climate for direct foreign investments in the wood processing sector, and the establishment of joint ventures between foreign and domestic companies. During 2002, some very strong multinational companies opened offices in Serbia, and during April 2003, preparations have started for building a new factory for the production of laminated parquet (a mutual investment of companies from Serbia and Sweden).

Continuation of reforms, a stable macroeconomic situation, increased consumption of products made out of natural materials (such as wood) in Europe, will all very much influence further production and exports of wood furniture from Serbia. In that sense, certain suitable programs for stimulating companies that produce and export wood furniture have been proposed to the Government. The increase of new housing construction and the renovation of existing buildings will additionally influence the increase of furniture consumption domestically, which will, in the end, influence production.

ANNEX 1 (TABLES)

Table 18: Area under forest and forest density

	Total land 1000 ha	Forest area 1000 ha	Forest area %	Forest area per inhabitant ha	Forest cover %
Montenegro	1 381	543	19.0	0.93	39.3
Serbia	8 836	2 313	81.0	0.25	26.2
Central	5 597	1 781	62.4	0 31	31.8
Vojvodina	2 151	103	3.6	0.05	4.8
Kos.&Metoh	1 089	429	15. 0	0.27	39.4
S & M	10 217	2 856	100.0	0.31	27.9

Source: Yugoslav survey, No. 3, 2000.

Table 19: Forests area by species group

Kind of stand	Monte-Negro	SERBIA Central	SERBIA Vojvodina	SERBIA Kosovo & Metohija	SERBIA Total	Serbia & Montenegro
	1 000 ha					
Pure						
Broadleaf	184	1 082	48	267	1 397	1 581
Conifers	39	95	2	11	108	147
∑ Pure	223	1 177	50	278	1 505	1 728
Mixed						
Broadleaf	190	521	50	130	701	891
Conifers	36	16	1	11	28	64
Broadleaf/ Conifer	94	67	2	10	79	173
∑Mixed	320	604	53	151	808	1 128
TOTAL	543	1 781	103	429	2 313	2 856
	Structure %					
Pure						
Broadleaf	34.0	60.8	46.4	62.3	60.4	55.4
Conifers	7.2	5.3	2.4	2.6	4.6	5.1
∑ Pure	41.3	66.1	45.8	64.9	65.0	60.5
Mixed						
Broadleaf	34.9	29.3	51.1	30.4	30.5	31.3
Conifers	6.6	0.9	1.4	2.6	1.2	2.2
Broadleaf/ Conifer	17.2	3.8	1.6	2.1	3.3	6.0
∑Mixed	58.7	34.0	54.2	35.1	35.0	39.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Yugoslav survey, No. 3, 2000.

Table 20: Wood volume by species group

Kind of stand	Monte-negro*	SERBIA				Serbia & Montenegro
		Central	Vojvodina	Kosovo & Metohija	Total	
	In millions of m^3					
Broadleaf	23	116	5.9	19	140	163
Conifers	6	9	0.1	1	11	18
∑ Pure	29	190	6	20	151	181
Broadleaf	8	48	8.8	6	63	71
Conifers	8	2	0.1	2	5	12
Broadleaf/ Conifer	27	15	0.1	2	16	43
∑Mixed	43	65	9	10	84	126
TOTAL	72	190	15	30	235	307
Structure, as %						
Broadleaf	31.9	61.1	39.3	63.3	59.6	53.1
Conifer	8.4	4.7	0.7	3.4	4.7	5.9
∑ Pure	40.3	65.8	40.0	66.7	64.3	59.0
Broadleaf	11.1	25.3	58.6	20.0	26.8	23.1
Conifers	11.1	1.0	0.7	6.6	2.1	3.9
Broadleaf/ Conifer	37.5	7.9	0.7	6.7	6.8	14.0
∑Mixed	59.7	34.2	60.0	33.3	35.7	41.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Yugoslav survey, No. 3, 2000.
*Data for Montenegro is concerning state owned forests only.

Table 21: Volume increment by species group

Kind of stand	Monte-negro	SERBIA				Serbia & Montenegro
		Central	Vojvodina	Kosovo & Metohija	Total	
	In thousands of m^3					
Broadleaf	408	2 860	240	570	3 662	4 070
Conifers	153	200	2	40	243	396
∑ Pure	561	3 060	242	610	3 905	4 466
Broadleaf	156	1 300	260	260	1 814	1 970
Conifers	224	60	-	60	117	341
Broadleaf/ Conifer	497	300	10	30	345	842
∑Mixed	877	1 660	270	350	2 276	3 153
TOTAL	1 438	4 720	512	960	6 181	7 619
Structure %						
Broadleaf	28.4	60.6	47.1	60.0	59.3	53.4
Conifers	10.6	4.2	-	3.2	3.9	5.2
∑ Pure	39.0	64.8	47.1	63.2	63.2	58.6
Broadleaf	10.8	27.4	50.9	27.4	29.3	25.9
Conifers	15.6	1.3	-	6.3	1.9	4.5
Broadleaf/ Conifer	34.6	6.4	2.0	3.1	5.6	11.0
∑Mixed	61.0	35.2	52.9	36.8	36.8	41.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Yugoslav survey, No. 3, 2000.

Table 22: Wood volume and volume increment per unit of forest area and species group

Type of stand	Monte-negro*	SERBIA				Serbia & Montenegro
		Central	Vojvodina	Kosovo & Metohija	Total	
	Wood volume in m^3/ha					
Broadleaf	122.3	107.4	120.3	69.5	100.5	70.3
Conifers	168.4	96.1	38.0	151.7	100.5	118.6
∑ Pure	130.4	106.4	123.7	72.8	100.7	104.3
Broadleaf	40.8	92.4	166.6	45.7	89.3	78.9
Conifers	214.3	149.0	37.1	203.9	165.2	192.5
Broadleaf/ Conifer	289.2	211.3	81.7	208.9	208.2	252.7
∑Mixed	133.1	107.0	160.6	67.2	103.3	111.7
AVERAGE	132.0	106.6	143.7	70.8	101.6	107.4
	Volume increment in m^3/ha					
Broadleaf	2.2	2.6	5.0	2.1	2.6	2.6
Conifers	3.9	2.2	1.1	3.2	2.2	2.7
∑ Pure	2.5	2.4	5.1	2.2	2.6	2.6
Broadleaf	0.8	2.5	5.0	2.0	2.6	2.2
Conifers	6.3	3.6	1.0	5.2	4.1	5.3
Broadleaf/ Conifer	5.3	4.6	3.0	4.1	4.5	4.9
∑Mixed	2.7	2.7	4.8	2.3	2.8	2.8
AVERAGE	2.6	2.6	4.9	2.2	2.7	2.7

Source: Yugoslav survey, No. 3, 2000.
* Data for Montenegro is concerning state owned forests.

Table 23: Forests structure by cultivation form (data 1992, 1995)

Cultivation form	In 1000 ha			Structure, as %		
	Serbia & Montenegro	Monte-negro	Serbia	Serbia & Montenegro	Monte-negro	Serbia
High forest	1 359	286	1 073	44.4	40.3	45.7
Coppices	1 368	298	1 070	44.7	41.9	45.5
Other cat.	333	126	207	10.9	17.8	8.8
Total	3 060	710	2 350	100.0	100.0	100.0

Source: Yugoslav survey, No. 3, 2000.

Table 24: The shares of different tree species in the total growing stock

Tree species	Serbia	Montenegro
	%	
Beech	47	46
Oak (all kinds)	25	5
Poplar	1	-
Other broadleaved	16	9
Spruce	5	26
Pines	2	2
Fir	3	10
Other conifers	1	2

Source: Yugoslav survey, No. 3, 2000.

Table 25: Damage in state forests by causes in Serbia and Montenegro

Year	Total damages in 1000 m^3	Share of each cause in %		
		Human factor	Fires	Other*
1980	40	45.1	27.2	26.7
1981	62	49.6	16.5	33.9
1982	53	37.4	38.8	23.8
1983	85	21.2	37.4	41.4
1984	62	54.0	8.2	37.8
1985	787	13.2	52.2	34.6
1986	73	35.2	32.7	32.1
1987	232	31.7	48.7	19.6
1988	44	61.2	25.9	12.9
1989	58	75.7	17.3	7.0
1990	142	37.7	56.7	11.3
1991	79	76.0	20.9	3.1
1992	174	42.9	47.5	9.6
1993	124	52.8	40.5	6.7
1994	92	65.8	6.9	27.3
1995	67	69.6	6.9	23.5
1996	61	44.2	33.4	22.4
1997	51	43.9	19.2	37.0

Source: Yugoslav survey, No. 3, 2000. * Insects, plant diseases, accidents

Table 26: Damages caused by fire in Serbia and Montenegro

Year	Area ha	Damage in m^3
1990	3 500	76 579
1991	1 541	6 815
1992	1 969	74 036
1993	6 895	46 473
1994	1 576	5 573**
1995	1 653	4 303
1996	4 593	8 518**
1997	1 230	6 658
1998	3 317	22 253
1999[1*]	320	1 619

Source: Statistic bulletin “Forestry”, * Uncompleted data (NATO bombing), ** State forests only
1 Without data for Kosovo and Metohija

Table 27: Basic data about tending in Serbia and Montenegro

Tending	Period	Area ha/year	Period	Area ha/year
Tending of young stands	1980-1990	61 000	1991-1998	4 000
Cleaning	1980-1990	53 000	1991-1998	6 500
Thinning	1980-1990	120 400	1991-1998	36 625

Source: Yugoslav survey, No. 3, 2000.

Table 28: Cutting by assortments in Serbia and Montenegro

Year	Total 1000 m^3	Technical wood 1000 m^3	Fuelwood 1000 m^3	Waste 1000 m^3
1980	4 526	1 836	2 184	505
1990	4 351	1 860	1 985	505
1992	3 452	1 472	1 573	407
1993	3 056	1 077	1 648	331
1994	3 110	1 247	1 502	361
1995	3 501	1 435	1 665	402
1996	3 520	1 374	1 715	431
1997	3 074	1 188	1 525	361
1998	3 137	1 306	1 432	400
1999[1]	2 930	1 214	1 373	343

Source: Statistical Bulletin "Forestry", 1 without data for Kosovo and Metohija

Table 29: Cutting by species group in Serbia and Montenegro

Year	Broadleaved 1000 м^3	% increment	Coniferous 000 м^3	% increment	Total 1000 м^3	% increment
1980	3 886	64	640	40	4 526	59
1981	3 895	64	564	36	4 459	58
1982	3 858	64	564	36	4 554	60
1983	3 867	64	742	47	4 609	60
1984	4 091	68	730	46	4 821	63
1985	4 384	73	799	51	5 133	67
1986	4 307	71	788	50	5 095	67
1987	4 386	73	699	44	5 085	67
1988	4 363	72	742	47	5 105	67
1989	4 225	70	758	48	4 983	65
1990	3 708	61	643	41	4 351	57
1991	3 431	57	723	46	4 154	54
1992	2 782	46	670	42	3 452	45
1993	2 575	43	481	30	3 056	40
1994	2 445	40	665	42	3 109	41
1995	2 845	47	656	41	3 501	46
1996	2 803	46	717	45	3 520	46
1997	2 528	42	546	35	3 074	40
1998	2 635	44	502	32	3 137	41
1999[1]	2 442	40	488	31	2 930	38
2000[1]	2 833	47	602	38	3 435	45

Source: Statistical Bulletin "Forestry"
1 Without data for Kosovo and Metohija

Table 30: Forest roads density in Serbia and Montenegro

Year	Forest roads	
	Length in km	Density in m/ha
1985	17 115	5.71
1990	17 196	5.74
1997	16 752	5.54
1998	16 701	5.84
1999	14 168	4.96

Source: Statistical Bulletin "Forestry"

Table 31: Basic data on afforestation in Serbia and Montenegro

Year	Area (ha)	Conifers as %	Number of seedlings	
			million	seedlings/ha
1980	19 585	90.8	50.2	2 563
1981*	18 882	80.9	-	-
1982*	20 354	77.3	-	-
1983*	19 698	81.0	-	-
1984*	18 302	78.7	-	-
1985	16 052	85.2	21.9	1 364
1986*	13 259	70.0	-	-
1987*	13 178	79.6	-	-
1988*	12 497	74.5	-	-
1989*	10 478	75.7	-	-
1990	9 438	84.1	21.1	2 236
1991	8 547	73.5	18.0	2 106
1992	8 232	73.5	11.7	1 421
1993	4 293	81.7	9.6	2 236
1994*	4 732	74.4	-	-
1995	4 760	67.5	23.3	4 895
1996	4 228	64.7	25.9	6 126
1997	2 928	74.0	5.5	1 878
1998	2 653	65.8	5.2	1 960
1999[1]	2 744	55.0	4.4	1 603

Source: Statistical Bulletin "Forestry" / [1] without data for Kosovo and Metohija / * Uncompleted data

Table 32: Hunting grounds and number of game in Serbia and Montenegro

Year	Hunting grounds		Game			
	Number	Area	Wild boar	Hare	Deer	Roe deer
		1000 ha	1000 pieces			
1980	-	8 225	13.0	800.0	5.3	80.0
1990	569	8 243	26.0	635.0	6.8	109.0
1997	567	7 614	15.0	539.0	5.3	77.0

Source: Statistical Bulletin "Forestry"

Table 33: Hunting grounds and number of game in Serbia and Montenegro

Year	Hunting grounds		Game								
	No	Area	Deer	Roe deer	Moufflon	Chamois	Wild boar	Bear	Hare	Pheasant	Partridge
		1000 ha	1000 pcs								
1990	569	8 243	6.7	108.9	1.0	2.3	25.7	0.5	635.1	697.0	287.3
1991	572	8 287	6.6	105.3	1.3	2.1	23.8	0.5	616.5	608.7	265.5
1992	572	8 030	7.1	95.6	1.2	2.1	32.1	0.5	592.7	607.1	255.1
1993	583	8 467	6.6	94.3	1.1	3.3	20.6	0.4	624.4	557.0	296.9
1994*	-	-	-	-	-	-	-	-	-	-	-
1995	575	8 349	9.5	79.4	0.6	2.5	16.5	0.4	624.4	518.9	327.1
1996*	-	-	-	-	-	-	-	-	-	-	-
1997	567	8 544	5.3	76.7	0.6	2.0	15.0	0.5	539.4	488.3	326.5
1998*	-	-	-	-	-	-	-	-	-	-	-
1999[1]	457	7 711	4.2	83.2	0.7	1.6	13.7	0.3	513.2	422.4	276.4
2000*	-	-	-	-	-	-	-	-	-	-	-

Source: Statistical Bulletin "Forestry" / * No available data / 1 without data for Kosovo and Metohija

Table 34: Game shot in Serbia and Montenegro

Year	Game								
	Deer	Roe deer	Moufflon	Chamois	Wild boar	Bear	Hare	Pheasant	Partridge
	pcs								
1990	1 434	9 675	298	79	5 522	32	149 210	543 288	78.992
1991	976	8 052	139	65	4 469	22	129 715	234 695	23.187
1992	1 001	7 700	72	62	5 285	30	149 752	228 837	19.349
1993	822	6 286	123	53	4 139	32	141 907	195 827	17.127
1994*	-	-	-	-	-	-	-	-	-
1995	784	4 298	53	88	1 365	72	129 726	151 163	22.626
1996*	-	-	-	-	-	-	-	-	-
1997	644	3 667	72	60	2 642	69	108 975	125 013	17.210
1998*	-	-	-	-	-	-	-	-	-
1999[1]	736	2 388	-	52	3 090	16	40 706	122 235	13.203
2000*	-	-	-	-	-	-	-	-	-

Source: Statistical Bulletin "Forestry" / *No available data / 1 without data for Kosovo and Metohija

Table 35: Forests by ownership in Serbia

Ownership	Area		Standing volume		Increment	
	1000 ha	%	million m^3	%	1000 m^3	%
PE Srbijašume	1 156	47.0	118	45.9	3 293	45.8
PE Vojvodinašume	96	3.9	18	7.0	675	9.4
PE National Parks	100	4.0	13	5.3	371	5.2
PE Beli izvor	8	0.3	2	0.7	41	0.6
Waterworks and agriculture organisations	23	0.9	3	1.2	80	1.1
Faculty of Forestry educational bases	6	0.2	1	4.3	27	0.4
Total state and social forests	**1 384**	**56.2**	**155**	**60.3**	**4 487**	**62.5**
Private forests	1 087	43.8	102	39.7	2 697	37.5
TOTAL	**2 462**	**100.0**	**257**	**100.0**	**7 184**	**100.0**

Source: FAO Report, FAO/TCP/YUG/2902(A), 2003

Table 36: Forests and forestland area in Montenegro according to ownership (1995)

Category of forest and lends	State ha	Private ha	Total ha
High forests	205 370	30 782	236 152
Coppices	47 708	78 409	126 117
Scrubs and maquis	50 171	66 143	116 314
Clearings for afforestation	55 948	-	55 948
Commercial Forests and Forestland	359 197	175 334	534 531
Protection forests	51 813	-	51 813
Rocky soils	67 097	-	67 097
Other land (pasture ground, meadow etc)	43 541	-	43 541
Bare grounds	110 638	-	110 638
High forests	6 178	-	6 178
Coppices	4 929	-	4 929
Scrubs	1 850	-	1 850
National parks	12 957	-	12 957
TOTAL	534 605	175 334	709 939
TOTAL FORESTS	368 019	175 334	543 353
PERCENTAGE OF FORESTS	67.7	32.3	100.0
PERCENTAGE OF OWNERSHIP	75.3	24.7	100.0

Source: Yugoslav survey, No. 3, 2000.

Table 37: Area, households and population according to censuses

	Area (km^2)	Households (1,000)	Population (1,000)	Population per km^2	Persons per household
1921	102,173	1 041	5 131	50	4.9
1931	102,173	1 220	6 086	60	5.0
1948	102,173	1 569	6 905	68	4.4
1953	102,173	1 709	7 399	72	4.3
1961	102,173	2 036	8 114	79	4.0
1971	102,173	2 370	8 976	88	3.8
1981	102,173	2 711	9 898	97	3.7
1991	102,173	2 871	10 394	102	3.6
2002	102,173				
Montenegro	13,812	163	615	44	3.8
Serbia(1)	88,361	2 614	7 498	85	2.9

(1) Without Kosovo and Metohija in 2002 / ***Source:*** Serbian and Montenegrin Statistical Office, Belgrade

Table 38: Population

	Serbia and Montenegro	Montenegro	Serbia			
			Total	Central Serbia	Vojvodina	Kosovo and Metohia
1000						
1958	7 878	453	7 425	4 729	1 806	890
1968	8 725	535	8 190	5 078	1 929	1 183
1978	9 612	582	9 030	5 500	2 004	1 526
1988	10 411	633	9 778	5 832	2 052	1 894
1998	10 617	647	9 970	5 780	1 968	2 222
1999	10 629	651	9 978	5 763	1 958	2 257
2000*	10 633	654	9 979	5 742	1 946	2 291
2001*	10 651	658	9 993	5 730	1 938	2 325

*Data for Serbia estimated on natural increase basis for Kosovo and Metohija from 1997
Source: Serbian and Montenegrin Statistical Office, Belgrade

Table 39: Population by age groups and censuses in Serbia and Montenegro

	1971	1981	1991	2002[1]
Total	8 976 195	9 897 986	10 394 026	7 498 001
0-4 year	758 421	829 344	772 164	342 335
5-9	737 933	810 610	791 505	394 596
10-14	759 364	760 194	809 234	439 830
15-19	855 706	753 907	786 687	495 651
20-24	769 221	768 336	741 299	512 429
25-29	553 284	832 014	718 531	504 566
30-34	661 761	758 157	739 731	476 447
35-39	724 223	549 504	795 134	486 009
40-44	702 610	657 371	725 337	531 828
45-49	565 640	705 581	515 289	621 553
50-54	324 600	675 523	615 867	571 353
55-59	371 381	536 447	642 920	389 185
60-64	399 719	296 611	597 281	443 784
65-69	315 060	308 824	445 689	460 406
70-74	222 625	293 929	222 562	387 284
75 and over	209 119	319 654	365 108	392 815
Unknown	45 528	41 980	109 688	47 930
Children under 7 year	1 052 477	1 164 444	1 089 902	...
Children 7 to 14 year	1 203 241	1 235 703	1 283 001	...

1) Final results of the 2002 Census in Serbia are without Kosovo and Metohija
Source: Serbian and Montenegrin Statistical Office, Belgrade

Table 40: Vital statistics in Serbia and Montenegro

	Live births	Deaths	Natural increase	Marriages	Infant deaths per 1000 live births	Divorces per 1000 marriages
	per 1000 population					
1950	29.5	13.1	16.4	12.4	117.2	117.2
1960	21.6	9.8	11.8	9.0	84.7	157.1
1970	17.7	9.2	8.5	9.2	54.4	118.1
1980	17.6	9.0	8.6	7.6	33.3	153.3
1990	14.7	9.3	5.4	6.2	22.8	165.3
1997	12.4	10.6	1.8	5.3	14.3	141.4
1998[1)]	12.1	10.7	14.0	5.2	13.9	143.6
1999[1)]	11.7	10.9	0.8	5.0	13.6	136.0
2000[1)]	11.8	11.1	0.7	5.5	13.3	146.1
2001[1)]	12.2	10.6	1.6	5.4	13.1	152.6
Montenegro	13.4	8.2	5.2	5.9	14.6	126.4
Serbia	12.1	10.8	1.4	5.3	13.0	154.5
Central Serbia	10.2	12.3	-2.1	5.3	10.4	183.6
Vojvodina	10.4	14.7	-4.3	5.7	9.5	204.6
Kosovo and Metohija	18.5	3.7	14.8	5.1	18.2	33.4

1) Data for Kosovo and Metohija taken over from 1997, as the last available year. All relevant indicators and population estimates for period 1998-2001 calculated on the basis of these data.
Source: Serbian and Montenegrin Statistical Office, Belgrade and internal sources of authors

Table 41: Gross domestic product in Serbia and Montenegro

Year	Total $ Million	Per capita, USD
1994	14 285	1 358
1995	15 285	1 449
1996	16 477	1 558
1997	16 419	1 549
1998	15 487	1 459
1999	10 090	1 205
2000[1)]	8 670	1 035

1) Without data for Kosovo and Metohija
Source: Serbian and Montenegrin Statistical Office, Belgrade and internal sources of authors

Table 42: Built dwellings

Year		Total	Social sector	Private sector	Per 1000 population
1999	Serbia and Montenegro	13 123	2 695	10 428	1.2
	Montenegro	2 087	407	1 680	3.2
	Serbia	11 036	2 288	8 748	1.1
2000[1)]	Serbia and Montenegro	12 732	3 015	9 717	1.2
	Montenegro	2 360	382	1 978	3.6
	Serbia	10 372	2 633	7 739	1.0

1) Contractors from the territory of Kosovo and Metohija excluded.
Source: Serbian and Montenegrin Statistical Office, Belgrade and internal sources of authors

Table 43: Ten main external trade partners of Serbia and Montenegro, 2002

Country	Exports		Country	Imports	
	$ Million	% of total		$ Million	% of total
Total	2 275	100	Total	6 320	100
Bosnia and Herzegovina	331	14.6	Germany	829	13.1
Italy	330	14.5	Russian Federation	787	12.5
Germany	243	10.7	Italy	653	10.3
Macedonia	207	9.1	Hungary	276	4.4
Switzerland	170	7.5	Slovenia	242	3.8
Russian Federation	91	4.0	Bosnia and Herzegovina	231	3.7
Greece	83	3.7	Austria	194	3.1
Slovenia	82	3.6	China	193	3.1
Hungary	79	3.5	France	182	2.9
Austria	65	2.8	Sweden	171	2.7

Source: Serbian and Montenegrin Statistical Office, Belgrade and internal sources of authors

Table 44: Ten principal articles in external trade of Serbia and Montenegro, 2002.

Article	Exports		Article	Imports	
	$ Million	% of total		$ Million	% of total
Total	2 275	100	Total	6 320	100
Aluminium, not alloyed	156	6.9	Crude oil	480	7.6
Sugar, refined	91	4.0	Electric energy	195	3.1
Raspberries, frozen	89	3.9	Natural gas	194	3.1
New outer tyres for cars	53	2.3	Motor vehicles, for passenger transport	109	1.7
Wheat, except seeds	45	2.0	Passenger cars, assembled	88	1.4
Fuel oils, n.e.s.	41	1.8	Recorded media, other	60	0.9
Floor coverings, wall coverings, etc, of plastic	39	1.7	Peripheral units for ADP, other	60	0.9
Footwear with outer soles of leather, other	36	1.6	Medicaments, retail sale, other	52	0.8
Medicaments, retail sale, other	35	1.5	Gas oil	49	0.8
Maize, except seeds	32	1.4	Coffee, not roasted	48	0.8

Source: Serbian and Montenegrin Statistical Office, Belgrade

Table 45: Wood production in Serbia and Montenegro, 1991-2002

Product	Unit	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
ROUNDWOOD	1000 m^3	3 684.0	3 045.0	2 725.0	2 748.0	3 099.0	3 099.0	2 713.0	2 738.0	2 533.0	3 353.5	2 484.3	2 936
Coniferous	1000 m^3	468.0	578.0	427.0	576.0	558.0	594.0	438.0	401.0	316.0	373.5	336.8	370
Non-Coniferous	1000 m^3	3 216.0	2 467.0	2 298.0	2 172.0	2 541.0	2 505.0	2 275.0	2 337.0	2 217.0	2 980.0	2 147.5	2 566
WOOD FUEL, INCLUDING WOOD FOR CHARCOAL	1000 m^3	2 012.0	1 573.0	1 648.0	1 502.0	1 664.0	1 715.0	1 523.0	1 432.0	1 282.0	1 772.0	1 276.9	1 650
Coniferous	1000 m^3	12.0	23.0	19.0	21.0	17.0	29.0	34.0	22.0	19.0	19.0	20.2	35
Non-Coniferous	1000 m^3	2 000.0	1 550.0	1 629.0	1 481.0	1 647.0	1 686.0	1 489.0	1 410.0	1 263.0	1 753.0	1 256.7	1 615
Industrial roundwood (wood in the rough)	1000 m^3	1 672.0	1 472.0	1 077.0	1 246.0	1 435.0	1 384.0	1 190.0	1 306.0	1 251.0	1 581.5	1 207.4	1 286
Coniferous	1000 m^3	456.0	555.0	408.0	555.0	541.0	565.0	404.0	379.0	297.0	354.5	316.6	335
Non-Coniferous	1000 m^3	1 216.0	917.0	669.0	691.0	894.0	819.0	786.0	927.0	954.0	1 227.0	890.8	951
Sawlogs and veneer logs	1000 m^3	1 097.0	1 007.0	760.0	852.0	938.0	969.0	911.0	830.0	972.0	1 266.0	1 006.0	1 040
Coniferous	1000 m^3	338.0	386.0	283.0	387.0	382.0	350.0	237.0	196.0	236.0	298.4	281.9	300
Non-Coniferous	1000 m^3	759.0	621.0	477.0	465.0	556.0	619.0	674.0	634.0	736.0	967.6	724.1	740
PULPWOOD (ROUND & SPLIT)	1000 m^3	277.0	236.0	128.0	132.0	193.0	161.0	132.0	119.0	103.0	189.2	139.8	164
Coniferous	1000 m^3	25.0	25.0	16.0	27.0	37.0	31.0	26.0	13.0	13.0	15.0	11.2	14
Non-Coniferous	1000 m^3	252.0	211.0	112.0	105.0	156.0	130.0	106.0	106.0	90.0	174.2	128.6	150
OTHER INDUSTRIAL ROUNDWOOD	1000 m^3	298.0	229.0	189.0	262.0	304.0	254.0	147.0	357.0	176.0	126.3	61.6	82
Coniferous	1000 m^3	93.0	144.0	109.0	141.0	122.0	184.0	141.0	170.0	48.0	41.1	23.5	21
Non-Coniferous	1000 m^3	205.0	85.0	80.0	121.0	182.0	70.0	6.0	187.0	128.0	85.2	38.1	61

Sources: Statistical yearbooks, different years, FSO, Belgrade.

Table 46: Wood products, production in Serbia and Montenegro, 1991-2002

Product	Units	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
SAWNWOOD	1000 m^3	568.0	461.0	315.0	280.0	304.0	378.0	391.0	438.0	364.0	504.0	391.3	432
Softwood	1000 m^3	184.0	167.0	146.0	144.0	159.0	120.0	82.0	73.0	94.0	106.0	94.8	122
Hardwood	1000 m^3	384.0	294.0	169.0	136.0	145.0	258.0	309.0	365.0	270.0	398.0	296.5	310
WOOD-BASED PANELS	1000 m^3	175.0	164.0	107.0	98.0	109.0	112.0	111.0	128.0	91.0	118.0	103.1	60
Veneer sheets	1000 m^3	43.0	40.0	26.0	23.0	29.0	28.0	25.0	29.0	22.0	33.0	23.1	13
Plywood	1000 m^3	21.0	19.0	16.0	9.0	15.0	13.0	13.0	14.0	14.0	19.0	15.3	12
Particle board	1000 m^3	78.0	79.0	56.0	55.0	57.0	57.0	56.0	59.0	45.0	50.0	41.3	11
Fibreboard	1000 m^3	33.0	26.0	9.0	11.0	8.0	14.0	17.0	26.0	10.0	16.0	23.4	24
WOOD PULP	1000 m.t.	138.0	98.0	39.0	45.0	69.0	46.0	71.0	74.0	47.5	122.0	146	152
Mechanical	1000 m.t.	30.0	18.0	16.0	21.0	26.0	16.0	13.0	14.0	4.0	12.0	24.0	21
Semi-chemical	1000 m.t.	14.0	11.0	7.0	10.0	12.0	11.0	9.0	13.0	6.0	18.0	7.0	6
Chemical	1000 m.t.	94.0	69.0	16.0	14.0	31.0	19.0	49.0	47.0	37.5	92.0	115.0	125
PAPER AND PAPERBOARD	1000 m.t.	427.0	402.0	222.0	238.0	245.0	249.0	300.0	326.0	229.6	179.6	241.3	248
Newsprint	1000 m.t.	73.0	57.0	32.0	38.0	47.0	29.0	25.0	23.0	22.0	31.0	41.1	52
Case materials	1000 m.t.	254.0	265.0	148.0	158.0	148.0	167.0	176.0	190.0	79.6	84.6	108.1	100
Folding boxboard	1000 m.t.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Wrapping papers	1000 m.t.	28.0	21.0	11.0	13.0	14.0	13.0	49.0	63.0	53.0	21.0	53.1	61
Other papers	1000 m.t.	72.0	59.0	31.0	29.0	36.0	40.0	50.0	50.0	75.0	43.0	36.6	35

Sources: Statistical yearbooks, different years, FSO, Belgrade.

Table 47: Wood products, export-import in Serbia and Montenegro, 2001-2002

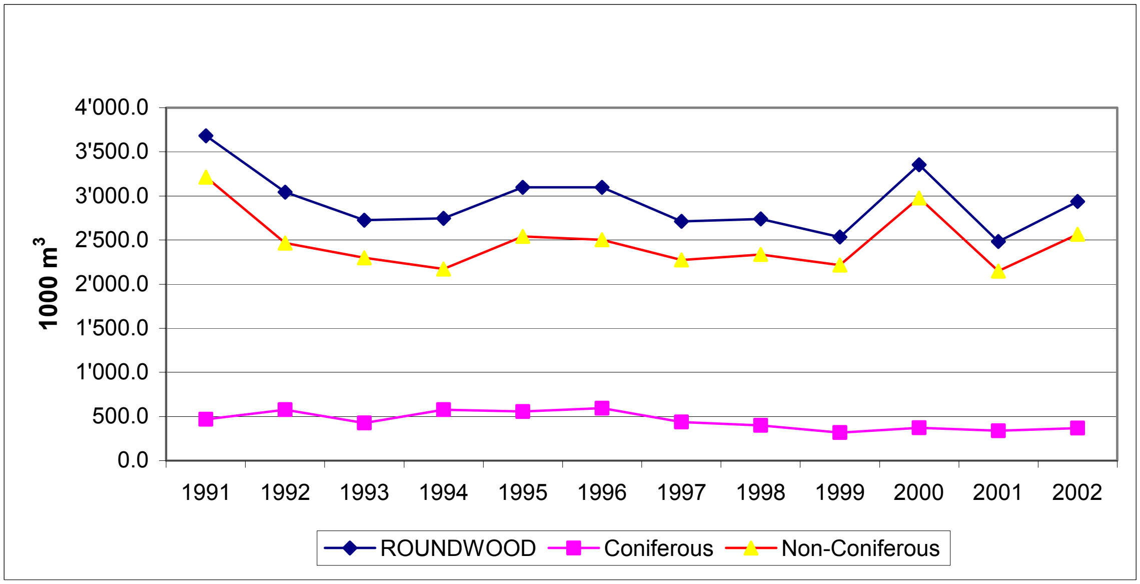
Product	Unit of quantity	IMPORT				EXPORT			
		2001		2002		2001		2002	
		Quantity	Value ($1000)	Quantity	Value ($1000)	Quantity	Value ($1000)	Quantity	Value ($1000)
ROUNDWOOD	1000 m^3	23	353	41	1 885	50	2 406	56	3 650
SAWNWOOD	1000 m^3	314	28 014	363	34 140	186	31 881	188	35 160
Coniferous	1000 m^3	296	25 938	340	31 270	21	2 363	36	3 780
Non-Coniferous	1000 m^3	18	2 076	22	2 570	165	29 518	152	31 380
of which: Tropical	1000 m^3	1	228	1	300	0	0	0	0
WOOD-BASED PANELS	1000 m^3	103	21 617	161	36 310	24	6 422	20	5 500
VENEER SHEETS	1000 m^3	1	962	1	1 020	14	3 410	10	2 780
Coniferous	1000 m^3	0	0	0	0	0	0	0	0
Non-Coniferous	1000 m^3	1	962	1	1 020	14	3 410	10	2 780
PLYWOOD	1000 m^3	1	221	2	750	5	1 960	2	990
Coniferous	1000 m^3	0	0	0	0	0	0	0	0
Non-Coniferous	1000 m^3	1	221	2	750	5	1 960	2	990
PARTICLE BOARD (including OSB)	1000 m^3	78	13 520	120	22 000	1	186	2	520
FIBREBOARD	1000 m^3	24	6 914	38	12 540	4	866	6	1 210
HARDBOARD	1000 m^3	5	2 516	12	4 900	4	866	6	1 210
MDF (MEDIUM DENSITY)	1000 m^3	18	4 308	25	7 500	0	0	0	0
INSULATING BOARD	1000 m^3	1	90	1	140	0	0	0	0
WOOD PULP	1000 mt	16	9 334	15	8 500	26	10 609	28	12 000
MECHANICAL	1000 mt	0	108	0	0	0	0	0	0
SEMI-CHEMICAL	1000 mt	0	0	0	0	0	0	0	0
CHEMICAL	1000 mt	16	9 225	15	8 500	26	10 609	28	12 000

Product	Unit of quantity	IMPORT				EXPORT			
		2001		2002		2001		2002	
		Quantity	Value ($1000)	Quantity	Value ($1000)	Quantity	Value ($1000)	Quantity	Value ($1000)
PAPER AND PAPERBOARD	1000 mt	138	88 135	69	42 820	34	16 788	11	6 240
GRAPHIC PAPERS	1000 mt	21	15 470	37	22 520	2	735	1	404
NEWSPRINT	1000 mt	9	5 029	25	12 920	2	735	1	404
UNCOATED MECHANICAL	1000 mt	12	10 442	12	9 600	0	0	0	0
SANITARY AND HOUSEHOLD PAPERS	1000 mt	10	5 073	11	6 318	0	0	0	42
PACKAGING MATERIALS	1000 mt	34	19 564	6	3 920	1	551	0	32
WRAPPING PAPERS	1000 mt	30	17 108	4	3 100	0	237	0	0
OTHER PAPERS MAINLY FOR PACKAGING	1000 mt	5	2 456	1	820	0	314	0	32
OTHER PAPER AND PAPERBOARD N.E.S.	1000 mt	72	48 028	16	10 062	31	15 501	10	5 804

Source: Statistical foreign trade, FSO, Belgrade

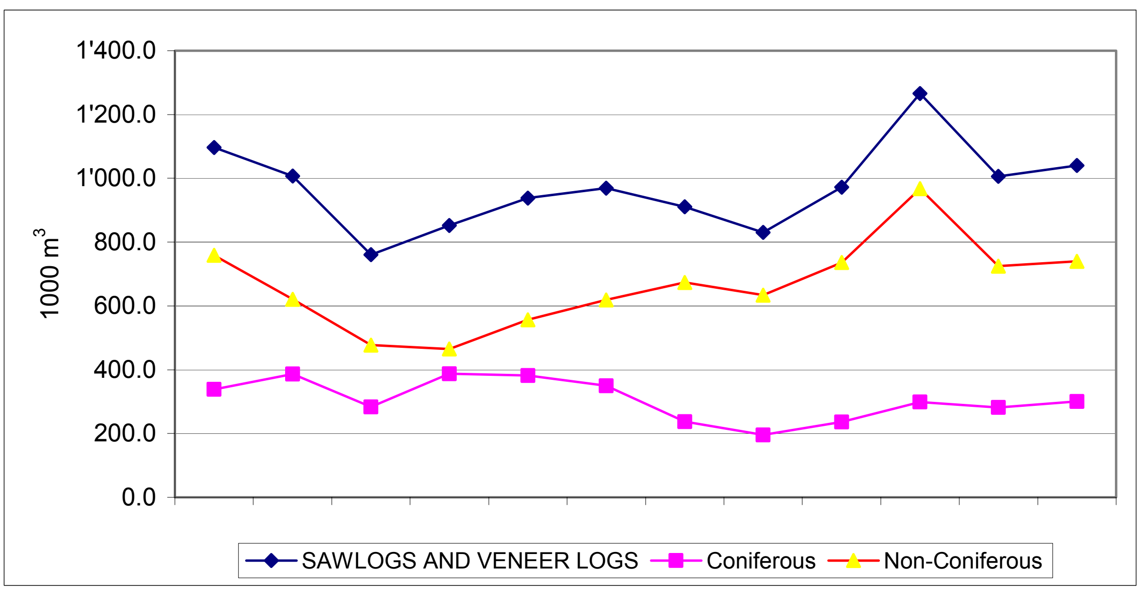
ANNEX 2 (Figures and Charts)

Figure 41: Roundwood production in Serbia and Montenegro, 1991-2002.



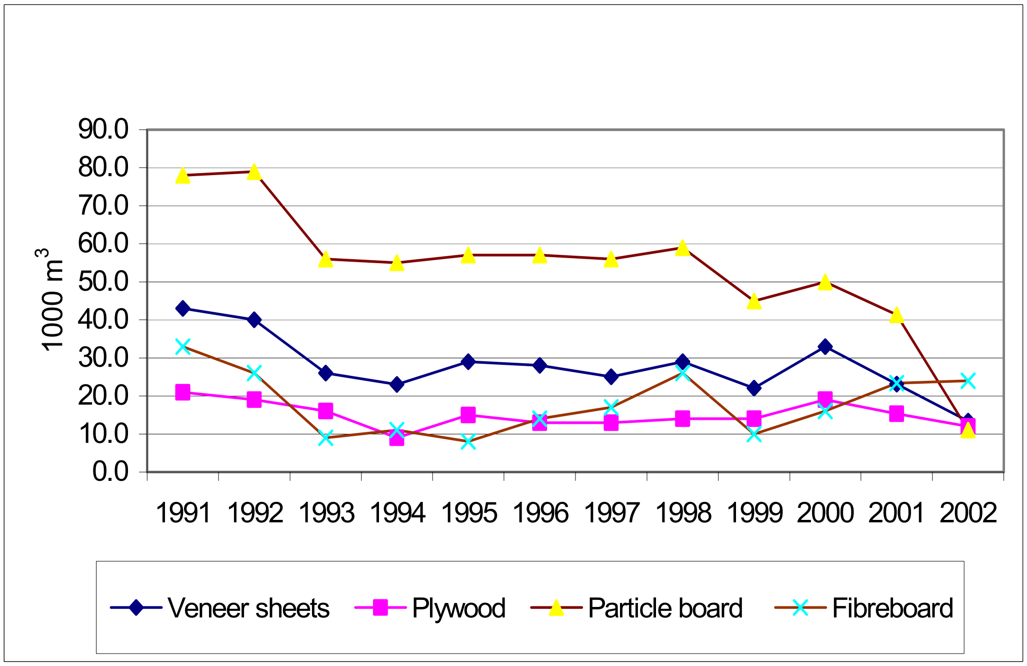
Source: Serbian and Montenegrin Statistical Office, Belgrade and Internal sources of author

Figure 42: Sawlogs and veneer logs production in Serbia and Montenegro, 1991-2002.



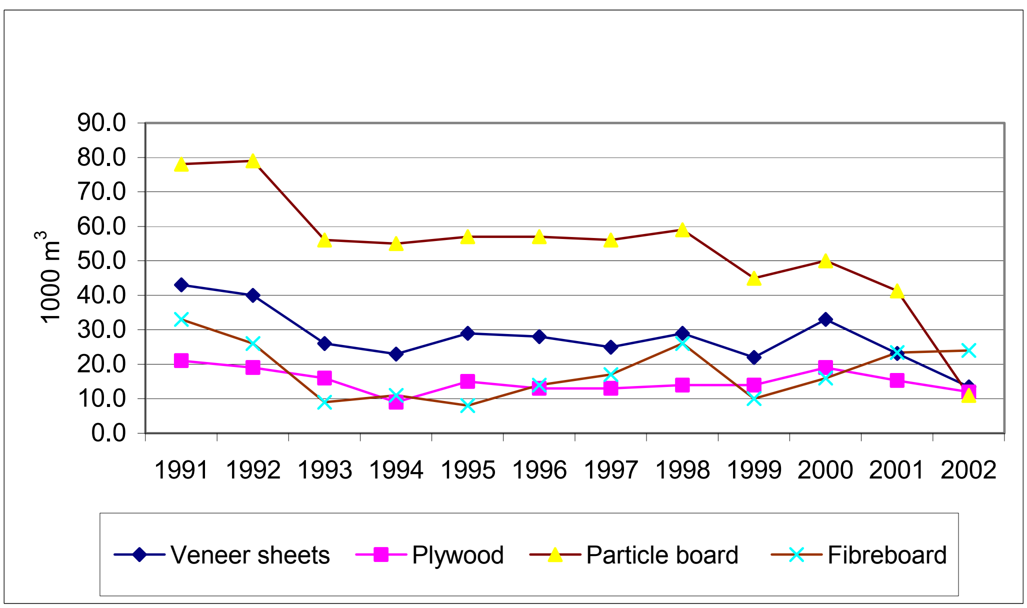
Source: Serbian and Montenegrin Statistical Office, Belgrade and Internal sources of author

Figure 43: Sawnwood production in Serbia and Montenegro, 1991-2002



***Source*:** Serbian and Montenegrin Statistical Office, Belgrade and Internal sources of author

Figure 44: Wood-based panel production in Serbia and Montenegro, 1991-2002.



Source: Serbian and Montenegrin Statistical Office, Belgrade and Internal sources of author

ANNEX 3 (Supplementary Information on Forestry and Forest Industries)

A. Government bodies dealing with forest and forest industries

Republic of Serbia

Ministry of Economy and Privatisation
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Tel: +381 11 3617 599
Fax: +381 11 3617 640
www.mpriv.sr.gov.yu
officempriv@mpriv.sr.gov.yu

Ministry of Agriculture, Forestry and Water Management
Directorate of Forests
Omladinskih brigada 1.
Belgrade, 11070
Tel: +381 11 3117 637
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www.minpolj.sr.gov.yu
office@minpolj.sr.gov.yu
minpsum@ptt.yu
dirsume@ptt.yu

Public Enterprise "Srbijasume"
Bulevar Mihajla Pupina 113.
Belgrade, 11070
Tel: +381 11 3115 028
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www.srbijasume.co.yu
ssume@infosky.net

Public Enterprise "Vojvodinasume"
Preradoviceva 2.
Petrovaradin, 21131
Tel: +381 21 431 644
Fax: +381 21 433 139
www.vojvodinasume-ns.co.yu
vsume@EUnet.yu

Public Enterprise National Park "Fruska gora"
Zmajev trg 1.
Sremska Kamenica, 21208
Tel: +381 21 463 666
Fax: +381 21 462 662
www.fruskagora-natl-park.co.yu
natlpfg@EUnet.yu

Public Enterprise National Park “Tara”
Milenka Topalovica 3.
Bajina Basta, 31250
Tel: +381 31 853 644
Fax: +381 31 851 446
www.tara.org.yu

Public Enterprise National Park “Kopaonik”
Kopaonik, 36354
Tel: +381 36 71 011
Fax: +381 36 71 098
www.kopaonik.net
np.kopaonik@ptt.yu

Public Enterprise National Park “Djerdap”
Kralja Petra 14a.
Donji Milanovac, 19220
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Fax: +381 30 86 877
www.djerdap.com
npdjerdap@npdjerdap.com

Public Enterprise National Park “Sar planina”
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Republic of Montenegro

Government of Montenegro

Tomasevica 2.
Podgorica, 81000
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Ministry of Economy
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Ministry of Environmental Protection and Physical Planning
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Public Enterprise – National Parks of Montenegro
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Forests Directorate of Montenegro
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Pljevlja
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Ministry of Tourism
Trg Vektra
Podgorica, 81000

B. Industry and trade organisations

Republic of Serbia

Chamber of Commerce
Resavska 5.
Belgrade, 11000
www.pks.co.yu

Republic of Montenegro

Chamber of Economy
Novaka Miloseva
Podgorica, 81000
www.pkcg.org

C. Universities, research institutes, planning institutes and other institutions

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Some facts about the Timber Committee

The Timber Committee is a principal subsidiary body of the UNECE (United Nations Economic Commission for Europe) based in Geneva. It constitutes a forum for cooperation and consultation between member countries on forestry, forest industry and forest product matters. All countries of Europe; the former USSR; United States, of America, Canada and Israel are members of the UNECE and participate in its work.

The UNECE Timber Committee shall, within the context of sustainable development, provide member countries with the information and services needed for policy- and decision-making regarding their forest and forest industry sector ("the sector"), including the trade and use of forest products and, when appropriate, formulate recommendations addressed to member Governments and interested organisations. To this end, it shall:

1. With the active participation of member countries, undertake short-, medium- and long-term analyses of developments in, and having an impact on, the sector, including those offering possibilities for the facilitation of international trade and for enhancing the protection of the environment;
2. In support of these analyses, collect, store and disseminate statistics relating to the sector, and carry out activities to improve their quality and comparability;
3. Provide the framework for cooperation e.g. by organizing seminars, workshops and ad hoc meetings and setting up time-limited ad hoc groups, for the exchange of economic, environmental and technical information between governments and other institutions of member countries that is needed for the development and implementation of policies leading to the sustainable development of the sector and to the protection of the environment in their respective countries;
4. Carry out tasks identified by the UNECE or the Timber Committee as being of priority, including the facilitation of subregional cooperation and activities in support of the economies in transition of central and eastern Europe and of the countries of the region that are developing from an economic point of view;
5. It should also keep under review its structure and priorities and cooperate with other international and intergovernmental organisations active in the sector, and in particular with the FAO (Food and Agriculture Organization of the United Nations) and its European Forestry Commission and with the ILO (International Labour Organisation), in order to ensure complementarities and to avoid duplication, thereby optimizing the use of resources.

More information about the Committee's work may be obtained by writing to:

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Forest Products Annual Market Review, 2003-2004.

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Forest resources of Europe, CIS, North America, Australia, Japan and New Zealand	ECE/TIM/SP/17
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UNECE/FAO TIMBER AND FOREST DISCUSSION PAPERS

The objective of the Discussion Papers is to mak

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In the interests of economy, Discussion Papers are issued in the original language only, with only minor languages editing and final layout by the secretariat. They are distributed automatically to nominated forestry libraries and information centres in member countries. This discussion paper may be placed on the Timber Committee website at: http//www.unece.org/trade/timber.

The Discussion Papers are available on request from the secretariat. Those interested in receiving these Discussion Papers on the continuing basis should contact the secretariat as well. Comments are most welcome and will be referred to the authors.

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Forest and Forest Products Country Profile: Serbia and Montenegro

"Forest and Forest Products Country Profile: Serbia and Montenegro", a UNECE/FAO Geneva Timber and Forest Discussion Paper, presents status and trends of the forest resource, the wood processing industry, trade, consumption and prices of forest products as well as forest sector policy and institutions in Serbia and Montenegro. It includes an outlook for the forest sector in Serbia and Montenegro, and offers some forest products market information for neighbouring Croatia, Slovenia and The Former Yugoslavian Republic of Macedonia. Extensive annexes provide statistics, graphs and supplementary information on forestry and forest industries.

UNECE Timber Committee and FAO European Forestry Commission

Further information about forests and forest products, as well as information about the UNECE Timber Committee and the FAO European Forestry Commission is available on the website www.unece.org/trade/timber. Information about the UNECE may be found at www.unece.org and information about FAO may be found at www.fao.org.

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