

Forests

Extract from France's 2021 Environmental Performance Review



Forests

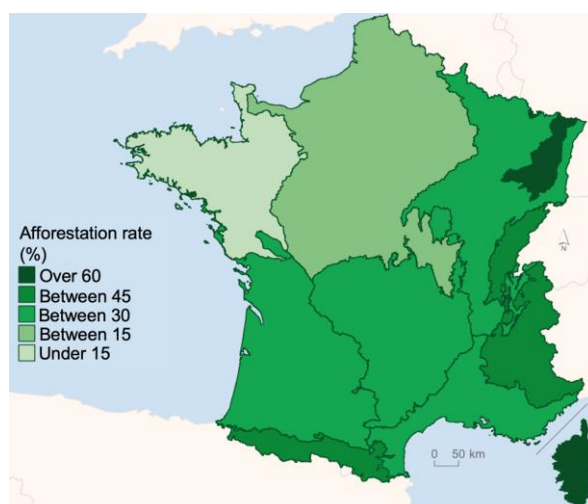
With nearly a third of Metropolitan France covered by woods and forests, France has the Europe's fourth highest forest cover after Sweden, Finland and Spain. France's forests are rich with diversified species (hardwoods and softwoods), pure and mixed stands, and different structures including regular and irregular forests and coppices, contributing to a balanced ecosystem. Apart from providing resources such as wood and mushrooms and recreational and cultural activities, the forest plays a key role in climate regulation, the water cycle, and soil preservation including its role as biodiversity reservoir, carbon sink and in erosion control.

THE FRENCH FOREST - A DEVELOPING DIVERSIFIED ECO-SYSTEM

Since the second half of the 19th century, the metropolitan forest area has grown steadily. It has increased by over 20% since 1985 to reach 17 million hectares (ha) in 2020, covering 31% of the metropolitan area. The increase in forested area is particularly marked in Corsica, in the Vosges mountains and in the Jura. (Map 1). Forest covers nearly 85% of Overseas France with 8.24 million hectares, 97.4% of which is in French Guiana.

Forests in Metropolitan France are mainly private (about 12.7 million ha) with state-owned forests covering 1.5 million ha and other public forests covering 2.8 million ha. With 190 species (3,250 species in Overseas France), it is divided into so-called "pure" stands with singles species (7.2 million ha) and mixed stands (7.5 million ha). The Landes forest, almost exclusively planted with maritime pines, differs from forests in north-eastern France and the Massif Central area, which have more diverse forests.

Map 1: Afforestation rate by major ecological region in 2017



Note: the 2017 average corresponds to the inventory campaigns from 2015 to 2019.

Scope: whole forest.

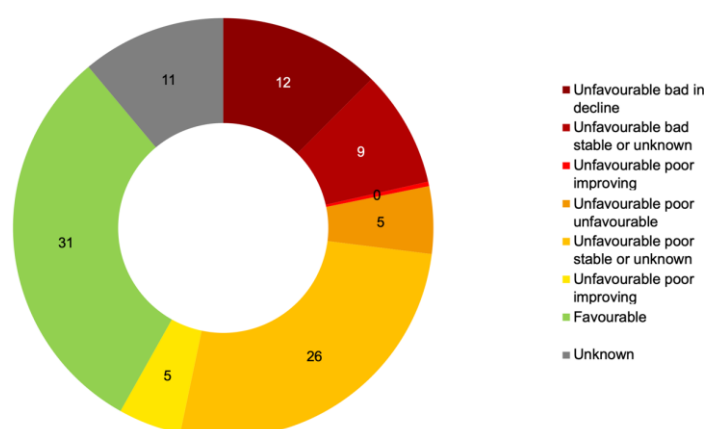
Source: IGN, national forest inventory, 2019. *Treatment:* SDES, 2021

Between 1985 and 2020, the volume of standing timber stock increased from 137 m³/ha to 174 m³/ha on average, reaching 2.8 billion m³ at the end of 2020. Hardwoods, mainly oak, accounted for 64% of the stock. The annual organic production of wood is about 88.8 million m³, or 5.6 m³/ha of which 59% is hardwood and 41% softwood. The Grand Est region is the highest with 7 m³/ha/year.

The French forest is home to many animal and plant species (72% of metropolitan flora), some of which are remarkable. Essential to forest biodiversity, standing dead wood (120 million m³) and soil (260 million m³) provide habitats for species with conservation challenges. Nearly one third of this dead wood (7.5 m³/ha) is found in standing trees, with the other two thirds on the ground (16 m³/ha). The forest is the ecosystem that suffers the least from human activity, yet many species of plants, mammals and birds are endangered. Of the 289 remarkable species

and habitats of forest ecosystems assessed by the Habitats-Fauna-Flora directive (2013-2018), only 31% had favourable conservation status (*Figure 1*).

Figure 1: Conservation status of remarkable species and habitats selected for the forest ecosystem
In %



Note: analysis based on 289 assessments (species and habitats) of the forest ecosystem.

Source: UMS PatriNat (AFB-CNRS-MNH), 3rd DHFF report, 2019. Treatment: UMS PatriNat; SDES

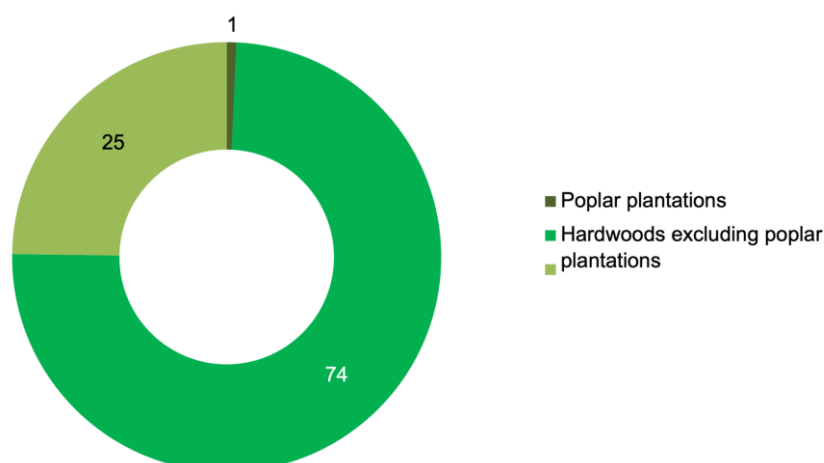
To cope with pressures, protective measures are applied to certain forests. In 2019, 1.8% of Metropolitan France forests was covered by a robust protection system¹ (national parks, national, regional and Corsican nature reserves, directed and integral biological reserves, official orders for the protection of biotopes). Also, over 40% of forests were included in the Natura 2000 scheme.

FOREST ECOSYSTEMS PROVIDE MANY SERVICES

Considered one of the world's largest carbon sinks, forests retain carbon in their biomass. As a result, they participate in the fight against climate change. It is estimated that 1.3 billion tonnes of carbon are stored in woody biomass (above and below ground) of french metropolitan production forests, three quarters of which is accumulated in hardwoods (*Figure 2*). Carbon stocks increased by an average of 14 million tonnes each year between 2007 and 2018, with stark fluctuations due to climatic events.

¹ As part of the National Strategy for the Creation of Protected Areas (SCAP).

Figure 2: Carbon stocks in woody biomass in 2018
In %



Scope: Metropolitan France.

Source: forest account - 2020-2021 agreement

The forest also plays a purifying role in the water cycle, filtering water through a complex root system combined with rich organic matter that reduces run-off. With over 700 million visits annually, forests are also popular for a range of recreational activities, particularly for green tourism.

The french economy also benefits from the forest's natural resources. In 2018, forestland was valued at €24.1 billion. The rate of timber harvesting (harvesting and losses) is about 55% of organic production less mortality. In 2018, the french forest industry counted nearly 185,000 direct FTE jobs which represents 0.7% of the working population. Production reached €49.4 billion and added value was €17.3 billion or 0.9% of GDP. Wood is also used as energy for heat, electricity and second-generation biofuel production. In 2020, wood energy accounted for 32.9% of France's renewable energy production.

Vulnerable ECOSYSTEMS THREATENED BY CLIMATIC AND BIOLOGICAL HAZARDS

Weather conditions such as drought, temperature and wind have strong influence on the forests' vulnerability to fire and its potential for spreading. Between 2007 and 2019, 3,600 recorded fires destroyed 11,400 ha of forest per year in Metropolitan France. In 2019, over 15,000 ha of forest ecosystems were destroyed. Storms, although infrequent, also cause a lot of damage. In 1999, 6% of the forest area (968,000 ha) was affected by the Lothar and Martin storms. Repeated droughts, in eastern France for example, also weaken forests, particularly coniferous forests which suffer from harmful beetles and insects and require early harvesting. Global warming and the intensification of trade also threatens french forests with increased disease and pests. This is the case in recent years in France when the Asian citrus long-horned beetle appeared, impacting oak and maple, and the pine wood nematode impacted conifers. Significant increases in wild ungulate populations (deer, roe deer, wild boars) also affects forest regeneration because they destroy shoots and buds of planted species.

FOR MORE INFORMATION

- [Chiffres clés de la filière forêt-bois - MAA](#)
- [La forêt en France: portrait-robot - IGN](#)
- [European Forest Accounts](#)
- [Les indicateurs de gestion durable de la forêt 2020 - IGN](#)