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THE LITHUANIAN FOREST SECTOR TOWARDS THE 21st CENTURY:
The Strategic Problems of the Transitional Period

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ABSTRACT

Strategy specifies the direction. Long-term strategy usually means the ability to answer the following questions:

- Where are we now?
- Where do we want to go?
- How do we get there?

Changes in the economical, demographic and political development of the country, the value orientation of the Government expressed by the Forest Policy, the availability of resources, the demand-supply situation in the markets, and the past and present performance of business all greatly affect the formulation of Forest Sector Strategies for the future.

This paper examines the first two questions presented above. Firstly, we shall introduce ourselves shortly to the present situation in which the Lithuanian Forest Sector exists. Secondly, we shall look at future possibilities. The important changes of the operating environment of the transitional period in the whole economy of Lithuania are also discussed.

Keywords: *Lithuanian Forest Sector, strategies, transition to market economy.*

CONTENTS

1. INTRODUCTION

1.1. General

A few years ago, the Forest sector of Lithuania was almost unknown to countries in Europe. A strong integration into the whole economy of the Soviet Union, very limited possibilities for trade outside Soviet borders, and overall control from Moscow made it very difficult for Lithuania to be a participator in wood markets in Europe. In recent years, the situation has drastically changed. Lithuania has gained back her independence. Lithuania has entered the European wood markets, followed by her neighbours, Latvia and Estonia. "Baltic wood" has become a common phrase between those involved in the wood business, and, usually we can hear about " sawmilling bum" in the Baltics, etc. There are many similarities among the three Baltic countries, but their Forest Sectors are developing differently.

During the Soviet period, Lithuania was a net *importer* of wood. Some 2 M. m3 of wood and wood products (in calculation to the roundwood equivalent) was annually imported from the Russian Federation. Nowadays, the country has changed its strategic direction, becoming a net *exporter* of wood. Lithuania exports similar amounts as was imported before, and the share of export is growing annually. "How was it possible?" and "What possibilities does the Forest Sector have in the future?" are the questions we shall answer in this short paper. One point, which should be taken into consideration, is the specifics of the transitional period of the entire Lithuanian economy (from a totally centrally-planned system to one operating according to free market principles).

1.2. Background

The Forest Sector is more and more important for the country's economy. The wood trade balance is positive in opposition to the whole trade balance of Lithuania (10% of the export value in 1995). The crises situations in the country's economy did not heavily affect the Forest Sector. Lithuanian foresters are able to supply the forest industries with their increasing needs from their own forest resources. A significant part (on a Lithuanian scale) of workers, especially in rural areas, are employed in forest industries: some 40,000 before 1990, and about 34, 000 in 1995 (Morkevičius, 1995).

The sawmill industry is one of the production spheres, in particular, where we can see symptoms of rapid recovery at the moment. It is one the few industries in which the new investments of Lithuanian business people take place, as well as those of foreign business people. The sawwood production is increasing and the export share is over 60%.

Such a "bum of sawmilling" in Baltic countries and in Lithuania, particularly, can be explained by several reasons. First of all, the production capacities already existed. Lithuania produced much bigger quantities of sawwood during the Soviet period (see table 1) and the sawmilling capacity was used only by 50% (Morkevičius, 1995). Sawwood was used by Lithuanian's own construction industry and other woodworking industries. Secondly, the crises in the whole economy affected the domestic demand for sawwood very severely. Thirdly, a positive environment for evaluating private initiative was created by political and economical changes. In addition, the big demand in the Western European market for sawwood in 1990–93, new possibilities of trade with foreign partners, and an enormous supply of wood from Lithuanian forests – by cutting spruce stands damaged by the wind, snow breaks, and insect attacks – create very attractive conditions for new business people to start sawmilling businesses. The last role here is not played by the initiative of foreign companies. The comparably low raw material and labour costs and the State policy of export support also make contributions to the fact that sawwood export is an attractive business. The industries of the Forest Sector need large scale investments to change their technologies to a level acceptable in western markers, especially those technologies in the paper and panel industries.

1.3. Purpose of the Paper

This paper examines the strategic changes in the Lithuanian Forest Sector after the restoration of the country's independence. The main purpose of this paper is to help one understand the current situation and possible development of the Lithuanian Forest Sector in the future.

The objectives of the study are:

- To describe the current operating environment of the Forest Sector affected by the transitional period in the Lithuanian economy.
- To outline future prospects of the Lithuanian Forestry and Forest Industries.

2. PHENOMENA OF THE TRANSITION TO A MARKET ECONOMY

2.1. Strategic Changes of the Political and Economical Environment

The economical and political development of Lithuania in the last decades can be divided into the following two periods: until 1990 and after 1990.

THE SOVIET PERIOD. The economy of the Lithuanian Republic until 1990 collaborated closely with all the republics of the Soviet Union. The economic collaboration covered the spheres of production, technology, finance, and credit. Following the USSR statistical data of 1983, Lithuania produced 2.4% of the furniture output and 2.1% of the paper output. The Lithuanian Republic ranks third in the former USSR in the production of wood-fibre boards, fourth in wood-particle boards, fifth in sawwood (see table 1) and also in paper; particularly, high-grade printing paper and special paper.

Lithuanians lost their experience of operating in a market economy environment. When the country changed its political and economical orientation, it was necessary to obtain such knowledge from the very beginning again.

INDEPENDENCE. After the restoration of independence (11.03.1990), Lithuania has been reforming its economy step by step adopting free market requirements. During this process, difficulties have arisen in many post-

Table 1. SAWWOOD PRODUCTION IN THE FORMER SOVIET UNION IN 1980–1990 thousand m^3

	1980	1985	1988	1989	1990
Soviet Union, total:	98 199	98 248	104 841	101 109	91 526
Russia	80.310	79.549	84.949	82.962	75.183
Ukraine	7.149	7.565	8.465	8.293	7.441
Belarus	2.861	3.074	3.320	3.325	3.105
Kazakhstan	2.132	2.035	2.143	2.005	1.764
Lithuania	**855**	**934**	**1.006**	**939**	**776**
Latvia	803	868	1.024	836	795
Estonia	637	668	675	585	500
Georgia	489	545	557	531	541
Uzbekistan	421	466	494	563	566
Moldavia	308	348	338	338	298
Kirghizia	207	225	225	228	202
Azerbaijan	244	280	211	157	126
Tadzihistan	127	121	140	187	96
Armenia	81	100	108	93	87
Turkmenistan	65	55	60	67	56

Source: Association "Lietuvos Mediena," 1996.

Soviet countries and in Lithuania, in particular. The political situation in Lithuania is stable, and the relations of Lithuanians with other citizens of other nationalities in the country are good, opposed to the neighbouring Baltic states.

In the period of 1990–1993 a decrease in the total national product came to comprised 50%; in industry, 55%, in agriculture, 39%, and in construction, 48%. In particular, a decrease has been noted in the production of these industrial branches which use a great number of imported materials and power resources. Many enterprises, especially plants, go bankrupt.

Investment has noticeably decreased. The renewal of technological processes has nearly stopped. In 1992, the funds allocated for constructing the objects of production and those of non-production constituted only 30%

of the funding provided in 1989. Over this period of time, the building of houses diminished by 50%. In 1992, only 11.7 thousand flats were built. According to statistics, the construction sector in Lithuania is in a deep crisis situation at the moment (see figure 1).

DWELLING HOUSES COMPLETED AND PUT INTO OPERATION IN 1990–1994 (thousand m^3 floor space)

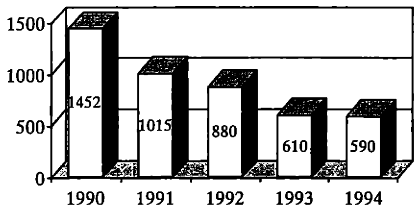

Figure 1. Source: "Statistical Yearbook of Lithuania, " 1994–1995, p. 314.

In 1992, the number of unemployed persons increased 4.4 times. In industry and construction, nearly 250 thousand were unemployed. An improvement of the situation can be mentioned: unemployment at the end of the year 1995, was 7.1% in Lithuania (124.4 thousand unemployed). To compare, in Estonia it was 2.6% (36.7 thousand), and in Latvia, 6.3% (85.5 thousand).

The net average industrial wage per month has achieved a level of 130 USD. The foreign direct investments in 1994 were about 150 million USD, and the cumulative figure until the end of 1995 achieved 300 million USD.

2.2. Gaining New Positions in the New Economic System

During the Soviet period, especially at the end of it, people had money, but it was difficult to buy goods. Nowadays, it is possible to buy almost everything if you able to pay for it. Such an environment provides for the initiative to make money. Some possibilities in use in Lithuania are explained below.

2.2.1. Privatization

Creating an economics system based on private initiative and free market principles, Lithuania has started privatization of state ownership, land reform, and has started returning back the property, nationalized by the communists, to former owners. From the very beginning of this process, a few interest groups have taken an active part in the privatization. The most important actors are the former management staff of the Communists (directors, etc.), the so-called Investment Share Companies, and the criminals.

Most of the former management staff during the Soviet period were the Communists. They had relations with Communists in other republics of the Soviet Union, power, and also money. By using these relations and information, many of these bureaucrats earned millions of USD in the early stages of reform.

The money of the Communist party was also used in privatization. Two years ago, in one newspaper in Russia, it was written that the capital of the Communist party of the Soviet Union abroad was some 100 billion USD (V. Pranulis, 1995). It is no doubt, that it was partly used in the privatization process in all of Eastern Europe.

The Investment Share Companies were another group involved in privatization. Active persons and the different interest groups established such companies to be able to influence privatization in the way they needed. They collected the "checks for investment" (or "vouchers") from an inactive part of the population and, after that, purchased some real property. After that, a large number of the companies transformed the capital (usually, as a guarantee for credits, or by establishing new companies Ltd., etc.) to some private persons and went bankrupt. Everything appeared more or less legal, and it was a method of capital concentration. Privatization using "vouchers" does not exist at the moment. The only conclusion is that this practice of privatization of the State property is economically ineffective, because it does not support any growth of production (Buinevičius, 1995).

The criminal group, using power, bribes, and blackmail, was the other very active group, especially in the privatization of medium-sized objects, restaurants, bars, and shops. They also provided a delivery "service" for others who wished to privatize some objects in auctions and earn millions. Now the criminals are making attempts to legalise that money by establishing new legal companies, using restaurants, etc.

Common citizens and foreign companies also took part in privatization, but their role wasn't very significant. In Lithuanian, the press sometimes prints information that the country is divided between 6–10 financial-political groups.

2.2.2. The Power of Bureaucracy and Corruption

When the old system was destroyed and the new one did not function, business success or failure depended very much on the decisions of separate bureaucrats. They could register your company or find some reasons to prolong the process of making decisions. They could give you a license for export or they could not, etc. This situation motivated business people to give bribes to bureaucrats, and it worked well. It was also a way to eliminate some competitors from the market.

2.2.3. The Finance Sector

One additional group, wishing and able to make big money, was in the finance sector. The new "bankers" very seldom had knowledge and experience with working in the banking sector (Pranulis, 1995). But it was not their aim to learn something; their aim was to collect money from people. They succeeded in the beginning, and made promises to pay 60–80% of the interest rate annually. The interest rate for credits was 100–120%. This was the reality of Lithuania two years ago. (Today, the interest rate for credits is much lower – 25–40%). Such a situation gives groups who control banks and similar financial institutions the possibility to collect money from hundreds of thousands of Lithuanians who believe that the market economy is such in reality. When it comes time to start paying interest, havever, such companies go bankrupt, one after the other. There are no foreign banks (or branches) at the moment in Lithuania (you can guess why), but it looks like, after the banking crisis at the end of 1995, some changes will be taking place.

2.2.3. The Business Experience

What the market is, what competition is, and how to work in market conditions was first of all understood by those who, with their own or borrowed capital, risked doing business on a contract basis (Pranulis, 1995). They started delivering or producing goods and services for the market in a very unstable environment. In this situation, when a new legislatiive system was introduced and changes took place every day – and after criminal attacks and pressure from the bureaucracy – they gained very valuable business experience, earned a starting capital and are now playing a very important role in the Lithuanian economy. Many of them are also involved in the wood business. They are mostly small and medium-sized companies.

By summarizing the initial results of the first stage of the transition to a market economy, it is clear that, in Lithuania, several interest groups are acting which are very aggressively and actively making attempts to gain better positions in the economy of the country. It doesn't look so bright if we think about moral and ethical principles, but in terms of time and the situation, it may be impossible to avoid. From an economical point of view, the expression of private initiative, also in such a context, is, probably, better than no initiative at all (Pranulis, 1995).

3. FORESTRY AND THE FOREST POLICY

3.1. Forest Resources and Land Usage

The forest occupies 1,970.3 ha (1994) or 31.4 percent of land area, while commercial stands comprise 1.86 M. ha. The growing stock of the forest estimates 334 M. m3 o.b. or 180 m3/ha with an average annual increment of 6.3 m3/ha. The average volume of mature stands is 244 m3/ha, and the average volume of mature pine stands is 285 m3/ha. (Rutkauskas, 1995). The productivity of the Lithuanian forests is higher than in Finland, England, the Netherlands, France, and Italy (Vasiliauskas, 1995). Since the Lithuanian population has reached 3.7 million inhabitants, the average forest area is as high as 0.53 ha, and the average volume, about 90.3 m^3 per capita. According to the prognoses of the development of the Lithuanian landscape, the forest cover should increase by 2% (120 thousand ha) in 2–3 decades (Kenstavičius, 1992).

The forests in Lithuania are distributed irregularly. The largest percentage of forest is located in the southern and eastern part of the

Republic, due to the prevailing poor and dry soils. The wooded area there is as high as 45%, and the most common woods are pure pine (Pinus sylvestris) stands. In west, north, and central Lithuania, spruce and mixed spruce-deciduous stands prevail.

The conifers in Lithuania occupy 61.6% of the total area with forest (and 66.9% of the volume). Hardwood species cover only 4.4%; among them, oak stands, 1.7%, and ash stands, 2.7%. Other deciduous tree species comprise 38.4% of the total area; among them, birch stands, 19.5%, black alder, 5.6%, white alder, 5.6%, and aspen, 2.7%. Stands of other tree species make up 0.6% of the area.

COMPOSITION OF MAIN TREE SPECIES IN LITHUANIA

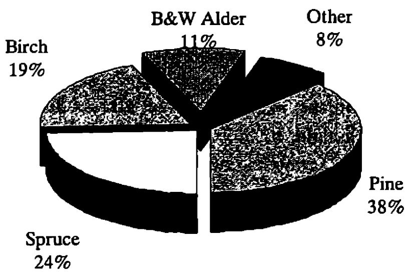

Figure 2. Source: Lithuanian Forest Management Planning Institute, 1994.

The distribution of age classes in the Lithuania forests is good for the wood supply: young stands comprise 27.8%, middle-aged, 44.7%, premature, 17.9% while the mature ones, 9.6% of the entire forest area.

3.2. Supply of Roundwood

3.2.1. The Actual Situation

During World Wars I and II, and during the post-war years (1920–1960) the forests of Lithuania were severely depleted by a felling of about 4–6 millions m^3 of timber per year. The area of mature stands decreased up to 4.2%: in 1921–1930, 6.4 M. m^3 of wood were cut annually; in 1931–1940, 6.7 M. m^3; in 1941–1944, 3.8 M m^3; in 1945–1950, 5.3 M. m^3; in 1951–1960, 3.8 M. m^3; in 1961–1993, 3.2 M. m^3. Since 1961, the approved annual felling norm has not been exceeded. This positively affected the improvement of stand-age structure, and the increment of forest productivity was achieved. The average stand volume per ha has increased from 99 m3 in 1966 to 180 m3 in 1993. The total timber volume has increased from 160 M. m^3 to 334 M. m^3, the area of mature stands has increased from 5.2% to 9.6%, and the volume, by 131.%. It should be noted that during this time, almost 2 M. m^3 of wood per year were imported from various regions of Russia. Lithuanian forest resources were, thus, saved (Vasiliauskas, 1995).

The present situation with the roundwood supply is rather good. The conservatism of foresters in privatization is the reason for the stable operating conditions of the State Forest Enterprises (SFE). SFE are able to guarantee a constant dellivery of quantities of roundwood to the market. During the last few years, snowbreaks, wind, and insect attacks have heavily affected spruce stands in Lithuania, so the quantities of removals are bigger (see table 3). In 1993, after a few strong storms, it was necessary to salvage 4.5. M. m3 of wood. In 1992–1994 unfavorable climatic conditions developed (hot and dry weather in the middle of 1992 and 1994, storms at the beginning of 1993). Spruce stands were very much weakened. In 1994, for the first time in Lithuania's forest history, spruce stands suffered from a mass attack of *Ips typographus*. Approximately 4,500 ha of spruce stands were entirely damaged and 120,00 ha were partly damaged. The volume of dead-standing spruce stands makes up about 1.9 M. m^3. In the last two years, all State Forest Enterprises have been mainly cutting dead spruce stands. Presently applied rotation periods restrict the annual cut in the short term. In production forests, the rotation rate for pine is 100 per year, spruce, 80, birch and black alder, 60, and aspen, 40. Trees of such an age reach 30 meters in height and 35–40 cm in diameter.

Lithuanian foresters are changing the orientation of forest management practice from one of biological forestry (as large a volume as possible from the area unit; this prevailed in Soviet times) to one of market-oriented forestry, where the value of wood is playing the most important role.

Table 2. FELLINGS IN THE STATE FOREST IN 1990–1994

	1990	1991	1992	1993	1994	1995*
Forest Felled						
thous. ha	190.3	167.8	208.9	383.6	219.7	
thous. m3	3,0.37.9	3,302.3	3,299.0	4,551.3	3,997.2	5,227.7
Expedient and Afforestation Fellings						
thous. ha	10.6	11.2	11.0	18.4	10.5	
thous. m3	1,740.3	2,050.4	1,853.2	1,455.4	1,816.7	
Sanitary Felling						
thous. ha	169.7	149.0	188.3	325.7	206.3	
thous. m3	1,251.9	1,186.0	1,376.7	3,021.4	2,110.5	
Other Felling						
thous. ha	10.0	7.6	9.6	12.4	2.8	
thous. m3	45.7	65.9	69.1	74.5	70.0	

Source: "Statistical Yearbook of Lithuania," 1994-1995, p. 314.

* estimation

3.2.2. Future Trends

Due to a favorable age class structure in the forest, harvesting can be increased both in the short term and long term. The growing conditions and the productive capacity of the forest land are good and should allow for a considerably higher annual cut than the current cut. In 1990, over 3 M. m3 o.b. were cut, corresponding to 1.7 m3/ha. The average annual increment is estimated as 11.9 M. m3 (6.3 m3/ha), and the total netannual increment as 6.9 M. m3 (3.7 m3/ha); 4.3 M. m3/year for coniferous forests and 2.6 M. m3/year (1994) for deciduous forests.

Average crown defoliation greatly weakens the health of the forest, but, until now, it has not caused large increment losses (about 1 M. m3/year). The State Forest Management Planning Institute, on the basis of forest inventory data from January 1, 1993, has calculated a planned cutting volume for the years 1994–2023 as follows:

1994–2003 – 5.05 M. m3 per year

2004–2013 – 5.52 M. m3 per year

2014–2023 – 5.86 M. m3 per year.

These calculations have taken into account forestry and environment protection requirements.

In this period of on-going land reform, the forests, which should be returned back to former owners, are not in use. The estimation is that the cutting volume in this period will decrease by 1.5 M. m3 (Vasiliauskas, 1995).

According to the limitations mentioned about, the actual forest usage up to the year 2000 could be some 3.7 – 4.0 M. m3 per year, but, after the completion of the land reform, the cutting volume could increase significantly and reach 5 M. m^3 in 2005.

The potential annual allowable cut in Lithuania can be estimated at some 5–6 M. m^3. Fellings in Lithuania (state + private forest) comprise 5.8 M m^3 in 1995.

3.3. Ownership, Management, and Forest Policy

3.3.1. Land Reform

Political and economic changes affect the ownership structure.

The current reform in the Forest Sector started from a near 100 percent of state ownership.

At the moment, 10% of the forests belong to private owners (01.01.1996). As a result of reform, one should expect State owned forests to occupy about 75–80% of the forests, and privatly owned, about 25–30%. Concerning the ownership of forests by forest industries, present Lithuanian legislation does not allow companies to buy land, including forest land. But many discussions are taking place about changing this practice.

In the Forest Sector, almost all woodworking industries have been privatized, with the exception of the State Forest Enterprises, where no privatization is taking place at the moment. Forest land is being transformed into private ownership by returning back to former owners. There are restrictions in the size of private holdings – no more than 25 ha of forest. For educated foresters, it was possible for a very short period in the middle of 1995 to buy up to 5 ha of forest using "vouchers."

3.3.2. Management and Forest Policy

The changes in Forest Management and Forest Policy are occurring simultaneously with other processes in Lithuanian society, and they are far from complete. The strategic direction of integration of Lithuania into the European Community is followed by the development and adaptation of management and policy practice in the Forest Sector to meet the requirements of a sustainable forest and biodiversity.

The policy of the Lithuanian Government in Forestry is implemented by the Ministry of Forestry. At the end of 1994, the Forest Act of the Republic of Lithuania was approved by the Parliament for the first time in Lithuanian history. These Acts, the Act of Protected Territories and the Act of Land, plus numerous regulations of the Government, are the legal bases for all kinds of forestry activities.

Within the jurisdiction of the Ministry there are 43 forest enterprises, 4 national parks, the State Forest Management Planning Institute, the State Enterprise of Technology and Projecting "Unksna," the Lithuanian Seed Breeding Centre, the Centre of Forest Market Economy, the Forest Seed Control Station, and the editorial staff of the journal " Mūsų Girios" (Our Woods).

The State Forest Enterprise (SFE) is the institution of state forest management and regulation which performs forest utilization, reforestation, protection, and the organisation of hunting husbandry in forest areas attached to it according to an established order. The SFE administrates 18–78 thousand ha (an average of 45 thousand) of forest area, which is divided into forest districts and sectors of forest guards. On January 1, 1995, there were 503 forest districts. An average area of forest district is 4,100 ha. The forest district is a territorial production unit, the functions of which are forest protection against fires, violations, diseases and pests, reforestation, tending of stands, and harvesting. These districts are directed by forestry engineers.

Forest districts are divided into 2–6 protection sectors by guards with an average area of 800 ha. There are 2,432 forest guard sectors. The forest guard sector is a territorial unit formed to protect forests against illegal cutting, plundering, fires, poaching, illegal haymaking, pasturing, and other forest violations. The forest guards take care of forest protection, organise and control all activities in the sector, and do some other physical work.

The forest enterprises employed about 14.6 thousand persons in 1990–1994, which included 7.3 thousand physical workers. Lithuania has 5 national parks, 30 regional parks, 5 reserves, and 290 various nature preserves. Most of them are within the forests. These protected territories occupy 718.5 thousand ha, or 11% of the Republic's entire area.

Forest management projects for all owners are being prepared by the State Forest Management Planning Institute "Miško projektas," which performs the inventory of forest resources and elaborates plans for the future functioning of each forest enterprise for the period of 10 years. This Institute compiled the Data Bank of the forest fund and its changes.

4. THE FOREST INDUSTRIES

4.1. General Description

In the period 1970–1990, about 1,500 enterprises in forest industries were in Lithuania. They were all owned by the state. There were about 40 specialized plants. A total of 34 thousand workers were employed in the industry in 1990. A large part (40%) of the production was furniture, which was made in 20 specialized plants. The average number of employees in one plant was 700.

All mechanical wood processing plants were constructed near highways and railroads in the period 1960–1975. Most of the equipment of wood processing plants is made in Russia.

Between 1972–1992, wood was used for producing fodder yeast (about 10 thousand tons) in the Kėdainiai biochemical plant. For this purpose, it utilized 130 thousand tons of wood (mostly woodchip from sawmills) yearly. Because of low profitability and environmental pollution, the production of fodder yeast was closed.

4.1.1. The Sawmilling Industry

In the period 1970–1990, there were no specialized sawmills in Lithuania. The production of sawmills was some 1 M. m^3 per year. Sawwood was produced in furniture and packing plants and, in these, for constructional components. Their total capacity was 2 million m^3. The capacity used, however, was approximately 50% (Morkevičius, 1995).

Lithuania was ranked fifth in the production of sawwood in the former USSR. After the restoration of independence, production decreased because of the necessity to adapt to the changing situation in the whole economy. Now, a recovery in the sawmill industry is clearly seen, and not only in Lithuania, but also in Latvia and Estonia (see figure 3).

SAWWOOD PRODUCTION IN THE BALTIC STATES
1988–1994 (thousand m3)

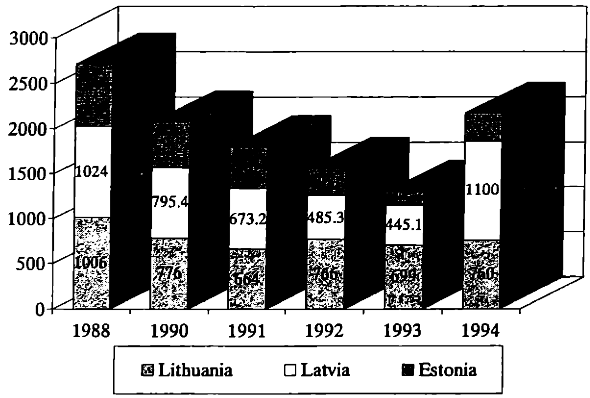

Figure 3. Source: "Statistical Yearbooks of Lithuania, Latvia, and Estonia" 1989–1995.

The sawmill industry is strongly oriented towards exportation. About 60–80% of production is exported nowadays.

4.1.2. The Wood-Based Panels Industry

Plywood is only produced in the plant "Klaipėdos Mediena" (the capacity is 30 thousand m3). Here, birch plywood of 4–6 mm thick and 1520 x 1520 mm in size are produced, as well as plywood components for furniture. The decorating plywood (1 mm thick) is mostly made from ash and oak. The capacity is 12 million m2 (or 12 thousand m3). Wood fibre boards and chip-boards are produced in 6 plants in Lithuania. The capacity of all chip-board plants is 227 thousand m3 and that of wood fibre plants is 138 thousand m3. The equipment of chip-board plants is the production of the Western European firms, Becher van Hullen, Bison, Renma-Repola, etc. The enterprise "Jures Mediena" manufactures plywood constructions (the capacity is 4.5 thousand m3). In recent years, some companies have started producing edge-glued panels for the furniture industry.

4.1.3. The Furniture Industry

Some 60 companies in Lithuania produce furniture at the moment. In these companies work some 10 thousand employees. The leaders in the furniture industry are newly established private companies, like "Narbutas and CO," and "Vokė-III." From the former state enterprises, the company "Klaipėdos Baldai" has the best position and image. The number of individual producers of furniture is rapidly increasing. While old furniture factories had problems with markets and were working in half capacity, new private companies are working in three shifts and have no problems finding buyers. About 40% of Lithuanian furniture is exported.

4.1.4. The Paper Industry

Paper and cardboard were produced in 5 plants, with an overall capacity of 270 thousand tons of production. Paper and cardboard plants were built from 1835–1925. Later they were insignificantly modernized. The machines installed, however, were of low capacity. Due to unfavorable dislocation and ecological limitations, they cannot be expanded. Because of the current economic reform (introduction of private ownership, changes of the market, financial reform, etc.) the process of investment and renewal of technologies is slow.

4.2. The Trends in Wood Consumption by Forest Industries

Following the most conservative estimations, the roundwood supply from local resources will be some 5.5 M. m^3 of pulpwood and fuelwood and 2.5 million m^3 of sawlogs). This volume could increase, if forest management practices are changed by shortening the rotational ages. It would allow

Lithuania to have a balance between the wood processing industrial capacity and her own forest resources.

The modernization of existing sawmills and the tendency to establish new ones has caused an increase in the sawmilling capacity. The resources of raw materials allow for the annual sawwood production of 1.1–1.5 million m^3, or even more. The domestic consumption of sawwood could increase in the future, due to changes in house building strategy.

The sawmills are the main suppliers of raw materials for other woodworking industries. The sawmill industry must be condensed to a lower number of sawmills. Quality aspects must yet be emphasized more in the future from the cutting of the sawlogs in the forest. The production of sawwood until 2020 could increase up to 1.7 M. m^3/year. Equipment from the processing of small-dimension logs should be introduced at an early stage in order to better utilize the wood coming from thinnings and small-sized logs of clear cutting. The frame saws should be successively replaced by bandsaws, circular saws, plan reducers, profiling machines, etc.

In the future, the most important products for export should be furniture, wood fibre boards, chip-boards, and the productions of the paper industry (if a new plant is built). But the export of sawwood as well as pulp wood will also be significant.

The current capacity of wood mass production, wood fibre boards, and chip-boards allows for the annual utilization of about 1 million m^3 of wood (including secondary raw materials). It is expected that, in the future domestic market, there will be no demand for 2.5 million m^3 of raw materials, excluding fuelwood. In order to utilize it, it is necessary to increase the production of wood fibre boards and chip-boards (up to 500 thousand m3) and to build a new paper and cellulose plant of average capacity (500 thousand tons). For this purpose, however, a significant investment (about 1 billion USD) is needed, and difficulties will arise in modernizing the industry and utilizing the pulp wood resources (Morkevičius, 1995).

The product quality of the board industry should be further improved, primarily though an improvement of technology and fibre raw material (for instance, the installation of barking equipment). The estimation is that the production of plywood should increase twice (up to 50–60 thousand m3). Raw wood resources are available.

Separate business and developmental plans should be elaborated upon for each wood-working enterprise. Wood energy production and use should also be given high priority. Fuelwood consumption could increase up to 2.0 M. m^3/year or ever more in the year 2000 and beyond.

Finally, the following can be concluded with full probability:

– In the nearest future, the demand for industrial wood of different sorts will increase (up to 2.0 M. m3/ year) due to an increase in construction of individual houses.

– Fuelwood consumption could increase up to 2.5 M. m^3/year.

– The export of wood products as well as raw materials could increase up to 0.5–1.0 M. m^3/year.

The domestic wood consumption in Lithuania's nearest future will correspond to the allowable cutting abilities.

5. LITHUANIAN WOOD MARKETS

5.1. Shifting from Import to Export

Over the last few years, a major share of the production of the Forest Sector has been exported. For example, 1/3 of the produced roundwood, 80% of the sawwood, 44% of the chipboards, 81% of the fibreboards, 66% of the furniture, and 100% of the plywood were exported in 1995 (Morkevičius, 1996). It comprises 10% of the total export value or some 3 M. m3 of wood (in calculation to the roundwood equivalent).

Lithuanian wood export markets are mainly concentrated in Europe at the moment. The competition in European wood markets is strong. Lithuanian companies feel this impact and must confirm their trade strategies.

Lithuanian Forest Industries were integrated in the economy of the former Soviet Union. Industry needs were satisfied by wood from some 30 autonomic republics and regions of the Russian Federation. Some 2 M. m^3 of wood and wood products were imported annually. After the restoration of Lithuania independence, the wood channel from Russia was almost closed.

Lithuania not only imported but, also, exported wood during this long period of time. Before World War II, much sawwood was exported from country forests and the timber from Russia was re-exported. Wood export comprised 15–20% of the income in foreign trade during this time. During the period of Soviet occupation, all international relations were regulated by Moscow. During the last decades, Lithuanian State Forest enterprises could only export some pulpwood for buying foreign equipment required for forestry purposes. The export experience and the business contacts of Lithuanians were very low.

5.2. The Domestic Wood Market

In the Lithuanian wood market, basic, natural changes have taken place in the last few years. Step by step, the free-pricing system for wood products as well as for roundwood has been introduced. All trade is now based on contracts and auctions. The auctions for selling stumpage from State forests started in June of 1992. Especially large quantities of stumpage were sold in 1993. The main reason for this was the catastrophical windblow and snow break of 1992/1993, when more was damaged than the annual cutting volume of 3.4 M. m^3. The roundwood supply (removals) grew during the period 1991–94: in 1991, 2,908 thousand m^3, in 1992, 3,163.7 thousand m^3, in 1993, 4,509.1 thousand m^3.

The largest percentage of roundwood sold in the domestic market is fuelwood. The majority of roundwood export is the export of pulpwood. The transition to a market economy, privatization, inflation, difficulties in finding partners in western countries, and almost completely closed trade channels in the territory of the former Soviet Union made a great negative impact on the Lithuanian Wood Industry. A majority of big domestic woodworking companies are in debt to State Forest Enterprises; some 30 M. LTL (7.5 M. USD) in December of 1995 (Ministry of Forestry, 1996).

5.3. Export Markets

The bad situation faced by the domestic wood-working industry forced it to look for partners abroad. Lithuania changed from a net importer of wood to a net exporter.

The assortment and quantities of Lithuanian traded wood are growing year to year (for instance, see figure 4). New channels of wood export have opened; in the Ukraine, for coniferous logs, in Russia (the Kaliningrad region), for coniferous pulpwood, in Latvia, for coniferous logs and industrial wood. Pulpwood continues to be exported to Sweden (see table 3).

Table 3. THE EXPORT OF WOOD AND WOOD PRODUCTS TO VARIOUS COUNTRIES IN 1994

Country	Quantity, in thousands of t	Value, in thousands of LtL (1USD=4.0LTL)
Total	2,082.2	326,616.3
Germany	110.9	66,856.0
Sweden	728.2	56,408.6
United Kingdom	155.4	53,187.4
Russia	180.7	29,836.1

Source: "Statistical Yearbook of Lithuania", 1994–1995, p. 368.

According to the data of the Lithuanian Ministry of Forestry, State Forest Enterprises annually exported some 45 thousand m³ of pulwood till the year 1988; to thousand m³ to Sweden and 35 thousand m³ to Finland. Export was 46.3 thousand m³ in 1988, 55.3 thousand m³ in 1989, 74.6 thousand m³ in 1990, and some 109.8 thousand m³ in 1991 (see Figure 4).

ROUNDWOOD EXPORT FROM LITHUANIA
THOUSAND M³ (1980–1995)

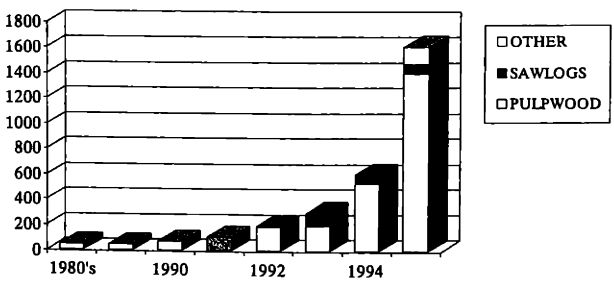

Figure 4. Source: Ministry of Forestry, 1989–1995, Dept. of Customs, 1994–1995.
* estimation

It is difficult to accurately estimate wood amounts exported from Lithuania between 1991and 1994, because trade became more decentralized and many private firms started to export and re-export timber. It was very difficult to collect accurate data from those firms. The present situation with statistics is better, but there is still room for improvement.

Figure 4 shows a dramatic increase of roundwood export quantities last year, compared with previous periods. The information of a 9 month period leads us to make such conclusions (see table 4).

Table 4. LITHUANIAN ROUNDWOOD EXPORT IN JANUARY - SEPTEMBER 1995

	01–03	04–06	07–09	TOTAL
Sawlogs	**30.4**	**23.4**	**16.5**	**70.3**
– coniferous	29.8	22.6	15.8	68.2
Pulpwood	**303.3**	**388.0**	**363.3**	**1,054.7**
– coniferous	209.7	320.1	270.7	800.5
Other	**25.5**	**40.2**	**33.4**	**99.1**
TOTAL	359.2	451.6	413.2	1,224.0

Source: "MEC naujienos" Nr. 12, 1995, p3.

The total amount of roundwood exported by Lithuania was 1,769.1 thousand m^3 in 1995.

A large part of sawwood export is pallet wood and construction wood. The main importers are Germany, the United Kingdom, the Netherlands, and Denmark.

Table 5. LITHUANIAN EXPORT OF SOFT SAWWOOD (First haft of 1995)

Country/Importer	thous. m^3	thous. Lt (1$=4LtL)
Germany	112.3	52,499
United Kingdom	47.6	22,801
Netherlands	34.9	12,292
Denmark	15.7	4,631
Poland	3.9	3,060
Hungary	8.5	2,953
Sweden	13.2	2,254
Other	13.6	8,979
Total:	254.6	111,508
Total for 1995	*748.3*	

Source: "MEC naujienos," 1995, Nr. 11. p. 4.

SUMMARY AND CONCLUSION

The development of the Forest Sector in Lithuania is occurring simultaneously with other processes in the country. The political changes of gaining back independence have heavily affected the orientation of the Lithuanian economy and social life. Strategic, natural changes are occurring in the Forest Sector.

During the Soviet period, the management of forest resources in Lithuania had a clear biological orientation. The needs of domestic industries were satisfied by importing about 2 M. m^3 of wood from Russia, in addition to a 3 M. m^3 supply from Lithuania's own forests. Forest industries were developed as an integrated part of the whole economy of the Soviet Union.

After independence was restored in 1990, the overall control from Moscow shifted with free possibilities to start almost any king business and positive environment for the evaluation of private initiative. Low costs of raw materials and labour, a low demand for sawwood, and almost no demand for pulpwood in the domestic market forced Lithuania to look for foreign partners. Starting almost from zero, the Lithuanian wood export became over 0.5 M. m^3 of sawwood and 1.6 M m^3 of roundwood. The Forest Sector's contribution to the country's hard currency earnings is currently important, as it was before World War II, and it's likely that this tendency will be the same in the future. From a net importer of wood, Lithuania became a net exporter. The main markets for roundwood are Sweden, Russia, and the Ukraine, and for sawwood, Germany, the UK, the Netherlands, and Denmark.

Lithuania has enough wood resource and a favorable age structure of stands to increase the wood supply up to 6 M. m^3 in the nearest future. The wood supply could increase even more, if forest management practices were changed by shortening the rotation ages, and more intensive thinning were used.

The structure of wood consumption is also changing. The consumption of fuelwood increased more than twice after 1990, and could reach up to 30–50% of the total wood consumption in the future. The conversion of boilers support this tendency.

The expectation is, that domestic sawwood consumption will increase. The consumption of industrial wood as a whole will increase by 30–40%.

A good situation with the wood supply, a favorable geographical location, skilled and educated workers, low labour costs, no culture differences, and export support from the Government make foreign investments in the country's Forest Sector attractive.

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LIETUVOS MIŠKŲ SEKTORIUS PASITINKANT 21-ĄJĮ TŪKSTANTMETĮ: STRATEGINĖS PEREINAMOJO LAIKOTARPIO PROBLEMOS

Algis Gaižutis

SANTRAUKA

Strategija numato veiklos kryptį. Formuluojant ilgalaikę strategiją paprastai būtina atsakyti į šiuos klausimus:

- Kur esame?
- Ką norime pasiekti?
- Kaip to sieksime?

Ekonominiai, demografiniai ir politiniai pokyčiai, Vyriausybės vertybių sampratą išreiškianti miškų politika, turimi ištekliai, pasiūlos ir paklausos santykiai rinkoje, ūkinės veiklos istorija bei šiandieninė padėtis labai veikia Lietuvos miškų sektoriaus strategijų formulavimą.

Straipsnyje aptariami pirmi du pateikti klausimai. Visų pirma apibūdinama dabartinė Lietuvos miškų sektoriaus padėtis, po to aptariamos jo ateities plėtros galimybės. Analizuojant padėtį atsižvelgiama į esminius pokyčius šalyje pereinamuoju laikotarpiu, vertinama jų įtaka.