

DISCUSSIONS

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FOREST SECTOR IN BULGARIA: KEY ISSUES FOR FURTHER DEVELOPMENT

The paper presents data on the forest resource development in Bulgaria during the 20th century, as well as contemporary challenges.

It is summarized that during the last 14 years, forestry in Bulgaria has passed through numeral structural and economic changes, directed to its adaptation to market economy. The forest industry in the transition to market economy after 1989 overcame the state monopolism but went to the opposite extreme. The weak sides of the forest industry in this period are summarized as: decreasing of the production; insufficiency of quantity and quality raw material for the existing processing capacities; lost markets for the production of the wood processing industry; problematic credit allowance. The strong sides of the Bulgarian forest industry are the high qualified specialists and the low labor price. The main challenge for sustainable development of economically viable forest sector is implementation of multifunctional forest management. Among the identified new priorities are: restoration of the economic activities in the state-owned forests; comasation of the small forest plots of land; interruption of experiments in the management of the forestry sector.

The quantitative criteria for meeting the new challenges by the Bulgarian forest industry is achievement of annual growth of production and export by 10%.

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1. Historical Background

As a political formation Bulgaria is one of the oldest countries in Europe, created on the Balkans in the 7th century (681) by the proto-Bulgarians, seven Slav tribes and the Severs, has specific history, of its forests in this account. At the end of the 9th and the beginning of the 10th century under the rule of king Simeon I the state boundaries were at the Black sea, Aegean sea and Adriatic sea. In 1396, however, Bulgaria fell under Ottoman yoke, which continued till 1878. The liberation of the country from the Turkish domination is a result of the Russian-Turkish war from 1877-1878.

Bulgaria, as a country in South Eastern Europe, is part of the bridge between the European and Southwest Asian flora and due to its geographic situation and geological history plays the role of species diversity formation center with rich

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genetic pool. Bulgaria is part of this refugium for the European flora and conserved it during the Diluvium and the Holocene. The products of the forest industry in Bulgaria for the period 1900 – 2000 are presented in table 1.

The total growing stock, which is raw material source for the development of the forest industry, increased from 199.7 million m³ (1940) up to 243.5 million m³ (1960), 303.8 million m³ (1980), 404.5 million m³ (1990) and to 526.1 million m³ (2000) (Radenski, 1999; UNECE-FAO, 2003).

2. Recent State of the Art

The forest resource now is characterized with the following features: forest land is 3 466 223 ha (31% forest cover), of which 1 500 000 ha are the forest plantations created in the second half of the 20th century; total annual increment – 12 300 000 m³; average annual increment per ha – 4m³. About 34% of the forests are with special functions – protective, recreational and in protected territories. The coniferous forests present 32% and the deciduous ones 68%, the area distribution according species being 23% oaks, 17% beeches, 9% Adriatic oak, 16% Scots pine, 9% Black pine, 4% Norway spruce and 22% other species (NFB, 2003).

The forests are divided by ownership as follows: state forests – 85.3% and non-state forests – 14.7% (of them 8.2% – private forests, 5.8% – municipal forests, 0.5% – owned by religious communities, 0.1% – owned by schools and 0.1% – owned by other juridical persons).

The projected annual production with respect to the inventory plans is 6 235 000 m³ and the yield is 4.7-5 million m³. Of them 72% are for the forest industry and 28% for the local population (BSFP, 2002). The share of the annual average industrial yield of coniferous wood is 34% and of deciduous wood – 66%, as the percentage distribution according to categories is: full-size timber, middle-size timber, small-size timber and fuel wood by conifers as follows 37:34:15:14 and by deciduous forests – 18:15:4:63 (MAF – NFB, 2003).

3. Challenges to Forest Sector Development in the Country

In the last 14 years the forestry in Bulgaria has passed through numerous structural and economic changes, directed towards its adaptation to market economy. The main goal is sustainable development of economically viable forest sector through multifunctional forest management. Some new priorities in this sector include: restoration of economic activities in the state-owned forests; comasation of the forests of small forest owners; interruption of the experiments in the management of the forestry sector; attention to the Bulgarian experience and traditions in forestry.

In the beginning of the 20th century the forest industry comprised 1145 small water-power saw-mills distributed mainly in the coniferous forests. The economic progress in the 1930s led to quick development of the timber processing industry and till 1945 their number increased up to 1533 with capacity of 2 167 000 m³. Saw-mill factories and log band-saws were 521 in number with capacity of 1 598 500 m³, water-power saw-mills were 630 with capacity of 379 000 m³, sleeper installations – 39 with capacity of 50000 m³, plywood factories – 8 with capacity of 60 000 m³, veneer factories – 5 with capacity of 8 000 m³, paper factories – 5 with capacity of 27 000 m³. There were 3 shipyards, 1 match factory

and 321 furniture workshops. The ownership of the timber processing enterprises was as follows: private – 73.3%, cooperative – 17.2%, state – 6.9% and municipal – 2.6%. The share of the wood yielding and timber processing industry at that time was 11.8% of the total industrial production and the workers involved – about 12000 (Stoyanov, 1968; Vuchovski, Dimitrov, 2003).

After the nationalization in 1947 a process of consolidating of the forest industry, increasing its capacity and developing new productions, as well as increasing the quantity of manufactured timber started. The production of particle boards, cellulose and wood pulp and wrapping began. From several to ten times increased the production of plywood – from 17 000 m² (1948) up to 70 700 m² (1970); of veneer – from 700 000 m² (1948) up to 35 211 000 m² (1980); of parquet – from 77 000 m² up to 1 880 000 m² (1970); of paper and paperboard – from 25 100 t (1948) up to 377 200 t (1980) (see table 1).

The yield from the resin tapping in the first years of its introduction was just several tons – 5 t (1937), 12 t (1939) but it increased continuously, reaching up to 3 250 t (1968). The utilization of the lightwood as industrial raw material for production of turpentine, tar, alcohol, acetone, acetic acid and wood charcoals show the same tendency. During this period other branches of the chemical forest industry such as production of tannin substances, essential oils, fodder, viscose, artificial fibers, etc. also developed. The impregnation and modification of wood extended.

The enlarged capacity of the forest industry allowed not only to process local raw materials but also to import timber. Significant was the share of the Bulgarian wood yielding in the Republic of Komi. For the period of 1968-1992 Bulgaria yielded for its own needs 21 780 000 m³ mainly full-size coniferous timber, which contributed for the decreasing of the harvesting in our forests in conditions of totally increasing wood consumption for the country (Vuchovski, Dimitrov, 2003). The number of Bulgarian specialists and workers in Komi in relation with the cooperative wood yielding of about 40 000 000 m³ was 14 000.

Generally, in the second half of the 20th century the forest industry was developing quickly and competitively, as this period of reconstruction and modernization led to significant increase of the production. The disadvantages of the period were: centralized planning, concentration of production and limitation of private economic initiative, irrational utilization of the raw materials especially of the deciduous logs.

The forest industry in the transition to market economy after 1989 overcame the state monopolism but went to the opposite extreme. In few years all factories under different forms turned to private enterprises and some of them were bought by foreign companies. Part of the big plants was liquidated and others strongly decreased their production. The 2170 saw-mills installed in the coniferous region created big problems for the protection of the forests. The newly created small companies for wood yielding and timber processing started illegal cuttings. Generally, since 1989 there has been great decrease in the forest industry. The small-scale enterprises prevail, part of which are with amortized and ineffective equipment, and the loading of the capacities is about 50%.

The weak sides of the forest industry in this period could be summarized as:

- decreasing the production;
- insufficient in quantity and quality raw material for the existing processing capacities;
- lost markets for the production of the wood processing industry;

- problematic credit allowance.

We should note, however, that the reconstruction and modernization of some plants and factories of the forest industry contribute to improve the structure and quality of the production and its export orientation. Since 1997 increasing and improvement in the production of furniture and plywood has been observed. Other strong sides of the Bulgarian forest industry are high qualified specialists and low labor price.

4. Contemporary Problems

Strategic goal of the forest industry is effectiveness and competitive ability and increase in the annual growth of production and export by 10%.

One of the contemporary problems, especially for the countries in transition, is the energy problem. The restrictions in the nuclear energy, the petroleum crises, the air pollution from burning brown coals and lignite imposes reconsideration of the problem of the use of wood as fuel. The exploitation of firewood in the country for the last century varied from 1.9 million m³ up to 3.8 million m³ and the production of charcoal – from 7 000 t up to 29 000 t. In the last decade there is tendency towards increase of the use of firewood and decrease of charcoal yielding.

The new economic circumstances and ecological requirements impose again the utilization of biomass for energy use. The Bulgarian forestry attains some experience in this aspect creating 150 000 ha of industrial forest plantations during the period 1973-1990.

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Table 1

Products of the forest industry in Bulgaria for the period 1900-2000

Year	Total felling	Fuel wood	Charcoal	Balsamic resin	Lightwood	Plywood	Veneer	Parquet	Wrapping	Particle board	Cellulose and wood pulp	Paper and paperboard
	m ³	m ³	t	t	t	m ³	m ²	m ²	m ³	m ³	t	t
1900	2406000	2021000	7140			0	0	0	0	0	0	0
1910	2783000	2250000	4000			0	0	0	0	0	0	0
1930	4198000	3570000	24000			0	0	0	0	0	0	0
1939	5042000	3760000	25000	12	3000	7400	626000	101000	0	0	0	17200
1948	6180000	3738000	29000	251	10000	17000	700000	77000	70000	0	14900	25100
1960	8568000	3373000	20000	1154	16844	64300	5028000	1801000	308000	22000	31400	77700
1970	7141000	2742000	18000	2616	14843	70700	23544000	1880000	324000	200000	91600	214900
1980	5908000	2223000	3000			55600	35211000	832000	294000	378000	233500	377200
1990	4681000	1894000	3000			48700	19837000	444000	191000	321000	127100	323500
2000	4630000	2162000	8000	0	0	51600	3000000	200000	85000	179900	77200	136000

Source: Forestry Research Institute, Bulgarian Academy of Sciences.