



**United Nations  
Economic Commission for Europe**



**Food and Agriculture Organization  
of the United Nations**

## **GENEVA TIMBER AND FOREST DISCUSSION PAPER 32**

### **FOREST AND FOREST PRODUCTS COUNTRY PROFILE**

#### **UKRAINE**

*by*

*Dr. Igor Buksha, Dr. Volodymir Pasternak, and Mr. Volodymir Romanovsky*



**UNITED NATIONS**



United Nations Economic Commission for Europe/  
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UNECE



Timber Branch, Geneva, Switzerland

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## **Note**

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## **Abstract**

This *Forest and Forest Products Country Profile* contains information on the forestry sector of Ukraine (one of the largest eastern European countries with a population of 50 million people). This country profile shows that despite a rather low percentage of total forest cover, Ukrainian forests are a very valuable natural resource for their ecological and social functions, and as a source of wood and non-wood forest products. Over the past decade, the legal and operational base of the national forest management system has been gradually replaced with a new system for forest planting and utilization. The newly developed Forest Code of Ukraine provides opportunities for partial privatization of state forests and equality of different ownership types on forest land. This country profile also contains interesting data on the forest industry of the country, production, trade and consumption of forest products, and provides analysis of the evolution of the forestry sector.

## **Acknowledgements**

The UNECE/FAO secretariat expresses its gratitude to our Ukrainian colleagues and all the experts who contributed in the preparation of this country forestry profile. The authors of this discussion paper, Dr. Igor Buksha, Dr. Volodymir Pasternak, and Mr. Volodymir Romanovsky have made significant efforts to bring together the most recent data and information on forestry and the forest products sector of the country, and to provide profound analysis of the development of their forestry sector. This study is an important contribution to the implementation of the integrated UNECE/FAO programme of work. Mr. Matthew Fonseca from the ECE/FAO Timber Branch secretariat has contributed a lot to make the best possible presentation of this original and interesting material in the Discussion Paper format.

ECE/TIM/DP/32

UNITED NATIONS PUBLICATIONS

ISSN 1020 7228

## Preface

The UNECE Timber Committee and FAO European Forestry Commission, working in close co-operation on issues of the sustainable forest management in Europe, pay special attention to developments in the forestry and forest products sector of eastern European countries. One efficient way of drawing attention to specifics of the forestry sector in countries of this region is the preparation of forest and forest products sector country profiles.

The sector profiles are prepared by national experts in close consultation with the secretariat and include statistical data, diagrams, graphs, brief analysis of the evolution of forestry sector and other information. The data relate to principal categories and volumes of goods and services of the forestry sector. The objective of the current forestry profile on Ukraine is to show the role and the importance of forests and forestry in this country against the background of the country's general economic and social development.

As one of the largest eastern European countries, with forests and other wooded lands situated irregularly over its territory, Ukraine pays special attention to the sustainable management of forest resources. The transition to a market economy has revealed many issues in the forestry sector, which have made it necessary to carry out measures to develop forestry which is economically, ecologically and socially sound.

According to the national legislation, and the State program "*Forests of Ukraine*" for 2002-2015, adopted by the Government in 2002, forests in Ukraine mainly carry out water conservation, protective, recreational and other non-wood producing functions with limited exploitation. The current forest policy of Ukraine is directed toward increasing the productivity of forest stands, enhancement of their useful natural properties, forest conservation and protection, and rational use of wood resources.

This sector profile was prepared by top-level national forestry experts in Ukraine, Dr. Igor Buksha, Dr. Volodymir Pasternak, and Mr. Volodymir Romanovsky. We would like to express our gratitude to the authors for their excellent work.



Mrs. Brigita Schmögnerová  
Executive Secretary  
UN Economic Commission for Europe

## Symbols and Abbreviations

-	none or negligible
--	no data available
*	Authors' estimate or unofficial data
UAH	Ukrainian Hryvnia (monetary unit)
m <sup>3</sup>	cubic meter

## Conversion coefficients

<i>Type of product</i>	<i>Unit of measurement (roundwood input to product output)</i>	<i>Value</i>
SAWN WOOD		
Coniferous	m <sup>3</sup> /m <sup>3</sup>	1.46
Deciduous	m <sup>3</sup> /m <sup>3</sup>	1.60
Sleeper	m <sup>3</sup> /sleeper	0.10
WOOD-BASED PANEL MATERIALS		
Veneer	m <sup>3</sup> /m <sup>3</sup>	2.11
Plywood	m <sup>3</sup> /m <sup>3</sup>	2.53
Particle board panels	m <sup>3</sup> /m <sup>3</sup>	1.65
Fibreboard panels	m <sup>3</sup> /1,000m <sup>2</sup>	9.80
PULP		
Mechanical	m <sup>3</sup> /metric tonnes	2.60
Semi-cellulose	m <sup>3</sup> /metric tonnes	3.00
Pulp for paper	m <sup>3</sup> /metric tonnes	5.00
Pulp for chemical processing	m <sup>3</sup> /metric tonnes	--

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## 1 Brief historical and geographical information

Ukraine – is one of the biggest countries of Europe, both in area and population. It is one of the founding members of the United Nations and is a member of many other international organizations. Until 1917, Ukraine was divided between Russia and the Austro-Hungarian empires. After the revolution in 1917 and civil war, Ukraine was proclaimed as a Soviet socialist republic, and on December 30, 1922, became part of the USSR.

Ukraine became independent on August 24, 1991 when the Parliament of Ukraine (*Verchovna Rada*) adopted the State Independence Act. Since independence, Ukraine has been in transition through the difficult and intense process of socioeconomic reforms, establishing of national institutions, and the formation of new political relations.

The territory of Ukraine is 603.600 km<sup>2</sup>. It has a population of 49.3 million (as of January 1, 2001), and is made up of over 100 nationalities and ethnic groups (of which 73% are Ukrainian). From west to east, Ukraine extends 1316 km, and from south to north - almost 900 km. The total length of the Ukrainian border is about 6500 km, including 1050 km of coastline.

The natural conditions of Ukraine are determined by its geographical position and relief. It is situated in the central part of Europe in the south-southwestern part of the East European plain (more than 94 % of the area). The remaining 6 % of the area lies in the Ukrainian Carpathians and Crimean mountains.

There are three main geographical zones in the plains of Ukraine: a zone of mixed forests (the Ukrainian Polissya) with an area of 101,900 km<sup>2</sup>, a forest-steppe zone - 194,700 km<sup>2</sup>, and a steppe zone - 242,800 km<sup>2</sup>. The mountain areas are comprised of the Carpathian mountains (56,600 km<sup>2</sup>) on the west, and the Crimean mountains (7,500 km<sup>2</sup>) in the south of the country. The altitude of the plains reaches 300 - 473 meters above sea level, and the mountain areas achieve 1542 meters (Roman Kosh mountain) in the Crimean mountains, and 2061 meters (Goverla mountain) in the Carpathians.

The climate of Ukraine is moderately continental for most of its territory, excepting a narrow strip of the southern coast of Crimea, which has a subtropical climate, and the mountain territories, which are characterized by vertical zoning of climatic elements.

## 2 General economic situation

Ukraine is an agrarian-industrial country. Under the centrally planned “command” economy system of the USSR, the economy of Ukraine was managed without taking into full account regional needs and interests, the raw materials capacities of separate regions, or ecological issues, and resulted in an over saturation of metallurgical, chemical, and mining industries. The end result for Ukraine was one of the highest levels of industrial pollution among republics of the former USSR. In 1990, Ukraine would have been sixth in the world on volumes of greenhouse gas emissions (after USA, Russia, China, Germany and Japan). After 1991, pollutants from stationary sources of emissions were reduced, for example, emissions of greenhouse gases were reduced from 880.5 million tons CO<sub>2</sub> equivalent in 1990 down to 315.9 million tons in 1998 (owing to reductions in industrial production and power demand).

Fertile soils and favourable climatic conditions have allowed extensive commercial use of land available for growing timber and crops. Thus, in 2001 agricultural land use was 72 % (almost 78 % of which are arable lands). In comparison to other countries, these parameters for agricultural use are extremely high, and have resulted in increased erosion, loss of soil fertility and overall land degradation. According to the Ukrainian academy of agrarian sciences data, it is necessary to reduce the arable land area by approximately 10 million ha, while correspondingly increasing the area of forests, natural landscapes, and shelter-belts, in order to reach sustainability.

After independence, Ukraine headed toward a market economy. The transition period was difficult. Reductions in the manufacturing sector, coupled with constant price increases, negatively affected consumer markets with inflation, reduced purchasing power, and as result, to a sharp decrease of living standards (table 2.1). Social systems, education, scientific research etc., all suffered in connection with the general economic recession after the disintegration of the Soviet Union.

Table 2.1  
**Comparison of 1991 to 2001 in the manufacture of the basic commodities**

<i>Parameters</i>	<i>Unit</i>	<i>1991</i>	<i>2001</i>
Electric power	billion kilowatt	278.7	173
Cast iron	million tons	36.6	26.4
Steel	million tons	45.0	33.5
Cement	million tons	21.7	5.8
Mineral fertilizers	million tons	4.2	2.2
Grain	million tons	38.7	39.7
Meat	million tons	4.0	1.5
Sugar	million tons	4.7	1.9

During the years 1991-1999 there were significant increases in the share of energy and metallurgical sectors with simultaneous reductions in branches producing final consumption products. Production of manufactured goods decreased by 64-77%; resource based and energy production industries fell by 33-57%. To the end of this time period, manufacturing industries, which were potentially dangerous for the environment, reached 33.8% of the total. All these changes resulted in a misbalanced economic structure, with too much weight on the use of natural resources.

The gross national product (GNP) in 2001 was 201,927 million UAH (the Ukrainian currency, Hryvnia), or 4,096 per capita; exports were 98,264 million UAH; imports – 82,208 million UAH; electric power consumption was 167.6 billion kilowatt. Production from Ukraine is currently delivered to more than 100 countries, with the basic exports being resource-based material (about 80 %).

Since 1992, the ownership of roughly 20 thousand state and 52 thousand municipal entities has been changed including the ownership of the land. The new Land Code of Ukraine, which was adopted in 2001 by the Ukrainian Parliament, provides three types of ownership of land: state, municipal and private. Lands of former collective agricultural enterprises are being transferred into private property.

During the last three years, positive changes in economic and social development of Ukraine were achieved. In 2000, an increase of real volume of gross national product (6 %) was achieved for the first time in 10 years. Increment of investments of gross fixed capital increased by 11.2 %, as did total foreign trade (27 %). The positive economic trends shown in 2000, continued through 2001. GNP in 2000-2002 increased by 20.9%; industrial production rose by 33%, and agricultural production rose by almost 25% (table 2.2). However, the structural reorganization of the economy, including power and resource conservations technologies have been insufficient, and the economic gains achieved were not reflected in living standards of the population.

During this period, the share of forestry and wood industries in the GNP of Ukraine remained low (about 1.4%), primary production of forestry in 2001 was 824.3 million UAH, or 0.37% of GNP.

Table 2.2  
**General economic and other information**

<i>Indicators</i>	<i>Unit</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2001</i>
Population	million people	51.8	51.5	49.5	49.3
Gross national product	1990 = 100	100	48	56	59
Total industrial output	1990 = 100	100	52	57	66
Mean annual number of workers and employees in the national economy	1990 = 100	100	82	73	72
Trade turnover in state, cooperative and private retail trade	1990 = 100	100	36	32	36

### 3 Forest resources

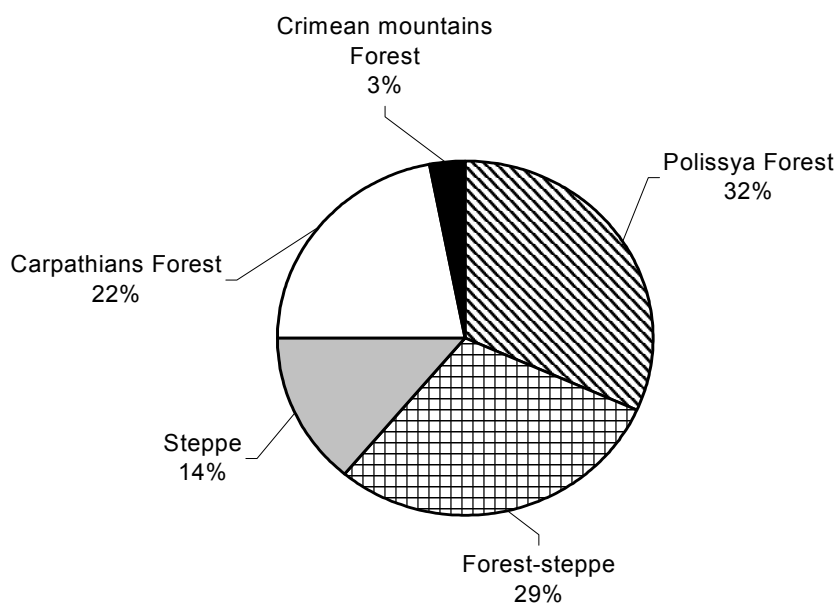
Ukraine has a low percentage of forest cover and an overall deficiency of forest resources. According to the last state forest inventory (as of 01.01.1996), the total area of the forest lands is 10.04 million ha, of which 9.4 million ha are stocked forests (15.6 % of the total area of the country) (table 3.1).

Table 3.1  
Main land-use categories  
(1,000 ha)

Category	Years					
	1983	1988	1993	1996	2000	2001
Total area	60355	60355	60356	60355	60355	60355
Including:						
Inland waters	2380	2410	2435	2419	2424	2424
Land	57975	57945	57921	57936	57931	57931
Agricultural Land	42495	42157	41930	41840	41827	41817
Forest and other tree-covered land	9260	9239	9313	10040	10426	10426
Other land	6220	6549	6678	6056	5678	5688

Source: Statistical Yearbook (1990-2001), State Statistics Committee of Ukraine, Kiev

Graph 3.1  
Distribution of stocked forest land in Ukraine



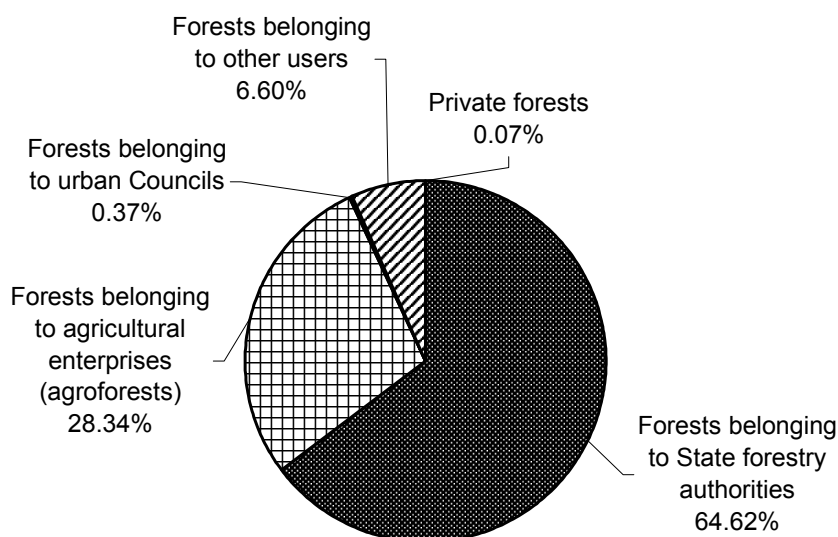
Currently, almost all the forest area of Ukraine is in state ownership and directed at use by different forest using businesses. Almost 65 % of the forest lands are under the use of state forest enterprises; the other 35 % falls under the use of agrarian formations, state scientific and educational establishments, and other organizations. Only 0.07 % of forests are in private property (table 3.2). State forestry bodies are responsible for the control of forest conditions in Ukraine.

Table 3.2  
**Area of forest and other tree-covered land by land use-category and type of management, 1996**  
 (1,000 ha)

	Total		Managed on the basis of a forestry plan
		%	
<b>Total area</b>	<b>10040</b>	<b>100.0</b>	
including:			
State and public forest			
including:			
Forests belonging to State forestry authorities	6485	64.6	6485
Forests belonging to agricultural enterprises (agro-forests)	2844	28.3	2500
Forests belonging to urban Councils	37	0.4	35
Forests belonging to other users	667	6.6	650
Private forests	7	0.07	

**Source:** Materials of Ukrainian forest fund accounting (1983, 1988, 1996)

Graph 3.2  
**Forest and other tree-covered land by use category**



Forests are situated very irregularly over the territory of the country. In the Polissya region, forest cover is 2.97 million ha (29.2 %), land covered in forest-steppe is 2.74 million ha (14.1 %), and in steppe - 1,32 million ha (5.4 %). In the Carpathians, forest cover is 2.08 million ha (36,7 %), and in Crimean mountains - 0.28 million ha (37,8 %). Coniferous stands occupy about 42.6 % of the stocked forest land, including Scotch Pine stands (*Pinus sylvestris L.*) which occupies 33.6 % of the stocked forest land. Broadleaved stands amount 43.6%, including both European Oak (*Quercus spp.*) and European Beech (*Fagus spp.*) 31.8 % (table 3.3).

Table 3.3  
Distribution of the predominant species on stocked forest lands (1996)

<i>Species</i>	<i>Area</i>		<i>Growing stock</i>	
	<i>1,000 ha</i>	<i>%</i>	<i>million. m<sup>3</sup></i>	<i>%</i>
Total main forest-forming species	9319	100	1733	100
Coniferous	3972	42.6	897	51.8
including:				
Pine	3130	33.6	646	37.3
Spruce	707	7.6	211	12.2
Fir	124	1.3	38	2.2
Larch	8	0.1	2	0.1
Juniper	3	0.0	-	-
Hardwood deciduous	4065	43.6	663	38.3
including:				
Oak	2273	24.4	367	21.2
Beech	688	7.4	191	11.0
Hornbeam	197	2.1	29	1.7
Ash	239	2.6	33	1.9
Maple	102	1.1	8	0.5
Elm and other Ulmaceae	53	0.6	3	0.2
Black locust	476	5.1	30	1.7
Others	37	0.4	2	0.1
Softwood deciduous	1282	13.8	173	10.0
including:				
Birch	529	5.7	69	4.0
Aspen	62	0.7	12	0.7
Alder	537	5.8	69	4.0
Lime	33	0.4	5	0.3
Poplar	84	0.9	13	0.8
Arborescent willows	37	0.4	5	0.3

*Source:* Materials of Ukrainian forest fund accounting (1983, 1988, 1996)

Table 3.4  
**Distribution of the predominant species on stocked forest lands belonging to state forestry authorities, 1996**

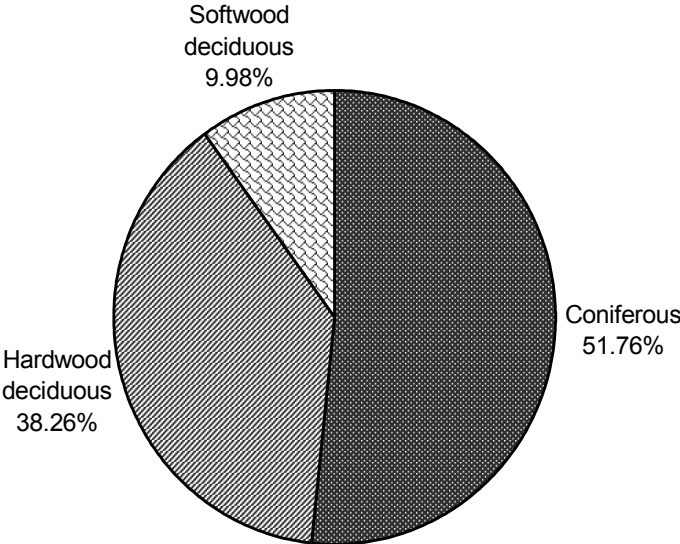
<i>Species</i>	<i>Area</i>		<i>Growing stock</i>	
	<i>1,000 ha</i>	<i>%</i>	<i>million. m<sup>3</sup></i>	<i>%</i>
<b>Total main forest-forming species</b>	<b>6054</b>	<b>100</b>	<b>1282</b>	<b>100</b>
Coniferous	2811	46.4	671	52.3
including:				
Pine	2201	36.4	482	37.6
Spruce	502	8.3	156	12.2
Fir	98	1.6	31	2.4
Larch	7	0.1	2	0.2
Juniper	3	0.0	-	-
Hardwood deciduous	2596	42.9	510	39.8
including:				
Oak	1716	28.3	304	23.7
Beech	537	8.9	158	12.3
Hornbeam	87	1.4	16	1.2
Ash	109	1.8	20	1.6
Maple	21	0.3	2	0.2
Elm and other Ulmaceae	13	0.2	1	0.1
Black locust	108	1.8	9	0.7
Others	5	0.1	-	-
Softwood deciduous	647	10.7	101	7.9
including:				
Birch	309	5.1	45	3.5
Aspen	31	0.5	7	0.5
Alder	248	4.1	38	3.0
Lime	14	0.2	2	0.2
Poplar	29	0.5	6	0.5
Arborescent willows	16	0.3	3	0.2

*Source:* Materials of Ukrainian forest fund accounting (1983, 1988, 1996)

Graph 3.3  
**Species Groups**  
*(as percentage of total area of stocked forest)*



Graph 3.4  
**Species Groups**  
*(as percentage of growing stock in stocked forests)*



Despite rather low total forest cover, the Ukrainian forests are very valuable for their ecological functions and as a source of wood and different kinds of non-wood forest resources. The total growing stock in the forests of Ukraine are estimated at 1.7 billion m<sup>3</sup>. Per capita, there is 0.18 ha of stocked forests and 35 m<sup>3</sup> of the total growing stock in Ukraine.

Approximately half of Ukrainian forests originate from afforestation. The distribution of age class of forest stands is as follows: young - 31 %, middle-aged - 45 %, premature - 13 % mature and over mature - 11 % (table 3.5). The average annual growing increment of stocked forests is 3.8 m<sup>3</sup> per ha and varies from 2.5 m<sup>3</sup> in the steppe zones up to 5.0 m<sup>3</sup> in the Carpathians.

Currently, it is difficult period for forestry in Ukraine. Gradually, forest planting and utilization, as well as the national economy will adapt to market conditions. The forest management systems developed under the USSR (which was one of the world's greatest exporter of timber), are no longer useful for Ukraine.

The legal and operational base of the forest management system is gradually being replaced with a new system. The new Forest Code of Ukraine has been developed, and provides for partial privatization of state forests, equality of different ownership types on forest lands, and the expansion of local government institutions rights on forest resources. Payment for use of different forest resources, improvement of the forest use organization and market principles of forest production distribution, and the privatization of production facilities are being considered.

Table 3.5  
Distribution of forests available for wood supply by age groups, 1996

Indicators	Total 1000 ha	by age groups					Range of felling ages (years)
		young stands		middle aged	premature	mature and over-mature	
		I class	II class				
Forests available for wood supply, total	5680	528	1455	2534	760	403	
<b>High forests, total</b>	4389	452	1303	1853	554	227	
including:							
<b>Coniferous, total</b>	2803	311	930	992	426	144	
of which:							
Pine	2256	227	727	860	354	88	81-100
Spruce, fir	541	84	198	131	72	56	71-140
<b>Broadleaved, total</b>	1586	141	373	861	128	83	
including:							
Oak high stem	1173	121	293	644	78	37	51-140
Beech	413	20	80	217	50	46	81-140
<b>Coppice forests and softwood deciduous, total</b>	1291	76	152	681	206	176	
including:							
Oak coppice	106	1	4	58	18	25	51-140
Birch	421	26	48	249	67	31	51-70
Aspen	44	3	4	6	13	18	41-50

Source: Materials of Ukrainian forest fund accounting (1983, 1988, 1996)



Table 3.6  
**Information on forests available for wood supply belonging to State forestry authorities**

Indicators	Unit of measurement	Years		
		1983	1988	1996
Forests available for wood supply of which:	1000 ha	4331	4312	3985
Coniferous	1000 ha	2188	2159	2015
Deciduous	1000 ha	2143	2153	1970
Growing stock	million. m <sup>3</sup>	710.7	731.1	849,6
including:				
Coniferous	million. m <sup>3</sup>	399.8	414.3	478,6
Deciduous	million m <sup>3</sup>	310.9	316.8	371,0

**Source:** Materials of Ukrainian forest fund accounting (1983, 1988, 1996)

Certification of forests in 4 state forestry enterprises was carried out under FSC-standards in 2000. The total area of certified forests is 203,000 ha., which could potentially supply 360,000 m<sup>3</sup> (roundwood equivalent) of certified production per year. The forest certification was carried out by Institute of Market Ecology (IME), Switzerland.

The forest policy of Ukraine is directed toward the increase of productivity of forest stands, enhancement of their useful natural properties, forest conservation and protection, and rational use of wood resources. According to Ukrainian legislation, the forests of Ukraine carry out mainly water-conservation, protective, sanitary-hygienic and ameliorative functions, and have limited exploitation value. In 2002, the government of Ukraine adopted the State program "*Forests of Ukraine*" from 2002-2015, with the following priorities :

1. To increase forest coverage of territories in natural zones to optimum level.
2. To increase the productivity and improve qualitative structure of forest stands.
3. To enhance forest protection properties, and conservation of biological diversity.
4. To increase forest sustainability against the negative factors of the environment, and climate change.
5. To utilize forest resources in a rational manner.
6. To increase the creation of protective forest stands and forest amelioration.
7. To improve the normative and legal base in the forestry sector and work on its harmonization with international principles of sustainable development and forest management.
8. To enhance state control of forest protection, conservation, utilization and reproduction.
9. To develop forest sciences and education.
10. To enhance social protection of forestry workers.

Before dissolution of the USSR, the annual consumption of timber in Ukraine was 36-38 million m<sup>3</sup> (roundwood equivalent, standard units), of which only 40% originated from within Ukraine. This situation became problematic in the early 1990s owing to significant reduction of wood imports from Russia, the reduction of fellings in Ukrainian forests in connection with the consequences of the Chernobyl accident, and increases to the area of forest unavailable for wood supply (nature conservation areas). As a result of the Chernobyl accident, about 3.5 million ha of forests of the country was contaminated with radioactive elements and almost 200,000 ha of forestlands were withdrawn from economic circulation. The area of forests available for wood supply is increasing through clear-up of the contaminated areas and the dissipation of radioactive elements in the affected forests.

The Ukrainian economy was oriented toward cheap imported wood materials from Russia and Belarus. This dependency on low cost material from external sources, subdued the development of conservation oriented utilization and manufacturing industries, and resulted in an ineffective structure of manufacture and consumption. As a result of the current slump in production and low solvency of consumers, the basic internal needs for wood are satisfied from local resources. Recently, the annual fellings have been 10-12 million m<sup>3</sup>, 45 % of which were main felling share.

About 33% of the annual increment is used (table 3.7). Besides wood, the forests of Ukraine provide foodstuff, technical and medical raw materials, and other non-wood materials, which are harvested in significant volumes. In particular, the annual volume of resin harvested in the forests of Ukraine is roughly 4,000-5,000 tons.

Table 3.7  
**Intensity of timber management**

<i>Indicators</i>	<i>Unit of measurement</i>	<i>1996</i>	<i>2000</i>
Amount of timber logged	mln.m <sup>3</sup>	11.4	11.6
Growing stock in stocked forests per capita	m <sup>3</sup> /cap	34	35
Timber management per ha of stocked forests	m <sup>3</sup> /ha	1.2	1.2
Total volume of cutting per capita	m <sup>3</sup> /cap	0.22	0.23
Total mean increment per capita	m <sup>3</sup> /cap	0.68	0.71
Utilization of mean increment	%	33	33

**Source:** Materials of Ukrainian forest fund accounting (1983, 1988, 1996); Statistics materials of State Forestry Committee of Ukraine (1990-2001), Kiev.

State enterprises supply most of the wood supply in Ukraine. In 2001, more than 12 million m<sup>3</sup> of timber were supplied, including 11 million m<sup>3</sup> (90.9%) by state enterprises, 871,000 m<sup>3</sup> (7.2%) by collective enterprises, and only 107,700 m<sup>3</sup> (0.9%) by private enterprises. The majority of wood used in Ukraine in 2001 was supplied by long-term users of forest fund areas, and only 837,300 m<sup>3</sup> (7%) were supplied by businesses which don't have long-term access to forest fund areas.

Forest management in Ukraine is highly intensive. Forest stand improvement measures cover over 6 % of forest lands annually. The forest management plans are developed on a regular basis for almost all forest lands. Planning of forestry measures is carried out by forest enterprises together with forest inventory process, which put into practice the technology of continuous information supply for forest management.

Last year's area of newly planted forest stands almost twice exceeded the area of fellings, thus annual area of reforestation and afforestation were about 37,000-43,000 ha (table 3.8). Forest plantations are created mainly from local seed material; maintained with seed trees on a selection basis. Between 1988 and 1996, the area of stocked forests of the country increased by 780,000 ha or by 9 %, and growing stock increased by 416 million m<sup>3</sup> (table 3.9).

Table 3.8  
**Reforestation and afforestation dynamics**  
(1000 ha)

<i>Type of work</i>	<i>Years</i>				
	<i>1981-1985</i>	<i>1986-1990</i>	<i>1991-1995</i>	<i>1996-2000</i>	<i>2001</i>
Reforestation	238	221	170	190	43
Of which:					
Seeding and planting of trees	219	209	153	158	34
Afforestation	77	85	62	36	4
Creation shelter-belts	19	22	11	3	0.4

**Source:** Statistical Yearbook (1990-2001), State Statistics Committee of Ukraine, Kiev; Statistical materials of State Forestry Committee of Ukraine (1990-2001), Kiev; National report on the state of the environment of Ukraine (1996-2001), Kiev.

Graph 3.5  
Reforestation and afforestation dynamics

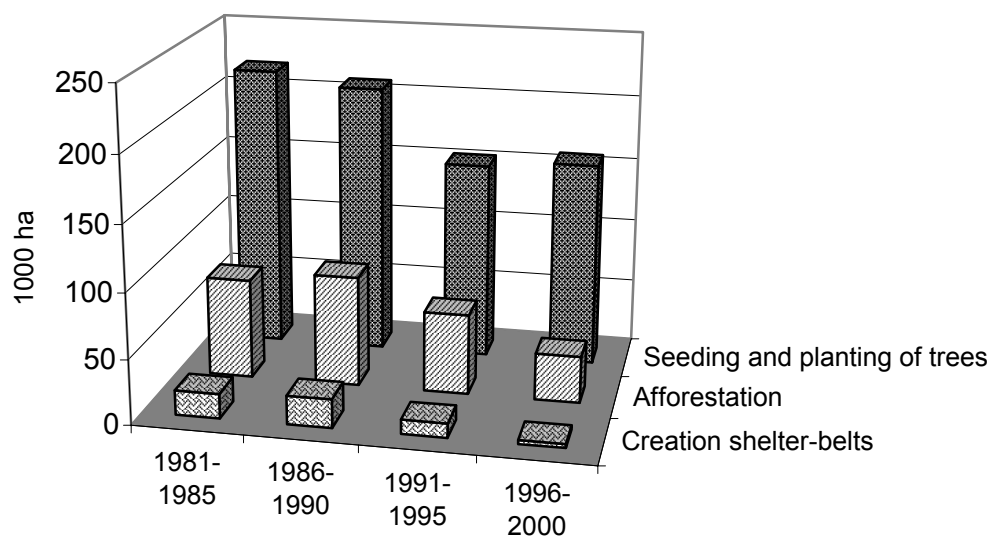


Table 3.9  
Forest resources dynamics

Indicators	Unit of measurement	Years		
		1983	1988	1996
Area of stocked forest including:	1000 ha	8558	8620	9400
Artificial plantations	1000 ha	2832	3885	4715
Total growing stock	million m <sup>3</sup>	1239.7	1319.9	1736.0
Stock per ha	m <sup>3</sup> /ha	145	153	185

Source: Materials of Ukrainian forest fund accounting (1983, 1988, 1996)

Table 3.10  
Comparative data on land use and forestry, 1996

<i>Indicators</i>	<i>Unit of measurement</i>	<i>Ukraine</i>	<i>Europe*</i>
Total land area per capita	ha/cap	1.12	0.97
Total land area used for forestry per capita	ha/cap	0.22	
Total area of forest and other wooded land per capita	ha/cap	0.20	0.37
Total area of stocked forest per capita	ha/cap	0.18	0.3
Percent of forest cover	%	17	38.1
Percent of stocked forest in total land area	%	16	31.1
Types of ownership of stocked forest	%		
State and public forest	%	99.9	46.8
Private forest	%	0.1	53.2
Type of forest management	%		
on the basis of a forestry plan	%	96.3	83.3
Growing stock in stocked forest	m <sup>3</sup> /ha	186	147
Including	m <sup>3</sup> /ha		
Coniferous	%	52.3	59.8
Deciduous	%	47.7	40.2
Net annual increment			
per hectare of stocked forest	m <sup>3</sup> /ha	4	4.4
as a percent of growing stock	%	2.2	3.1

\*Europe – TBFRA-2000

**Sources:** Materials of Ukrainian forest fund accounting (1983, 1988, 1996); Forest Resources of Europe, CIS, North America, Australia, Japan, and New Zealand.

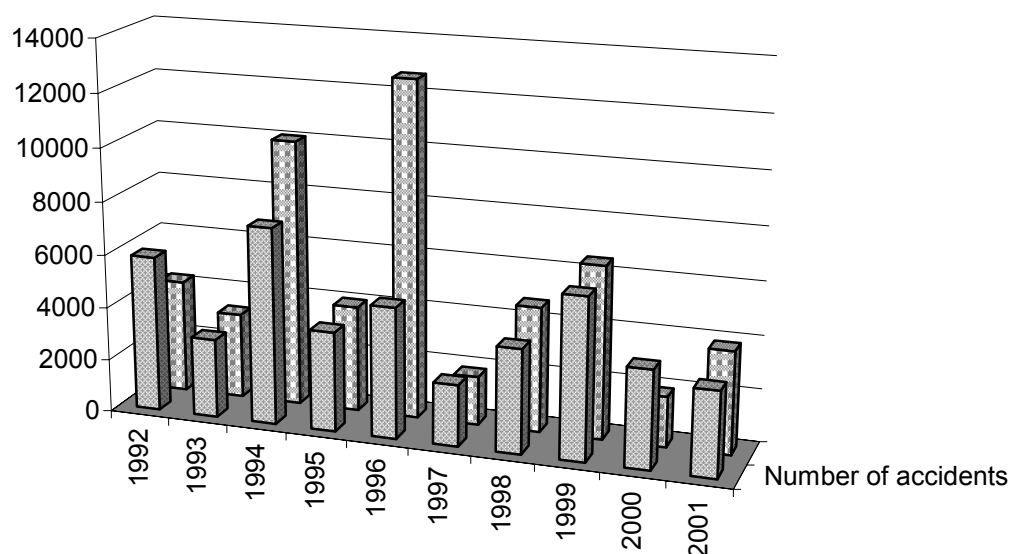
Ukrainian forests have been substantially damaged owing to anthropogenic influence (table 3.11). Particularly, the direct losses from forest fires (6.2 million UAH in 2001), which were mainly human caused.

Table 3.11  
Forest fire statistics

<i>Indicators</i>	<i>Unit of measure</i>	<i>Years</i>									
		<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>
Area affected by fires	<i>ha</i>	4252	3214	10040	3995	12670	1835	4706	6494	1905	3860
Number of accidents	<i>number</i>	5869	2967	7411	3754	4928	2309	3915	6070	3696	3205
including known causes	<i>number</i>	5869	2967	7411	3754	4928	2309	3915	6070	3696	3205
by human fault	<i>number</i>	5862	2959	7369	3736	4909	2295	3879	6055	3683	3187
by natural factors	<i>number</i>	7	8	42	18	19	14	36	15	13	18

**Source:** Statistical Yearbook (1990-2001), State Statistics Committee of Ukraine, Kiev; Statistical materials of the State Forestry Committee of Ukraine (1990-2001), Kiev; National report on the state of the environment of Ukraine (1996-2001), Kiev.

Graph 3.6  
Forest Fires



In some years heavy losses are caused by natural phenomena, such as storms, windbreaks, snow and ice breakage. In 2000, ice breakage seriously damaged about 300,000 ha of forests in the southwest part of Ukraine.

The forests of the southern part of the country also periodically suffer from droughts. In forests weakened by these influences (drought and breakage) outbreaks of insect and disease events occur. Of the insects, the most widespread pests in Ukrainian forests are: green oak leaf roller (*Tortrix viridana* L.), gypsy moth (*Lymantria dispar* L.), brown-tail moth (*Euproctis chrysorrhoea* L.), winter moth (*Operophtera brumata* L.), pine sawfly (*Diprion pini* L.) and European pine sawfly (*Neodiprion sertifer* Geoffr.), pine beauty moth (*Panolis flammea* Schiff.), and pine moth (*Dendrolimus pini* L.). From pathogenic fungi and diseases of trees, the most widespread are root rot (*Fomes annosus* Fr.), white rot (*Armelaria melea* Quell.) and mycosis of oak (*Ophiostoma quercus* Naunfeld.).

#### 4 The forest industry

In 2001 the forest industry in Ukraine was made up of 3,653 enterprises with a staff of more than 345,000 people. According to ownership types, these enterprises (legal entities) are separated in collectives (89.8%, including joint-stock companies – 66.5%), state (3.1%), private (1.6%), and international or other states (5.5%). Also private businessmen are engaged in wood processing. The volume of production of the enterprises in 2000 (wholesale prices) was 6,823 million UAH.

The biggest part of forest industry production according to production volumes is attributed to the enterprises related to the Ministry of industrial policy of Ukraine. As of 2000, the Ministry of industrial policy of Ukraine encompassed 254 of the most powerful wood processing enterprises.

The basic types of products produced by wood processing enterprises of Ukraine are: sawnwood, wood packing materials, intermediate goods made from coniferous and broadleaves timber, particle board (including laminated and composite), fibreboard, glued plywood, glued bentwood, parquet, joinery, furniture, hulled, sliced and synthetic veneer, ethyl acetate, acetic acid, carbamid rosin, charcoal, edge lipping, and spring blocks for mattresses.

In 1999, the wood processing facilities of Ukraine produced: sawnwood – 2,141,000 m<sup>3</sup>, parquet - 540,000 m<sup>2</sup>, particle board - 210,000 relative m<sup>3</sup>, fibreboard - 13.3 million relative m<sup>2</sup>, plywood - 44,000 m<sup>3</sup>. The production of these products decreased from 1990-1996. The most significant reductions to production were in sawn wood (almost 90%), and fibreboard (60%). Since 1997, production volumes have stabilized, and even some small increases for certain kinds of products have been observed.

As of 1 January 2000, wood-processing and furniture enterprises employed 37,856 people of whom almost 47% work in wood-processing enterprises (timber plants, plywood factories, secondary factories of wood materials etc.), 27.5% at furniture factories, and the rest at furniture mills.

Capacity utilization of traditional wood-processing enterprises has decreased catastrophically for the last 10 years: sawnwood - almost 60%; parquet - more than 70%; particle board - 75%; fibreboard - 50%; and plywood - 59%. In 1999, capacity utilization was 14.4% for sawn-woods production, and 38.6% for fibreboards production. The basic machines and equipment in the sawn-wood industry have been in operation for more than 10 years.

Table 4.1

**Production of main types of products of the wood processing and pulp and paper industry**

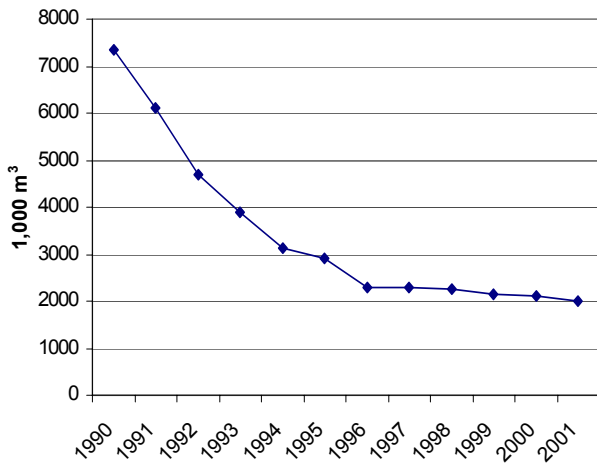
Type of products	Unit of measure	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Sawnwood	1,000 m <sup>3</sup>	7330	6106	4690	3884	3123	2917	2296	2306	2258	2141	2127	1993
Plywood	1,000 m <sup>3</sup>	169	149	98	51	32	38	32	30	36	44	56	80
Particle board	1,000. rel. m <sup>3</sup>	1186	1099	952	806	492	382	240	202	189	218	264	379
Fibre board	million. relative* m <sup>2</sup>	36	36	33	26	18	14	11	14	13	13	17	20
Cellulose (excluding chemical pulp)	1,000 tonnes	104	90	76	48	51	61	34	26	30	37	39	41
Wood-pulp	- " -	45	37	26	22	19	23	18	11	15	13	23	27
Paper	-"-	369	353	279	181	94	98	95	87	104	82	102	126
Cardboard	-"-	543	470	379	276	209	207	198	177	189	229	309	350
Furniture (in actual prices)	billion. krb./million . hrn**	2	4	61	2214	12479	34264	326	330	329	567	614	807

**Source:** Statistical Yearbook (1990-2001), State Statistics Committee of Ukraine, Kiev.

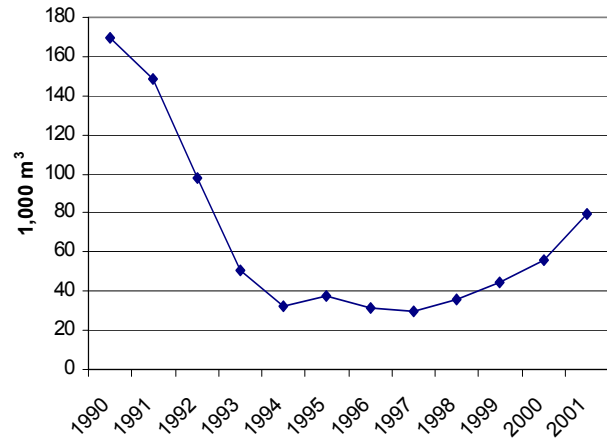
\*1 centimetre basis

\*\*in mln. hrn. from 1996

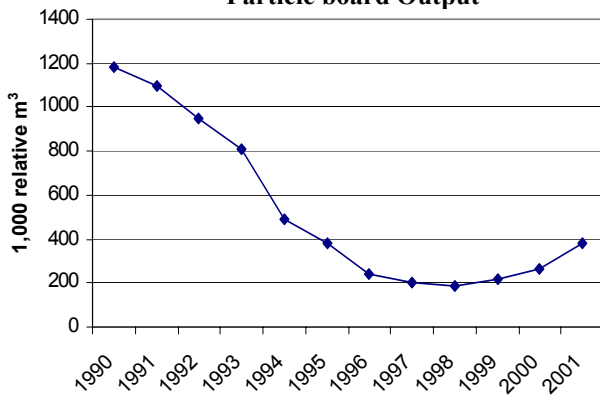
Graph 4.1  
Sawnwood Output



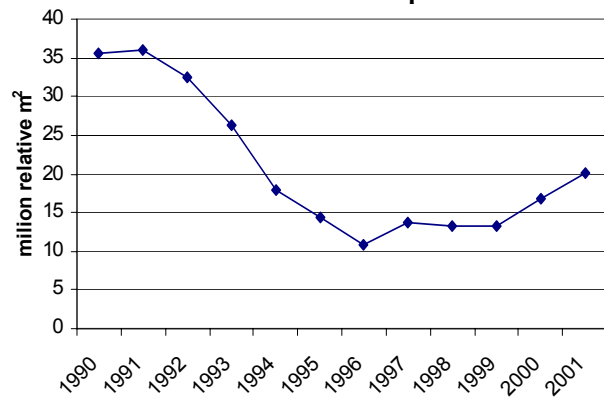
Graph 4.4  
Plywood Output



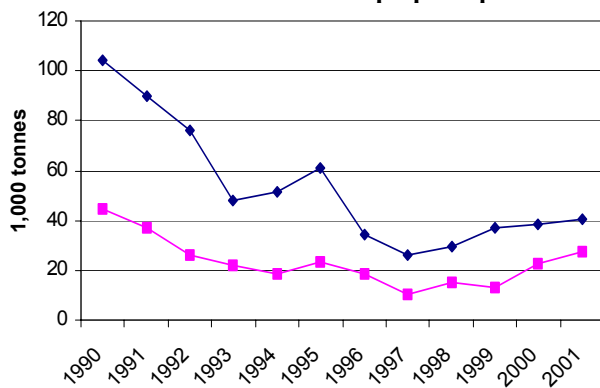
Graph 4.2  
Particle board Output



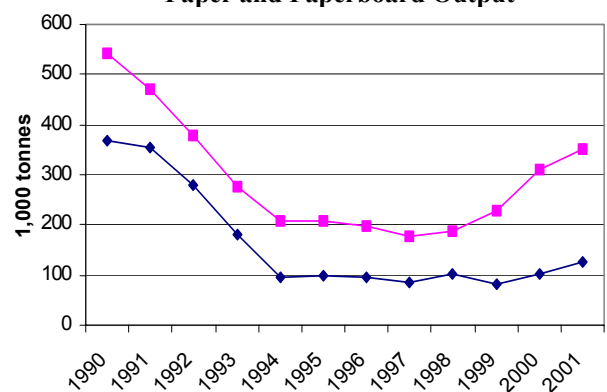
Graph 4.5  
Fibreboard Output



Graph 4.3  
Cellulose and Wood-pulp Output



Graph 4.6  
Paper and Paperboard Output



Since 1996, the value (in US dollars) of exports from the wood-processing enterprises of Ukraine has reduced by 12%. There has been, however, positive increases to the percentage of exports in the overall production of wood products. In 1996, the share of export production was 8,5% of the total production of wood-processing enterprises of Ukraine; in 1999, the share of exports was almost 13% of the total amount of wood product sales. In 1999, the volume of export deliveries was about \$10.7 million (which was a 5,5% increase over 1998).

From 1996-1998, Ukrainian manufacturers exported products such as: raw forest products, sawn-woods, furniture components, hulled, sliced and synthetic veneer, particle and fibreboard, plywood and parquet. The part of other production in total amount of export was insignificant. In 1999 Ukrainian manufacturers also exported components made from waste fibreboard, laminated particleboard and wooden products.

In 1996 and 1997, the biggest component of export production was particleboard - 33.5% and 29.6% respectively. However, in 1998 and 1999, plywood occupied first place with 23.5% and 20.0% respectively. For the period of 1996-1999, exports increased for only two types of product – roundwood and sliced veneer. In the case of roundwood, exports increased by 500% during the period, in the case of sliced veneer - exports increased by 150%. Thus 85% of production was exported by wood-processing enterprises, 10% - by furniture mills, and the remaining 5% – by furniture factories.

The basic kinds of imported supplies for the Ukrainian forest industry are: dyes, bleach, various kinds of lacquers, glues and rosins, solvents, emulsions, decorative lamina plastic, peeler logs, particle board without machining and/or decorations, paper for lamination, chrome plated\* plastic, cardboard for packing, cotton fabrics, thermo-fibre, polyethylene bags, metal construction products, nails, plastic doors, wood-processing tools, knives and saws for wood-processing machines, accessories, and spare parts for equipment. The basic suppliers of such products in 1999 were: Russia, Netherlands, Ireland, Germany and Poland. The total amount of imports was about 3,7 million USD.

Particle board production in Ukraine began in the 1960's, when six factories were constructed with a capacity of 25-35 thousand m<sup>3</sup> of particle board per facility annually. Development of new manufacturing techniques has enabled the use of low-grade wood and wood waste products to manufacture furniture with domestically produced boards. Work is currently underway on improvements of board production technology, particularly in producing and application of glued materials. Currently, particle board is being developed by 14 \* enterprises. The majority of operating enterprises producing particle board have technological equipment that is 25-30 years old (which exceeds the expected useful life by 2-3 times). In 2001, about 380,000 relative m<sup>3</sup> of particle board were produced, with the deficiency satisfied by imports from other countries, namely Russia and Belarus.

Fibreboard is produced by 3\* factories. Their combined capacity is about 40 million m<sup>2</sup> of fibreboard per year; however, existing capacities are not completely utilized (in 2001, 20.2 million relative m<sup>2</sup> of fibreboard were produced). Modernization of manufacture is supposed on the basis of imported equipment for the production of high quality fibreboard.

As evidenced by historical documents, paper manufacture in Ukraine began in first half of 16th century. Nowadays, 25 enterprises operate in the pulp and paper industry of Ukraine. About 20,000\* people are employed in the pulp and paper industry in Ukraine. The production capacities of Ukrainian paper and cardboard manufactures are 1 million tons, and for cellulose and wood pulp - 180,000 tons. The majority of the pulp and paper industry is using equipment technology that is obsolete and should be renewed. Among 50 papermaking machines in Ukraine, 58% have been in use for more than 40 years, some are not in operation or are operated on a conserved basis. The manufacture of paper in Ukraine has decreased from 353,000 tons in 1991 to 124,000 tons in 2001 (table 4.2). Consumption of paper has also decreased considerably over the last years (currently it is approximately 15 kilograms per capita).



Table 4.2  
**Production of paper by type**  
*(1,000 tons)*

Type of products	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Paper, total	353.0	278.6	181.0	94.1	98.0	95.1	86.6	103.6	81.7	102.0	126.0
including:											
Newsprint					15.8	14.8	8.3	15.9	14.4	26.0	32.3
Printing paper	39.2	27.7	13.9	1.8	0.9	0.6	5.0	0.5	0.4	0.1	0.0
Writing paper	27.6	24.5	12.6	5.2	2.7	3.3	4.8	6.3	0.7	2.3	4.4
Paper for book and notebook covers	16.4	8.5	2.2	0.4	0.8	1.9	1.0	1.4	0.5	1.2	1.5
Waxing base	8.2	8.0	7.1	4.0	3.4	0.3	0.1	0.4	0.4	0.2	0.2
Base for coated paper	10.1	9.2	4.8	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3
Cigarettes paper (reels)	4.7	5.6	4.2	1.9	3.1	1.0	0.2	0.3	0.2	0.1	0.1
Packing paper	60.1	50.1	35.8	15.6	12.9	9.4	7.9	8.2	8.1	8.0	8.9
Wallpaper	29.1	27.9	12.7	3.7	3.2	2.6	0.5	1.5	0.0	1.2	0.0

Source: Statistical Yearbook (1990-2001), State Statistics Committee of Ukraine, Kiev.

There are 3 kinds of pulp and paper enterprises in Ukraine:

1. Pulp-and-paper mills.
2. Waste paper processing factories.
3. Enterprises producing paper and cardboard from imported raw material.

The main manufacturer of pulp-and-paper products in Ukraine is the State joint-stock holding company "Ukrpapirprom". Its collective investment fund consists of share holdings of paper mills and factories; the biggest of them are Kyevsky, Ghydachivsky, Rubighansky, Poninkivsky, Izmailsky, Dnepropetrovsky and Malynsky. The enterprises of holding company "Ukrpapirprom" produce 100% of the cellulose, almost 90% of the paper and more than 40% of the cardboard produced in Ukraine. In connection with limitations of local raw material sources, the pulp and paper enterprises in Ukraine mainly use imported cellulose and are specialize in the manufacture of smaller sizes of paper and cardboard. They also produce packaging grades of paper and cardboard on the basis of recycled waste paper (table 4.3).

Table 4.3  
Utilization of wood-waste and waste paper, 2000

<i>Type</i>	<i>Unit of measurement</i>	<i>Amount</i>
WOOD-WASTE		
Volume formed	1,000 m <sup>3</sup>	1529.2
UTILIZATION OF WOOD-WASTE	1,000 m <sup>3</sup>	713.6
including:		
for technological purposes	1,000 m <sup>3</sup>	327.1
for heating	1,000 m <sup>3</sup>	386.5
Sale for other consumers	1,000 m <sup>3</sup>	397.6
Volume of waste unused	1,000 m <sup>3</sup>	418.0
WASTE PAPER		
Potential volume	1,000 tons	500
Actual volume	1,000 tons	326.9
Import	1,000 tons	30.8
Actually utilized	1,000 tons	292.3
including:		
for technological purposes	1,000 tons	292.3
Sale for other consumers	1,000 tons	57.6
Volume of unused waste paper	1,000 tons	7.8

*Source:* Statistical Yearbook (1990-2001), State Statistics Committee of Ukraine, Kiev

In Ukraine wood pulp is produced only at the Ghydachivsky pulp-and-paper mill, and only in small volumes, (only supplying 10-15% of demand). Izmailsky pulp-and-paper mill produces cellulose from cane, however, for various reasons, this facility is barely operating. Up to 80% of the raw material in Ukraine has to be delivered from abroad, primarily from Russia (opportunities for producing internally manufactured wood pulp are being studied). The government has planned construction of new pulp-and-paper mill, with a capacity of 200,000-300,000 tones of wood pulp per year. According to experts, it will provide of 1.5 million tones of paper and cardboard per year.

The forest chemical industry operates 3\* enterprises which employ about 2,000\* people. The value of production in 2001 (wholesale prices) was 58 million\* UAH. These products include: charcoal, acetic acid, formalin, dry carbamid rosins, and other products. The manufacture of low toxic rosins is developing, and this will allow an increase of production of particular board that meets international standards.

## 5 Trade

Under the planned economy of the former USSR, trade of wood and other forest products in Ukraine were centralized. The Ministry of Forestry and Ministry of Wood Industry planned volumes of future wood supply for jurisdictional enterprises and submitted them to the central state scheduled bodies. They developed plans of forest resources supply, and according to these plans, state enterprises entered contracts and supplied products to consumers in Ukraine. Firewood and other less important forest resources were distributed approximately in the same order at regional and local levels. Export operations from Ukraine were carried out through the all-Union export organization "Exportlis". Quotas on export of wood materials were established by the governmental bodies of Ukraine.

The formation of a market economy in Ukraine has resulted in radical changes in the organization of wood trade. The Ukrainian market is rather limited, in terms of prices paid for forest products. There is a stable demand for high quality wood, while low-grade wood does not have much demand, because of the low level of processing technologies for such wood in Ukraine. Insignificant fluctuations in wood price and demand testify to stable demand in the market. In 1999, the volume of wood-processing industries sales decreased by 2% compared to 1998.

The significant difference between prices for wood at home versus foreign markets is a powerful stimulus to export wood production. The centralized export deliveries are carried out by the state enterprise "Crona", which was created on the basis of the state producing-marketing association "Dybrova". Also, state forestry

enterprises independently entered contracts for exports of wood production. The Commission of Foreign Economic Relations of the State Forestry Committee of Ukraine coordinated this activity. There is a significant amount of private and joint-stock companies, which export wood products. Recently, the volume of wood products exported has grown. From 1998 until now, the total value of Ukrainian wood exports exceed the value of imports. In 1996, the value of wood and timber products exported was \$55.2 million, in 1998 – \$100.2 million, and in 2001 - \$229.9 million. USD. Within the system of the State Forestry Committee of Ukraine, the value of wood exports increased from \$3.3 million in 1994 to \$66.2 million in 2002. But the share of export is relatively low, and in 2002 it was 18.4% of logged timber. In 2001, the total volume of wood materials exported (roundwood equivalent) was almost 1.5 million m<sup>3</sup>.

## 7 The prices

Under the conditions of the centrally planned economy of the former USSR, all prices on wood materials were fixed at rather low levels. Practically all types of wood resources were distributed centrally, therefore prices had mainly a regulating role and limited economic value.

Since January 1992, all forest production in Ukraine has been transacted on free market prices, with periodic restrictions on price hikes. However, the attempts to keep prices from increasing by administrative means, appeared to be ineffective. Due to hyperinflation, prices on products of the wood-processing and pulp and paper industry increased by more than 2900% during 1992, and in 1993 by 9700%. Price indexes have continued to increase, however, the rate of growth gradually has slowed. In the last few years, prices in wood domestic market have stabilized to some degree (table 6.1).

Table 6.1  
Prices on the main types of forest products (average)

Type of product	Unit of measurement	1998	2000	2001				2002			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Roundwood conifers	UAH/m <sup>3</sup>	135	203	225	223	226	248	274	254	251	220
hardwood		245	370	408	400	400	450	507	470	460	500
Sawnwood	UAH/m <sup>3</sup>	160	187	200	208	208	206	222	227	227	229
Wood packing materials	UAH/m <sup>3</sup>	177	161	162	164	182	198	159	159	158	153
Parquet	UAH/m <sup>2</sup>	28	26	27	29	29	30	32	32	32	32
Rate of exchange:											
UAH/USD		2.45	5.44	5.43	5.41	5.35	5.30	5.32	5.33	5.33	5.33
UAH/EUR		2.77	5.03	5.06	4.72	4.78	4.74	4.63	4.91	5.21	5.30

*Source:* Statistical materials of the State Forestry Committee of Ukraine (1990-2001); Information materials of the National bank of Ukraine on the website: [www.bank.gov.ua](http://www.bank.gov.ua)

Listed below are some examples of 2002 prices for round wood and sawn-wood:

**a) Round wood I quality, 26 centimetres in diameter and larger**

Coniferous 145-280 UAH/m<sup>3</sup>

Broadleaves 365-650 UAH/m<sup>3</sup>

**b) Sawn-wood edged I quality**

Coniferous 400-650 UAH/m<sup>3</sup>

Broadleaves 700-1500 UAH/m<sup>3</sup>

**c) Sawn-wood (not edged) I quality**

Coniferous 275-350 UAH/m<sup>3</sup>

Broadleaves 450-1000 UAH/m<sup>3</sup>

During 2002, the stumpage prices (harvesting taxes) were fixed, and were priced based on the value of the forest products. Wood from main fellings (and resin products) are wood resources of the state, and rates are fixed by the government (the Cabinet of Ukraine). Rates on other forest resources are fixed by regional state administrations.

New rates on wood in forest stands were fixed in 1997, and in 2001, the rates on high quality wood of broadleaves were increased. Harvesting taxes are still comparatively low and only cover 50% of the expenses of reforestation.

## 8 Production, trade and consumption

In the framework of centralized planning, production volumes were not determined by real demand, but by directive planned parameters. Presently, manufacturing levels are influenced by market conditions and demand on production. The wood supply (stumpage) is limited by sound application of forest utilization and strictly supervised by forest and environmental protection bodies of the State. Fellings are mainly carried out by forestry enterprises, but other businesses can also carry out wood harvesting, if they have proper qualifications. New forest legislation is intended to create the opportunity of selling wood resources under competitive conditions while at the same time, reserving "first right of refusal" for enterprises engaged in forest planting.

The breakdown of forest products consumption can be characterized as follows: most of the volume of forest products is used on capital building and repair-operational needs (27 %\*), packing (20 %\*), mining industry (11 %\*), fuel and energy needs (10 %\*). The rest, 32 %\*, of forest products is used on production of consumer goods, needs of mechanical engineering and other purposes.

## 9 Institutions

The agencies managing the state forests of Ukraine function at three levels - national, regional and local. The central body of the state executive authority responsible for formation of national policy on forest and game management is the State Forestry Committee of Ukraine (SFC of Ukraine), which provides policy realization, management and intersectoral coordination. At the regional level, regional forestry associations provide this function, and at the local level - state forestry enterprises.

At the current time, management of the former collective-farm forests (forests of agricultural organizations) has been divided up between the SFC of Ukraine, and the Ministry of Agrarian Policy. Governing bodies have also been formed to control former collective-farm forests at regional and local levels. Generally, over 90% of Ukrainian forests are managed by SFC and the Ministry of Agrarian Policy.

Realization of policies for the wood-processing industry is put on the Ministry of industrial policy. For the pulp and paper industry, the state joint-stock holding company "*Ukrpapirprom*" handles this responsibility.

Forest scientific research is mostly carried out by state research institutions, and educational establishments. Non-governmental forest scientific organizations occupy a very limited segment of the forest scientific research market. Basic research and educational organizations on forests are follows:

1. Ukrainian Research Institute of Forestry and Forest Melioration named after G.N. Vysotsky (URIFFM), Kharkiv) including branches and regional research stations.
2. Ukrainian Research Institute of Mountain Forestry (URIMF, Ivano-Frankivsk) and forest research station.
3. Educational-Scientific Institute of Forest and Landscape Gardening Management of National Agrarian University (Kiev).
4. Ukrainian State Forestry Technical University (Lviv),
5. Forestry faculty of Kharkiv National Agrarian University, (Kharkiv),
6. Scientific Information Centre of Forest Management (Kiev).

Besides the higher educational institutions in Ukraine, there are 7 special forestry colleges. The Ukrainian Centre for the Training, Retraining and Improvement of Qualifications of Forestry Personnel "*Ukrcentrkadrilis*" is engaged in improvement of professional skills of specialists on forestry.

An important establishment within the structure of SFC of Ukraine is the forest inventory service, which carries out inventory of all forests within the country that are organizing and planning forestry development.

State inventory enterprises "*Ukrderglisproect*" consists of 5 forest inventory branches (expeditions); three of them are in the central part of the country (near Kiev), one - in the west (in Lviv) and one - in the east (in Kharkiv). Planning and searching work in the field of forestry are carried out by two institutes - the Ukrainian State Planning and Search Institute for Forestry ("*Ukrdiprolis*", Kiev), and Ukrainian State Planning and Search Institute for Forest Amelioration and Forestry ("*Kharkivdiproagrolis*", Kharkiv). Further supporting forestry, with good quality seed for the planting of forest trees species, is the Ukrainian State Forest Seed Station "*Ukrderglisnasinnya*", and protection against pests and diseases is provided by "*Ukrlisozahist*".

## 10 Outlook

Given the conditions of "economy in transition" and the transformation of socioeconomic relations, it is very difficult to forecast the development of forestry and wood resource consumption industries. On the basis of strategic Government direction, it is possible to provide that, in the near future, reforms in Ukraine will be directed toward: maintenance of private ownership institutions, improving management of state owned entities, development of business and competition, transformations of manufacture structure and trade liberalization.

As for forestry and forest resources consuming sectors, the general directions of changes may be the following:

### a) In forestry

State ownership of forests will remain dominant. In the near future, significant expansion of forest area is not expected. Forest area by 2015 will probably increase by about 300,000 ha (or 3,2%) and will total about 9.7 million ha. The total growing stock will increase by about 16,7 %. The increase of forest areas will be basically through creation of new forest stands (mainly in regions with low forest cover). Improved forest distribution over the country will have a positive influence on environmental conditions. In the long term, it is possible to expect further extension of coniferous and broadleaves forest stands through replacement of low quality and low productivity stands (up to 5 % of lands covered with forests).

In the near future, the expected increase of forest area will not increase the volume of wood supply. Changes in the age structure of forests and the optimization of forest management, will influence future wood supply more fundamentally.

Increases to the natural-conservation fund in forests could decrease the area of forests available for wood supply by almost 20 % until 2050 (in comparison to 1996), and may become one of the most powerful factors that will cause a reduction of wood supply. On the other hand, the percentage of mature forests in age structure will rise eventually, which will allow an increasing volume of fellings. Volumes of wood supply will also depend on health condition of the forests. In forests with bad health conditions, the felling age can be lowered and will cause an insignificant increase of wood supply volume. The volumes of wood supply from the forest areas polluted after the Chernobyl accident (through dissipation of radioactive elements) will increase in the future.

### b) Wood industry

In connection with an increase of technical opportunities for Ukrainian wood processing enterprises, there should be increases to production volumes. Such increase will depend on investments in this industry and the technological retrofitting of these enterprises. Improvement to the general investment climate in Ukraine would assist in attracting foreign investments in the wood processing industry. Taking into account an increasing demand for paper production, a revival of activity focused on pulp-and-paper is supposed.

### c) Organizational structure

The process of decentralization of management and delimitation of control over the economic functions, will go deep in forestry. Economic activity of manufacturers will move away from centralized organizations toward commercially independent enterprises (that is why the number of small enterprises will increase). In connection with the dominant position of state ownership of forests; privatization in forestry will mainly occur in the product manufacturing sectors. Private forestlands will increase mainly through creation of new forest stands on what were former agricultural lands (as is provided for in the new Land code of Ukraine, 2001).

d) Trade

Under the current conditions of economic revival, imports in Ukraine will dominate in forest trade, however, if the purchasing capacity of potential Ukrainian consumers for wood products reduces, forest product exports could be increased.

e) Prices

It is possible to expect a gradual rise in prices on wood, particularly owing to increases to the harvesting taxes on standing timber.

f) Consumption of wood materials

The structure of wood consumption within Ukraine will not change significantly, however, exports of high quality forest products to foreign markets could see minor growth in the near future. An increase of consumption forest products in building and for pulp and paper industry is possible as is the increased use of low quality wood and wood waste products as bio-fuels.

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## **SUPPLEMENTARY INFORMATION ON FORESTRY AND FOREST INDUSTRIES**

### **A. Government bodies dealing- with forest and forest industries sector**

State Forestry Committee of Ukraine, Shota Rustaveli St. 9-a,  
01023 Kiev  
Tel.: (044) 228-56-66  
(044) 226-32-53

Ministry of Ecology and Natural Resources  
Kreshatyk 5  
01601 Kyiv-1  
Tel.: (044) 226-24-28

Ministry of Industrial Policy of Ukraine  
Surikova 3  
03035 Kyiv-35  
Tel.: (044) 246-32-00

Ministry of the Economy and European Integration of Ukraine  
M.Grushevskogo 12/2  
01008 Kyiv-8  
Tel.: (044) 293-93-94

Ukrainian State Committee of Material Reserve  
Pushkinska 28  
01601 Kiev  
Tel.: (044) 226-22-64

Ministry of Agrarian Policy of Ukraine  
Kreshatyk 24  
01001 Kiev  
Tel. (044) 226-34-66

### **B. Industry and Trade Organizations**

State enterprise "Krona"  
Elektrikov 29  
04176 Kyiv-176  
Tel.: (044) 417-53-79

State forest protection enterprise  
"Ukrlisozahist"  
Internationalna St, 127  
61140 v. Pokotilivka, Kharkiv Region  
Tel.: (0572) 49-30-75

Ukrainian Base for Air Protection of Forests  
Derevoobrobna 1  
01013 Kiev  
Tel.: (044) 531-71-50

Ukrainian Centre for the Training, Retraining and Improvement of Qualifications of Forestry Personnel "Ukrcentrkadrylis"  
252510 Boyarka, Kiev region  
Tel.: (044) 439-59-88

State joint-stock holding company "Ukrpapierprom"  
M Raskhovoy 19  
02167 Kyiv-167  
Tel.: (044) 517-41-72

Ukrainian State Forest Seed Station  
"Ukrderglisnasinnya"  
Lisodoslidna 14  
08150 Boyarka, Kiev Region  
Tel.: (04498) 3-50-60

Cherkassy State Forestry Association  
"Cherkassylis"  
Bozhenko 4  
18009 Cherkassy  
Tel.: (0472) 47-03-75

Chernigiv State Forestry Association  
"Chernigovlis"  
Uritskogo 8  
14000 Chernigiv  
Tel.: (04622) 7-29-42

Republic Committee of forestry and game management  
of Autonomy Republic of Crimean  
Gavena 2  
95013 Simferopol  
Tel.: (0652) 44-27-19

Dnipropetrovsk State Forestry Association  
"Dnipropetrovsklis"  
Naberezhna Peremogy 38  
49094 Dnipropetrovsk  
Tel.: (0562) 68-40-66

Donetsk State Forestry Association  
"Donetsklis"  
Stadionna 24a  
83102 Donetsk  
Tel.: (0622) 66-02-02

Zhitomir State Forestry Association  
"Zhitomirlis"  
Khlibna 41  
10029 Zhitomir  
Tel.: (0412) 22-64-99

Zaporizhzhya State Forestry Association  
"Zaporizhhyalis"  
Chumachenka 15-b  
69117 Zaporizhzhya  
Tel.: (0612) 95-16-85

Kiev State Forestry Association  
"Kyivlis"  
Svyatoshinska 30  
03115 Kiev  
Tel.: (044) 451-20-00



Kirovograd State Forestry Association "Kirovogradlis"  
Timiryazeva 76  
25050 Kirovograd  
Tel.: (0522) 22-06-03

Kharkiv State Forestry Association  
"Kharkivlis"  
Dergprom, 3rd entrance, 7th floor  
61022 Kharkiv  
Tel.: (0572) -47-85-87

Kherson State Forestry Association  
"Khersonlis"  
Polyakova 2  
73000 Kherson  
Tel.: (0552) 22-39-52

Khmel'nitsky State Forestry Association  
"Khmelnitsklis"  
Kamenetska 55  
29000 Khmel'nitsky  
Tel.: (0382) 26-84-15

Lviv State Forestry Association  
"Lvivlis"  
Yavornitskogo 8-b  
79058 Lviv  
Tel.: (0322) 97-61-21

Lugansk State Forestry Association  
"Lugansklis"  
Lisovij Proizd 1  
91045 Lugansk  
Tel.: (0642) 54-83-80

Mykolayv State Forestry Association  
"Mykolayvlis"  
P. Lenina 16  
54029 Mykolayv  
Tel.: (0512) 46-00-26

Odesa State Forestry Association  
"Odesalis"  
Kanatna 83  
65107 Odessa  
Tel.: (0482) 22-51-25

Poltava State Forestry Association  
"Poltavalis"  
Gulaka Artemovskogo 22  
36018 Poltava  
Tel.: (0532) 57-03-42

Rivne State Forestry Association  
"Rivnelis"  
Pushkina 26  
33000 Rivne  
Tel.: (0362) 26-74-64

Sumy State Forestry Association  
"Sumylis"  
Zasumska 12-a  
40030 Sumy  
Tel.: (0542) 27-62-79

Ternopil State Forestry Association  
"Ternopillis"  
Bagata 5-a  
46000 Ternopil  
Tel.: (0352) 22-30-02

Vinnitsa State Forestry Association  
"Vinnitsalis"  
Pirogova 26  
21100 Vinnitsa  
Tel.: (0432) 32-60-25

Volyn State Forestry Association  
"Volynlis"  
P. Voli 30  
43000 Lutsk  
Tel.: (03322) 4-25-38

TransCarpathian Region Forestry Administration  
Sobranets ka 156  
88017 Uzhgorod  
Tel.: (03122) 3-54-15

Chernovtsy Region Forestry Administration,  
Ruska 203a  
58000 Chernivtsy  
Tel.: (03722) 4-88-57

Foresters' Association of Ukraine  
Shota Rustaveli 9a  
01023 Kiev  
Tel.: (044) 234-75-66

Ivano-Frankovsk Region –Forestry Administration  
S. Vasiliyanok 48  
76015 Ivano-Frankivsk  
Tel.: (03422) 4-90-93

### C. Universities

National Agrarian University  
Golosievo, Geroyv Oborony 15  
01041 Kyiv-41  
Tel.: (044) 363-51-75

Ukrainian State Forest Technical University  
Generala Chuprinky 103  
79057 Lviv  
Tel.: (0322) 35-20-03

Kharkiv National Agrarian University  
62483 Kharkiv region  
p.o. Dokuchaevskoe  
Tel.: (0572) 99-76-80

### D. Research institutes, planning institutes and other organizations

Ukrainian Research Institute of Forestry and Forest Melioration (named after G.M. Vysotsky)  
Pushskinska 86  
61024 Kharkiv  
Tel.: (0572) 43-15-49

Ukrainian Research Institute of Mountain Forestry (named after P.S.Pasternak)  
M. Grushevskovo 31  
76000 Ivano-Frankivsk  
Tel.: (03422) 2-52-16

Ukrainian State Forest Inventory Enterprise  
"Ukrderglisproekt"  
Proletarska 22  
08200 Irpen/ Kiev Region  
Tel.: (04497) 5-25-63

Ukrainian State Planning and Search Institute for Forestry.  
"Ukrdiprolis"  
Bratislavska 50  
01133 Kiev  
Tel.: (044) 512-26-12

Ukrainian State Planning and Search Institute for Forest Amelioration and Forestry  
"Kharkivdiproagrolis"  
Serikovska 36  
61017 Kharkiv  
Tel.: (0572) 12-16-07

Council for the Study of the Productive Forces of Ukraine  
National Academy of Sciences of Ukraine  
Bulvar Shevchenka 60  
01032 Kyiv-32  
Tel.: (044) 216-90-70

Research Economical Institute of Ukrainian Ministry of Economy and European Integration  
Bulvar Druzhby narodiv 28  
02601 Kiev  
Tel.: (044) 269-95-03

Ukrainian Research Institute on Mechanical Processing of Timber  
UkrNDIMOD  
Bozhenka 84  
03022 Kiev  
Tel.: (044) 269-33-03

Ukrainian Institute for the Planning of Enterprises in the Pulp and Paper Industry "Ukrdipropapir"  
M. Raskhovoy 19  
02002 Kiev  
Tel.: (044) 517-48-46

Ukrainian Institute for the Planning of wood-processing and furniture enterprises  
"Ukrdiproderrevprom"  
M. Raskhovoy 17  
02002 Kiev  
Tel.: (044) 517-44-74

#### E. Periodicals

"Forest and Hunting Magazine"  
Scientific and Technical Journal  
Shota Rustaveli 9a  
01023 Kiev  
Tel.: (044) 228-31-38

"Forestry and Forest Melioration"  
Scientific Journal  
Pushkinska 86  
61024 Kharkiv  
Tel.: (0572) 43-15-49

Forestry Proceedings of National Agrarian University  
Geroiv Oborony 15  
03041 Kiev  
Tel.(044) 267-82-41

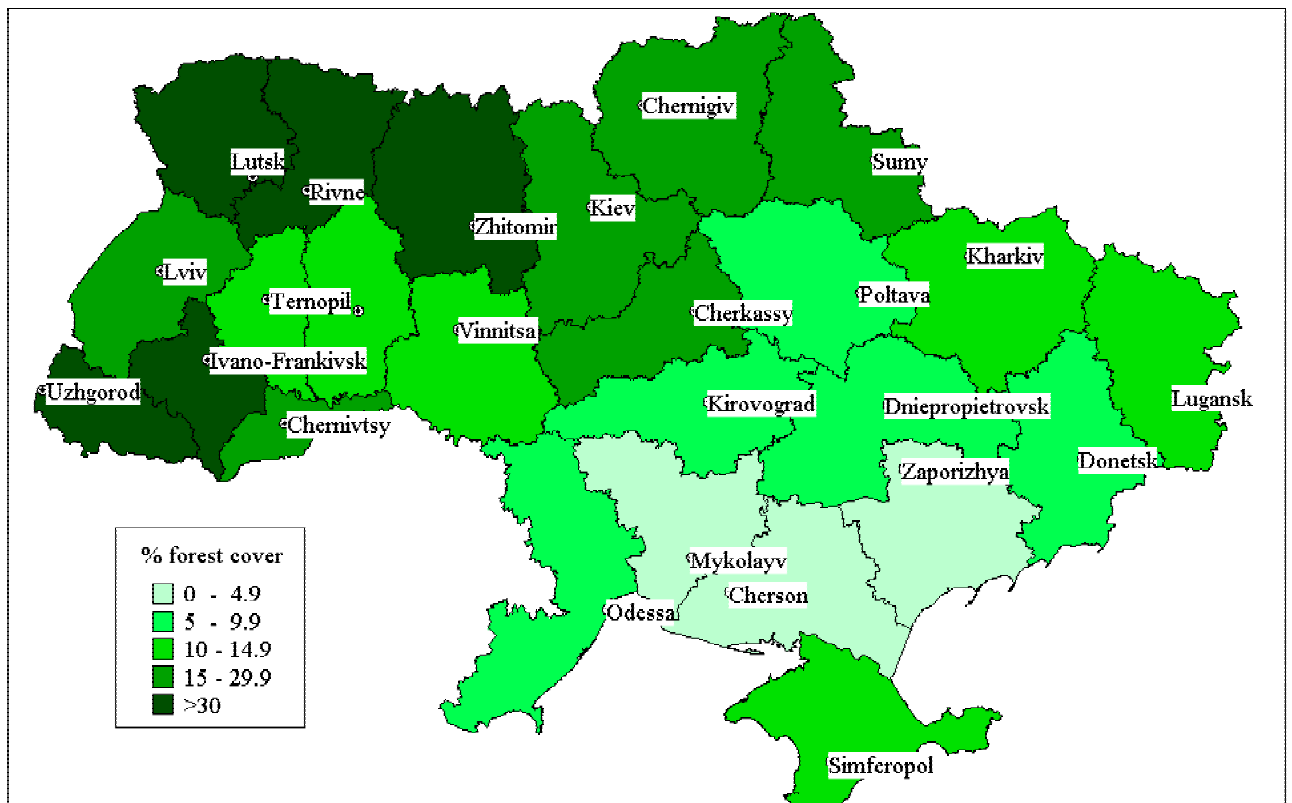
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p.o. Dokuchaevskoe  
62483 Kharkiv region  
Tel.: (0572) 99-72-70

Proceedings of Ukrainian State Forest Technical University  
Generala Chuprinky 103/54  
79057 Lviv  
Tel.: (0322) 39-06-95

"Ridna Priroda",  
Ukrainian journal  
Anri Barbyusa 5-b  
03150 Kiev  
Tel.: (044) 220-73-34



Natural zones of Ukraine.



## 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 organizations. 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 organizations 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:

Timber Section  
Trade Development and Timber Division  
UN Economic Commission for Europe  
Palais des Nations  
CH - 1211 Geneva 10, Switzerland  
Fax: + 41 22 917 0041  
E-mail: [info.timber@unece.org](mailto:info.timber@unece.org)  
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### ***Timber Bulletin Volume LVI (2003)***

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1. Forest Products Prices, 2000-2002
2. Forest Products Statistics, 1998-2002 (database since 1964 on website)
3. Forest Products Annual Market Analysis, 2002-2004
4. Forest Fire Statistics, 2000-2002
5. Forest Products Trade Flow Data, 2000-2001
6. Forest Products Prospects for 2004

### ***Geneva Timber and Forest Study Papers***

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Forest resources of Europe, CIS, North America, Australia, Japan and New Zealand	ECE/TIM/SP/17
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Interim report on the Implementation of Resolution H3 of the Helsinki Ministerial Conference on the protection of forests in Europe (Results of the second enquiry)	ECE/TIM/DP/12
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Timber Committee Yearbook 2003	ECE/TIM/INF/10
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The objective of the Discussion Papers is to make available to a wider audience work carried out, usually by national experts, in the course of ECE/FAO activities. The Discussion Papers do not represent the final official outputs of particular activities but rather contributions which, because of their subject matter or quality, deserve to be disseminated more widely than to the restricted official circles from whose work they emerged. The Discussion Papers are also utilized when the subject matter is not suitable (e.g. because of technical content, narrow focus, specialized audience) for distribution in the UNECE/FAO Timber and Forest Study Paper series. Another objective of the Discussion Papers is to stimulate dialogue and contacts among specialists.

In all cases, the author(s) of the discussion papers are identified, and the papers are 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 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. It is the intention to include this discussion paper 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 them on the continuing basis should contact the secretariat as well. Your comments are most welcome and will be referred to the authors:

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E-mail: [info.timber@unece.org](mailto:info.timber@unece.org)  
<http://www.unece.org/trade/timber>

## ***Forest and Forest Products Country Profile: Ukraine***

This *Forest and Forest Products Country Profile* contains information on the forestry sector of Ukraine (one of the largest eastern European countries with a population of 50 million people). This country profile shows that despite a rather low percentage of total forest cover, Ukrainian forests are a very valuable natural resource for their ecological and social functions, and as a source of wood and non-wood forest products. Over the past decade, the legal and operational base of the national forest management system has been gradually replaced with a new system for forest planting and utilization. The newly developed Forest Code of Ukraine provides opportunities for partial privatization of state forests and equality of different ownership types on forest land. This country profile also contains interesting data on the forest industry of the country, production, trade and consumption of forest products, and provides analysis of the evolution of the forestry sector.

### ***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](http://www.unece.org/trade/timber). Information about the UNECE may be found at [www.unece.org](http://www.unece.org) and information about FAO may be found at [www.fao.org](http://www.fao.org).

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