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of a forest: the economic, social and environmental functions.

At present, when there is an increasing focus on a circular economy, a green economy through which European states aim to fight against climate change by using low carbon footprint products that also manage to store carbon for a long time, the new challenges we are facing are forcing us to adapt as we go, to think on the long term and correct that which does not work in the short run.

The Romanian Forestry Association - ASFOR aims to advertise the use of wood products and bring awareness among the political class and the government with regard to the importance of wood as a renewable natural resource, its contribution to the national economy, but also the possibilities that this resource brings in terms of increasing the standard of living, especially in rural areas.

The forest and wood products should be at the center of public policies. Increasing the land area covered by forest species would naturally lead to an increase of the amount of carbon absorbed, while the use of wood in products that have a long life allows storing carbon long term.

The achievement of the green economy objectives should be supported through both forest security measures and measures for the protection and advertisement of nature parks and reserves. A very important focus must be placed on wood-related research and innovation. Currently in Romania, research regarding the exploitation, primary processing and industrialization of wood is not organized, being carried out in a disparate manner, mostly by universities specialized in the field.

We propose 10 measures for a revival of the forest economics, which would contribute to the revival of the national economy on an ecological basis, and allow us to achieve our carbon storage objectives, which are essential in fighting off climate change.

Ciprian-Dumitru Muscă, President

"When you enter a forest, before making any decision, you need to first establish what was in the past, what is in the present, and how the forest should look following the measures that would be applied".

Marin Drăcea. father of Romanian forestry



1

National Forestry Strategy 6

Measures encouraging the use of wood in construction works and daily activities

2

Measures for forest owners

7

Forest protection. Traceability

3

Increasing the forest management capacity 8

National Forestry Council

4

Sustainable wood crops

9

"Afforestation of degraded lands" National program

5

Strategic development investment fund 10

"Forests of special value" National program



National Forestry Strategy

An economy without a strategy is like the crew of a drifting ship: it sails in all directions without finding land.

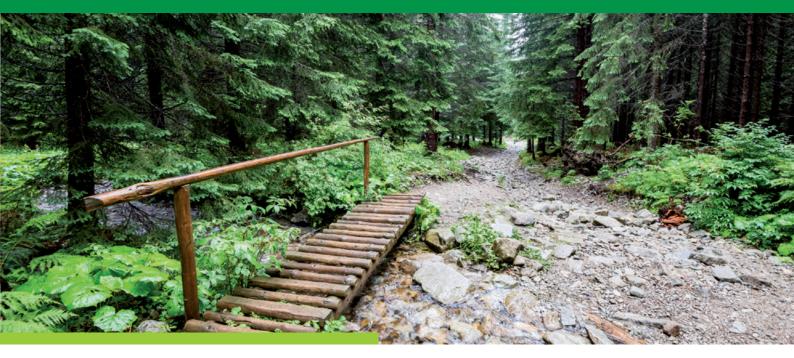
- · Reducing administrative burdens;
- Sustainable forest management;
- · Increasing forest surfaces;
- Investments in infrastructure and the accessibility of the forest fund;
- A free but fair market for wood capitalization;
- Developing and advertising the concept of bioeconomy;
- Support for the diversification of wood products;
- Support for using wood in construction works;
- Measures for protecting forests of special value for the environment;
- · Transparency and communication;
- Investments in research, development and technology transfer;
- Defining wood products as being vital;
- · National Forestry Council;
- Wood stock market.

Measures for forest owners

Strong owners equal well-managed forests.

- Compensating forest owners for their income losses in case of forests located in protected natural areas;
- · Increasing the amount of EU funds attracted;
- Measures for increasing the value of forest properties by paying additional environmental services;
- Drafting the national forestry cadastral plan, funded by the state budget or EU funding.





Increasing the forest management capacity

Well-equipped forest ranges - well-managed forests.

- Investment program for the acquisition of equipment for monitoring the integrity and health of forests (650 drones);
- Investment program for the acquisition of wood measuring equipment (electronic tree calipers, tele-measurement/ photomeasurement computer equipment);
- Investment program for the acquisition of video equipment for monitoring the forest area;
- RNP Romsilva increasing the efficiency of the manner in which the state forests are managed, thus becoming an example of good practice;
- Separating forest management and exploitation activities within the RNP, in order to reduce costs and losses;
- Program for upgrading the wood transport infrastructure and accessibility of the forest area. In Romania, the density of forest roads is of approx. 6 ml/ha. The minimum required for completely covering the forest area is of 10 ml/ha, far below the level of development of, for example, Germany, which has a network of forest roads of 60 ml/ha.

Sustainable wood crops

Economic operators specialized in the exploitation, sorting and primary processing of wood.

- Programs for supporting SMEs, which account for most of the logging and wood processing sector, for technology upgrades and activity diversification;
- Access to funding and supporting investments in warehouses and environmentally friendly equipment;
- Programs that help facilitate the participation of SMEs in research/innovation programs;
- Founding the bioeconomy research and development center "Institutul Lemnului";
- The first funicular program;
- Programs for acquiring ecological, environment friendly exploitation equipment;
- Developing technologies adequate for the specific landscape of our country - differentiated by the mountain, the hills and the meadow areas;
- Reimbursement of the excise duty on the fuels and lubricants used by forestry equipment and chainsaws in the activity of felling, harvesting, sorting and processing wood;
- Grouping wood exploitation works, including afforestation, in basins and entrusting their completion for periods of 4-5 years.



Investment fund for strategic development

The funding of projects is vital. The most important source of funding is European funds.

- Establishing the "National fund for forestry investments", by attracting the funds that feed the Environmental Fund, the amounts withheld through the natural resources tax, the amounts acquired through the capitalization of carbon certificates;
- Establishing the Agency for Payments and Interventions in Forestry, Logging and the Wood Industry;
- Investments in the wood chemical industry (cellulose, bioethanol, components for pharmaceuticals);
- Encouraging the use of the "Romanian wood" national brand for the quality certification of wood sustainably harvested in Romania;
- The wood stock market transparent wood capitalization system for obtaining a value corresponding to the importance and quality of the wood materials traded.

Measures encouraging the use of wood in construction works and daily activities

Wood is renewable, recyclable, ecological, and beneficial for human health. The use of the wood resource is vital for a green, ecological economy.

- The "Wooden constructions" program (public authorities will build passive wooden houses and will use at least 10% wood in all constructions funded by public funds);
- The "Wooden house" program individuals will be financially supported in building wooden constructions;
- The "Wooden constructions for a green economy" program - legal entities will be supported in building headquarters, technical spaces, commercial buildings made of wood and manufacturing wood goods;
- Reduction of the VAT rate for wood used in construction to 5%, in order to encourage the use of wood in constructions;
- Procurement program for high combustion efficiency heating installations;
- · Removing VAT for firewood.
- Supporting manufacturers of solid wood furniture.





Forest protection. Traceability

The health of an economy relies on a fair economic environment, free from illegal activities.

- The National Forest Guard structure coordinating the county forest guards for a better management of criminality in the Romanian forestry sector, with forest security attributions;
- · Forest security structure within MAI;
- Developing the SUMAL software and creating a transparent wood traceability chain, with a focus on the first marketing of the wood;
- Developing wood measurement systems;
- Dispatching the measured wood from the forest; Attesting entities dispatching wood; Giving up the wood APV assessment system, due to its great assessment errors, and the imprinted hammer system, due to the low security of the imprint; introducing an electronic system for wood measurement upon dispatch from the forest or warehouses;
- Equipping the control staff with modern technologies for monitoring the forest area;
- Encouraging the use of the "Due Diligence" system developed by independent organizations.

National Forestry Council

We did not invent the science and the art of managing forests, not the wood harvesting and processing!!!

- An independent, apolitical body that would:
- · continuously develop the national forestry strategy;
- oversee the implementation of the national forestry strategy;
- issue approvals related to the forestry legislation;
- join professional associations in supporting certain points of view in Parliament;
- maintain an active dialog with professional associations;
- regulate the manner in which commissions issuing certificates of practice in the forestry sector operate;
- organize the access to professions in the field of forestry at national level;
- Will oversee the development of intersectoral dialog and communication on the subject of forests;
- Will support the development of scientific research and specialized education;
- Will carry out programs for supporting forestry education.



The "Afforestation of degraded lands" national program

Forest crops have the capacity to reduce and improve land degradation processes.

- Identifying degraded lands;
- Transforming degraded lands into forests through afforestation;
- Granting grants by surface, similar to the ones in agriculture, for the entire period during which it fulfills a protection function or until the first wood harvest.

The "Forests of special value" national program

The ecological system is based on three elements - air, soil and water. Forests have a beneficial role on air, water and soil.

- The National Agency for forests of special value, which will be in charge of:
- The national registry of virgin forests;
- Unitary management of parks and protected natural areas and conservation of natural habitats:
- Identifying, establishing and managing landscape corridors, forest strips along communication channels;
- Identifying, establishing and managing forest corridors along river banks.

Benefits:

- Improving natural conditions. Restoring the balance of ecosystems affected over time by various factors. Preventing the desertification of southern Romania.
- Increasing the agricultural production. Protection of traffic routes.
- Protection of localities. Increasing biodiversity in the southern part of Romania.
- Increasing biomass production with improved provision of other ecosystem services in sustainable forest management.

THE FORESTS OF ROMANIA IN FIGURES





Financial perspective

According to a PWC Report regarding the forestry sector and the wood industry of Romania:

"the direct contribution of the wood industry to the formation of Romanian GDP has been relatively constant over the last decade (varying from 1,1% to 1,5%).

In this regard, in 2014 Romania was ranked 9th in the European Union (1,1% compared to the EU average of 0,4%). If we were to also take into account the indirect and induced effect on the economy, in Romania, forestry and wood processing have a 3,5% contribution to GDP." [...]

"The forestry and wood processing sectors bring 1.7 billion Euro to the state budget, when taking into account both the direct and indirect effects on the economy. Furthermore, there are 128,000 people directly employed in this sector, and another 186,000 people employed in related sectors".

Another analyze estimates a 8,6% contribution of the furniture industry and forestry economy to GDP. Thus, the furniture industry has a 2% contribution, primary processing and wood industrialization accounts for 1.6%, while forestry and logging bring a 5% contribution to the GDP.

The total turnover of forestry economic operators exceeds 6 billion Euro.

The export-import balance is positive, with 254 million Euro in 11 months in 2019.

GREEN DEAL. Opportunities for the forestry sector

As signatory party to many conventions on climate change (the Paris Agreement, the Kyoto Protocol 2, the 2030

climate and energy framework), Romania has undertaken numerous international commitments regarding the reduction of greenhouse gas emissions (GHG emissions).

The main guidelines for reducing the GHG inventory for the LULUCF sector - which includes the use of lands, changing the category of land use and forestry - with a focus on the measures corresponding to the forestry sector, are:

- extending the forest areas; in order to achieve these objectives, we need to extend the surface of forests with approx. 10.000 ha/year, and considering the fact that the average cost if approx. 8.000 Euro/ ha, it results in a fairly high cost;
- increasing energy efficiency in the use of firewood as an energy resource - low potential in the short term, requires major investment;
- for burning wood in traditional stoves, energy yields are around 40%; for burning wood in modern power plants with cogeneration, yields can reach 90%;
- the use of harvested wood for manufacturing wooden products for long-term use - MAJOR potential; wooden products - timber, boards, furniture, paper, wooden constructions - have the role of storing carbon for long periods.

Wood is a renewable resource, a natural and recyclable product.

THE FOREST AREA

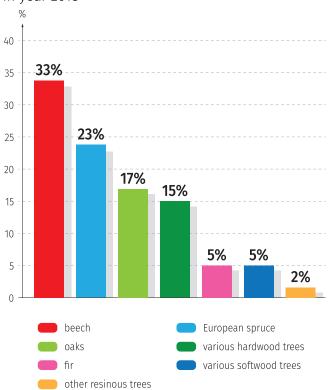
Romania's forest area accounts for 28% of the country's total surface

The forest area has continuously increased for the past 15 years. Thus, Romania has gained approx. 214500 ha.

According to the Forestry Code, the totality of forests, lands intended for afforestation, of those serving the needs of forest cultivation, production or administration, of ponds, riverbeds, and other forest areas, including the non-productive land, included in the forest agreements of January 1, 1990, with area amendments inclusively, according to the input/output operations legally performed, constitutes, regardless of the form of ownership, national forest area.

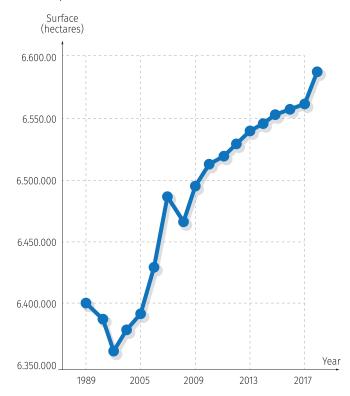
Forest areas,

by main species, in year 2018



Evolution of the Romanian forest surface

in the period 1989 - 2018



The structure of wood production is conditioned by the composition by species of forests

In Romania, softwood species cover 1.917 thousand ha (namely 29,9%), while hardwood species cover 4.501 thousand ha (namely 70,1%).

Individually, by tree species, beech has the widest surface, with 2.139 thousand ha, followed by spruce, with a surface of 1.480 thousand ha and oaks, with a surface of 1.060 thousand ha.

Romania enjoys a great diversity of tree species. This contributes to the stability of the stands, and also has a great economic importance, due to the diversification of wood products obtained.



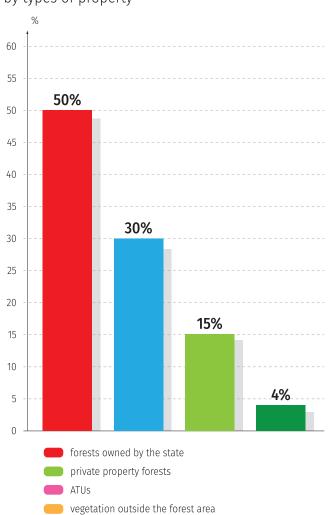
FOREST PROPERTY IN ROMANIA

In year 2018, public property accounted for 64,3% of the total national forest area, while the private property represented 35,7%, being mostly managed by private forestry structures (95,6%).

The surface of the privately owned forest area enjoys an increasing trend, to the detriment of the publicly owned area, due to the continuous process of forest retrocession.

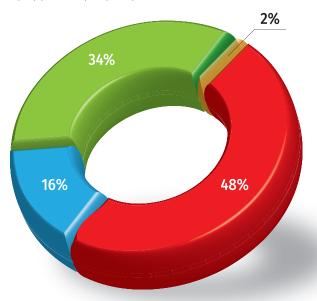
The volume of wood harvested,

by types of property



Forest area.

by types of property



state (public property)	48%
natural and legal entities	34%
ATU (public property)	16%
ATU (private property)	2%

About 50% (49,9%) of the volume of wood harvested in Romania comes from the state's public property, managed through the National Directorate of Forestry - Romsilva.

In Romania, forest management is ensured by

- · 467 forest ranges, out of which:
- 147 regime forest ranges;
- 313 state forest ranges;
- 6 INCDS bases;
- 1 range belonging to the RAPPS.

In year 2018, compared to year 2017, the volume of wood harvested from privately owned forests increased by 16,2%, the volume harvested from forests in public ownership belonging to administrative-territorial units, by 15,3%, the volume harvested from forests in the state's public ownership by 0,3%, while the volume harvested from the forest vegetation located on plots outside the forest area decreased by 10,7%.

WOOD HARVESTING

The annual volume of wood harvested is expressed through the possibility established by forest arrangements.

Romania harvests about 60% of its forest growth, as opposed to the European average of over 60%

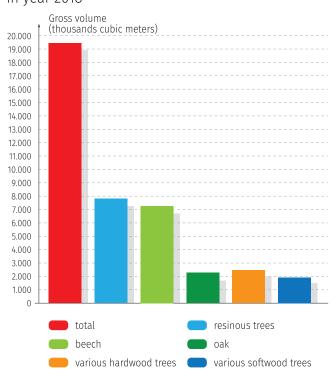
In year 2018, the total harvested volume was of 19.462 thousand cubic meters (gross volume) of wood, with 1.146 thousand cubic meters more than in the year of 2017.

We need to consider the fact that between years 2017-2020, about 3,5 million cubic meters came from accidental products (trees brought down by wind).

The wood is harvested by romanian companies.

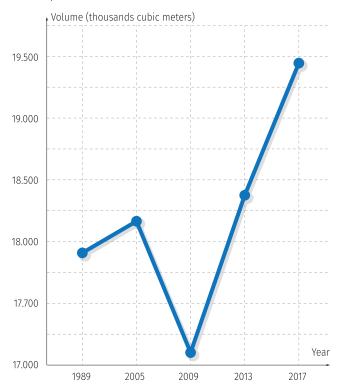
The volume of wood harvested,

by main species, in year 2018



The dynamics of wood harvesting

in the period 2014 - 2018



By forest species:

- resinous trees represent 36,6% of the total volume of the harvested wood mass
- · beech, 33,8%;
- oak, 10,5%;
- various species of hardwood trees (acacia, sycamore, ash, walnut etc.), 11,3%;
- various species of softwood trees (linden, willow, poplar etc.), 7,8%.

Thus, softwood species, especially spruce and fir, have a a share of less than a third of the total wood mass, whilehardwood species account for two thirds, of which beech has the largest share.



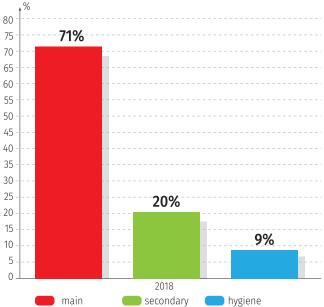
CATEGORIES OF HARVESTED PRODUCTS

The volume of wood mass harvested, by product categories, shows that 71% of the wood harvested in Romania comes from main products, 20% from secondary products, while 9%, from hygiene products.

The volume of wood mass harvested,

by product categories,





Main products

• wood harvested from a tree that has reached maturity or the age of exploitability, in compliance with specific technologies, referred to as treatments, with the purpose of ensuring their regeneration; over 90% of the stands subjected to such cuttings regenerate naturally, from the seed of the felled trees or the shoots or suckers produced by them;

Secondary products

• the wood resulting from carrying out maintenance, cleaning and thinning processes on young stands;

Hygiene products

• wood resulting from trees that dry out within the normal process of natural removal;

The total volume of main products provided by the forestry arrangements represents the capability of that forest.

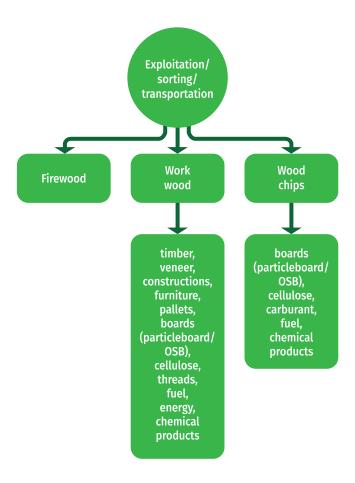
The annual capability the ratio between the capability and the number of years for which the forestry arrangement is applicable.

According to the Forestry code, it is the maximum volume of main products that can be harvested annually, except certain special cases, which require approval of the central public authority responsible for forestry.

The main product capability is determined through the growth indicative test.

Romania is the only European state using this method (a Romanian method, which has been applied for about 50 years).

In the other European states, the capability is established as being 70-85% of the current annual growth.



LOGGING

In Romania, 4.771 entities are authorized for performing logging activities - authorized natural persons, companies, regime forest ranges and state forest ranges.

The lowest attested capacity is of 2.500 cubic meters, while the highest attested capacity is of 185.000 cubic meters.

The number of forestry specialists - foremen, forestry technicians and engineers declared responsible within economic operators is of 5.200 individuals.

The vast majority of economic operators are small companies.

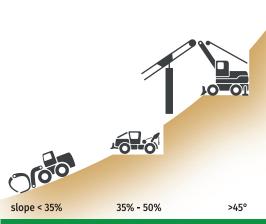
88% of the economic operators have operating capabilities of up to 12.000 cubic meters, which requires owning a tractor or TAF, and having a forestry specialist, such as a foreman or technician

Certified capacity (cubic meters)	Number of certified operators	Percentage
< 6.000	2.643	55,4%
6.001 - 12.000	1.526	32,7%
12.001 - 25.000	461	9,7%
25.001 - 50.000	92	1,9%
50.001 - 100.000	8	0,2%
> 100.001	5	0,1%
Total	4.771	100%



It is obvious that the wood industry requires upgrades and investments for the acquiring of modern environmentally friendly technologies.

In order to avoid the overloading or overturning of forestry equipment, norms recommend the following maximum inclinations of routes.



Land slope (degrees)	Surface (hectares)	Percentage
< 6°	850.805	12
6° - 15°	1.893.322	27
26° - 35°	1.536.396	22
36° - 45°	737.488	11
>45°	85.790	1

Logging, as a manufacturing process, is performed with the purpose of extracting from the forest area the gross wood necessary for the primary processing and wood industrialization or the population, under the conditions provided by the requirements for forestry interventions and protection of the natural environment.

Longing requires knowledge of machine systems, forest transports, forestry products, techniques of executing cultural operations and forestry treatments, forest management, geomorphology, ecology, forestry economy, labor protection, labor standardization, Fire Protection and Prevention etc.





TODAY, ROMANIA HAS THE UNIQUE CHANCE OF DEVELOPING A GREEN, ECOLOGICAL ECONOMY!!!

ASFOR supports the economic development of Romania - support for SMEs, support for the wood exploitation, primary processing and industrialization companies in Romania.

Romania requires measures for using wood as a renewable resource in relaunching the national economy on an ecological basis. For this purpose, it is mandatory to maintain balance between economic, social and environmental functions in the sustainable management of forests.

The surface of Romania's forests is slightly growing.

Romania has a huge growth potential, with about 2 millions of hectares of degraded land. Other important areas where Romania is deficient are shelterbelts and waterway protection corridors.

Over 40% of Romania's forests are covered by various degrees of protection and are part of protected areas. In this regard, Romania has a better situation than other European countries, but the framework for the management of these areas needs to be completed and developed.

Furthermore, secure funds are needed to ensure compensation for entities owning forests included in protected areas.

Providing the population with heat and providing the necessary wood is challenging, especially when it comes

to determining the real consumption of wood provided by forests. Due to the lack of energy alternatives, Romania needs an energy strategy that includes thermal energy.

Wood is harvested by Romanian companies, which require support in order to acquire the necessary equipment and reduce the cost of harvesting timber. The cost of harvesting timber is transferred to the cost of the final product, thus companies struggle to cope with competition from external markets. The purchasing of competitive wood harvesting equipment has an important impact on the quality of the harvesting process, which in turn has a lower impact on the environment.

Romania has one of the most restrictive systems when it comes to exercising the property right over forests, resulting in blocking access to the resource, especially to privately owned forests. Policies must be directed to facilitate the owner's access to the fruits of his property.

In the context of the Green Deal, Romania needs to promote local processing and the use of the wood resource in obtaining high value-added products that also have a long period of use, in order to ensure long-term carbon storage.

Wood is a renewable resource with a huge potential in the development of activities, job creation, obtaining income for the state, obtaining ecological products that are also much healthier for humans.

