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# FORESTRY, 2021

The total forest land area in 2021 remained at approximately the same level as in 2020 and amounted to about 2.75 million hectares.

The total logging in both state-owned and privately-owned forests in 2021, as compared to 2020, decreased by 4.7%. Expressed in the quantity of roundwood, it was a decrease of about 248 thousand m<sup>3</sup>.

The total production of coniferous wood decreased by 9.6% and the production of non-coniferous wood by 3.8%, as compared to the previous year.

In 2021, the production of fuel wood decreased by 3.5%, or by about 77 thousand m<sup>3</sup>, while the production of industrial roundwood (wood in the rough) decreased by 5.6%, or by about 171 thousand m<sup>3</sup>, as compared to 2020.

The total value of wood sold in 2021, as compared to 2020, increased by 43.8%, while the average prices increased by 2.3%. The increase in the total value of wood sold in 2021, as compared to 2020, was caused by an increase in the value of non-coniferous wood, of 54.3%

Non-coniferous wood had a share of 87.7% in the total value of sold wood in 2021, while a share of coniferous wood was 12.3%. The average price of coniferous wood in 2021, as compared to 2020, increased by 6.4%, while the price of non-coniferous wood increased by 0.9%.

In 2021, as compared to 2020, the value of seeds and sowing material used in forestry increased by 4.5%, while the total value of forest protection agents used decreased by 40.2%. Expressed in kuna, expenses for seeds and sowing material increased by about 1.6 million kuna, while expenses for forest protection agents fell by about 1.6 million kuna.

The consumption of electricity increased in value terms by about 337 thousand kuna (6.8%), while the consumption of motor fuels increased by about 11 million kuna (14.9%). The consumption of gas increased in value terms by 636 thousand kuna (39.5%). The total value of services done in forestry increased in value terms compared to the same period of the previous year by 10.0%.

The total damages in forestry in 2021, as compared to 2020, decreased by 56.6%. Concerning individual types of damages, the highest decrease was recorded for damages caused by fire.

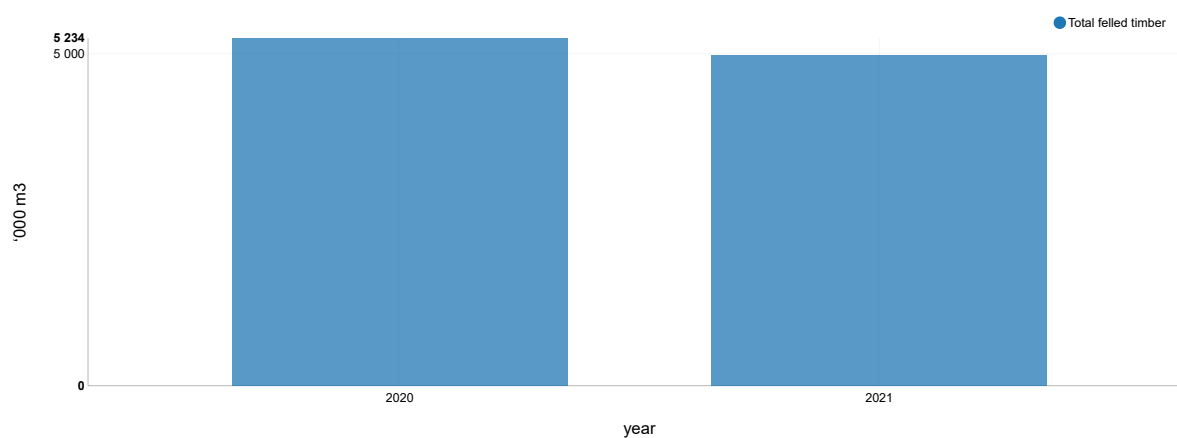
## 1 FOREST LAND AREAS

	Forest land area, ha		Indices 2021 2020
	2020	2021	
Total	2 747 273	2 753 429	100,2
Forests	2 512 659	2 530 865	100,7
Production forests	1 574 755	1 545 642	98,2
Protective forests	493 105	524 531	106,4
Special-purpose forests	444 799	460 692	103,6
Other forest land	194 613	183 008	94,0
Arid land	40 001	39 556	98,9

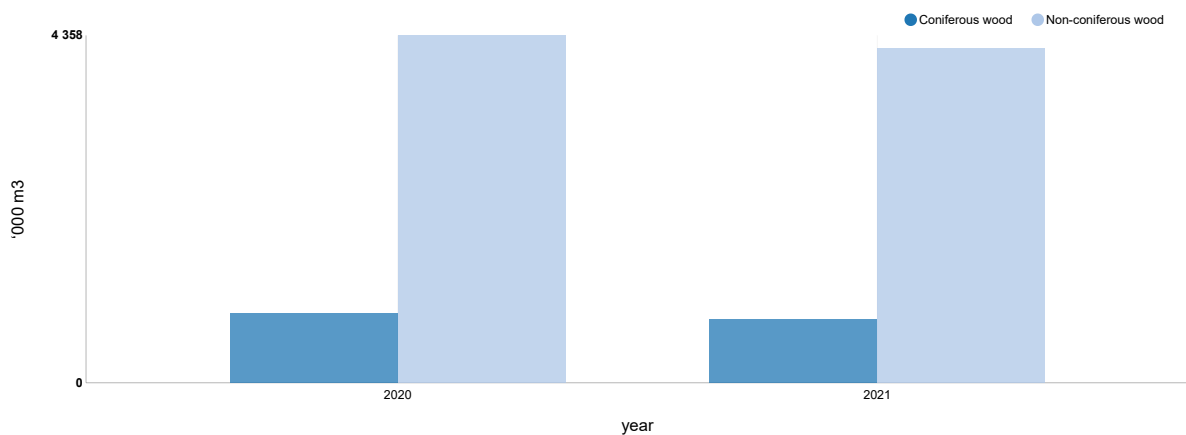
## 2 COMMERCIAL TIMBER PRODUCTION

	Manufactured quantities, '000 m <sup>3</sup>		Indices 2021 2020
	2020	2021	
Roundwood	5 234	4 986	95,3
Coniferous	876	792	90,4
Non-coniferous	4 358	4 194	96,2
Fuel wood, including wood for charcoal	2 207	2 130	96,5
Coniferous	58	50	86,2
Non-coniferous	2 149	2 080	96,8
Industrial roundwood (wood in the rough)	3 027	2 856	94,4
Coniferous	818	742	90,7
Non-coniferous	2 209	2 114	95,7
Sawlogs and veneer logs	2 469	2 394	97,0
Coniferous	534	517	96,8
Non-coniferous	1 935	1 877	97,0
Pulpwood	554	458	82,7
Coniferous	281	222	79,0
Non-coniferous	273	236	86,4
Other industrial roundwood	4	4	100,0
Coniferous	3	3	100,0
Non-coniferous	1	1	100,0

G-1 FELLED TIMBER, 2020 AND 2021



## G-2 FELLED TIMBER – BY TYPES OF WOOD, 2020 AND 2021



## 3 VALUE AND PRICES OF FORESTRY PRODUCTS SOLD

	2020		2021		Indices <u>2021</u> <u>2020</u>	
	Value, thousand kuna	Average price, kuna/m³	Value, thousand kuna	Average price, kuna/m³	Value	Average price
Total sale value	1 913 443	369,00	2 108 304	377,37	143,8	102,3
Coniferous	268 155	292,00	259 997	310,67	96,9	106,4
Non-Coniferous	1 645 288	385,57	1 848 307	389,12	154,3	100,9
Fuel wood, including wood for charcoal	466 062	200,65	558 167	210,10	119,8	104,7
Coniferous	9 141	155,25	9 156	138,36	100,2	89,1
Non-Coniferous	456 921	201,83	549 011	211,94	120,2	105,0
Industrial roundwood (wood in the rough)	1 447 381	505,61	1 550 137	529,02	107,1	104,6
Coniferous	259 014	301,37	250 842	325,46	96,8	108,0
Non-Coniferous	1 188 367	593,23	1 299 296	601,67	109,3	101,4
Sawlogs and veneer logs	1 347 293	581,76	1 440 006	610,92	106,9	105,0
Coniferous	206 764	382,01	207 881	407,84	100,5	106,8
Non-Coniferous	1 140 529	642,69	1 232 125	666,96	108,0	103,8
Pulpwood	6 445	209,02	11 257	215,37	174,7	103,0
Coniferous	3 004	210,98	3 049	219,70	101,5	104,1
Non-Coniferous	3 441	207,34	8 208	213,81	238,5	103,1
Other industrial roundwood	93 643	181,50	98 874	189,84	105,6	104,6
Coniferous	49 246	162,01	39 911	161,50	81,0	99,7
Non-Coniferous	44 397	209,44	58 963	215,43	132,8	102,9

## 4 VALUE OF SERVICES DONE IN FORESTRY

	Value of services, thousand kuna		Indices <u>2021</u> <u>2020</u>
	2020	2021	
Total	341 609	375 837	110,0
Logging and drawing services	230 726	246 079	106,7
Arboriculture services	52 173	64 963	124,5
Services of maintenance and repairs in forestry	33 828	38 658	114,3
Other production services	24 882	26 137	105,0

## 5 VALUE OF SEEDS AND SOWING MATERIAL USED

	Value of seeds and sowing material used, thousand kuna		Indices 2021 2020
	2020	2021	
Total	35 232	36 808	104,5
Seed	2 872	2 175	75,1
Seedlings and rhizomes	32 360	34 651	107,1

## 6 VALUE OF FOREST PROTECTION AGENTS USED

	Quantity of forest protection agents used, thousand kuna		Indices 2021 2020
	2020	2021	
Total	3 891	2 327	59,8
Fungicides	2 170	1 442	66,5
Insecticides	486	246	50,6
Herbicides	524	464	88,5
Other agents	711	175	24,6

## 7 VALUE OF CONSUMED ENERGY AND FUEL

	Value of consumed energy and fuel, thousand kuna		Indices 2021 2020
	2020	2021	
Electricity	4 981	5 318	106,8
Fuel for heating (gas)	1 609	2 245	139,5
Motor fuel	72 204	82 981	114,9
Petrol	4 350	4 725	108,6
Diesel	67 854	78 256	115,3

## 8 DAMAGES IN FORESTRY

	Quantity of roundwood, '000 m <sup>3</sup>		Indices 2021 2020
	2020	2021	
Total damages	532	231	43,4
Damages caused by fire	134	8	6,0
Damages caused by pests	141	71	50,4
Damages caused by weather conditions	257	152	59,1

## NOTES ON METHODOLOGY

### Sources and methods of data collection

Data on forestry products and felled timber until 2013 were obtained by collection and processing of data on reporting units engaged in the forestry and timber felling activity as defined in the NKD 2007, section A Agriculture, Forestry and Fishing, division 02 Forestry and logging.

Since 2014, data related to forestry have been taken over from the Directorate for Forestry, Hunting and Wood Industry of the Ministry of Agriculture, as well as from the limited liability company Hrvatske šume as an administrative data source.

Data on production of forestry products have been harmonised since 2014 with the international *Joint Forest Sector Questionnaire* (JFSQ), which is submitted to Eurostat and other relevant institutions at the annual level.

Since 2014, data on products sold in forestry have been taken over at the quarterly level from the limited liability company Hrvatske šume as an administrative data source and at the annual level since 2015.

### Coverage and comparability

Reporting units referred to in the data are forest management offices of the limited liability company Hrvatske šume and of other legal entities classified into activities defined in section A Agriculture, forestry and fishing, division 02 Forestry and logging, as well as legal entities classified into other activities but engaged in the forestry, logging and related service activities.

Data have been generated in the form of databases prepared by the limited liability company Hrvatske šume and submitted to the Croatian Bureau of Statistics in the form adjusted for further processing.

### Definitions

**Forest** is, as defined in Article 5 of the Forests Act (NN, Nos 68/18, 115/18, 98/19, 32/20 and 145/20), land overgrown with forest trees and/or its shrubby forms, shrubs and ground vegetation on an area of 0.1 ha and more, where forest products are continuously produced, socially beneficial functions are realised and there are balanced relations between biocenosis and habitat. Forests also include forests in protected areas according to a special regulation; forest seed facilities of the seed source type (if it is an integral part of the forest complex) and seed stand; monuments of park architecture originating from natural forests; protection belts of trees with a surface of 0.1 ha and more and a width of 20 m and more; forest lanes up to 5 m wide; forest roads and light lanes near roads up to 5 m wide; routes of water supply, wastewater drainage (sewerage), oil pipelines, gas pipelines, electricity and other lines up to 5 m wide within forest complex.

According to Article 22 of the Forests Act (NN, Nos 68/18, 115/18, 98/19, 32/20 and 145/20), forests are divided by purpose as follows:

- **Production forests** serve for the production of wood and non-wood forestry products, providing that their socially beneficial functions are preserved and improved.
- **Protective forests** are primarily used for the protection of soil, water, settlements, establishments and other property, providing that their socially beneficial functions are preserved and improved. Protective forests are forests and forest lands within areas protected under nature protection regulations. They are divided into forests in which the economic use of natural resources is allowed and to forests in which the economic use of natural resources is prohibited.

**Special-purpose forests** are:

- 1) protected forests
- 2) urban forests
- 3) forest seed facilities
- 4) forests for scientific research
- 5) forests for the purpose of the defence of the Republic of Croatia
- 6) forests for the purpose prescribed by special regulations.

**Other forest land** encompasses non-overgrown non-production land (lanes, light lanes near roads, power-transmission lines, oil pipelines etc.) as well as non-overgrown production land (clearings, smooth rocky grounds, reed patches etc.).

**Arid land** encompasses forest roads of more than 5 meters width, water paths, channels, swamps, harsh karst, areas under construction establishments, gravel pits, stone pits etc.

**Logs** (of non-coniferous and coniferous wood) are parts of timber intended for further processing by sawing, sometimes by cutting and peeling, as they have good physical and chemical characteristics, so they are intended to be industrially processed. It includes logs for cutting and logs for veneer and peeling.

**Industrial roundwood** (non-coniferous and coniferous) includes all kinds of wood suitable for mechanical processing, such as sawlogs and veneer logs, mining timber, transmission-line and telephone-line pylons as well as other oval timber.

**Pulpwood** is round and chopped wood of conifers, beech and soft non-coniferous wood. It is used in the production of cellulose and artificial fibres.

**Fuel wood** (of non-coniferous and coniferous wood) is intended either to be used directly as fuel or for the production of charcoal. It is a kind of wood whose worming capacity is exploited. Therefore, their level of dryness, dimensions and the way how they are arranged are very important characteristics. According to the type of wood, there is a hard fuel wood (beech wood, hornbeam wood, Turkey oak wood and oak wood) and soft fuel wood (birch wood, poplar-wood, willow wood, alder wood).

**Other industrial roundwood** (wood in the rough) includes small technical wood suitable for the production of wooden props, poles, various laths and pillars for fences, handles for various tools and similar. They are made of stump flanges, sweet chestnut, ash-tree, cornelian cherry, sweet and sour cherry etc. They are chopped in winter.

## Abbreviations

Eurostat	Statistical Office of the European Communities
ha	hectare
m <sup>3</sup>	cubic metre
NKD 2007.	National Classification of Activities, 2007 version
NN	Narodne novine, official gazette of the Republic of Croatia
p/st	number of items (pieces/sticks)
'000	thousand

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