

ENVIRONMENTAL FUNCTIONS OF FORESTS



The environmental functions of forests are crucial for our wellbeing:

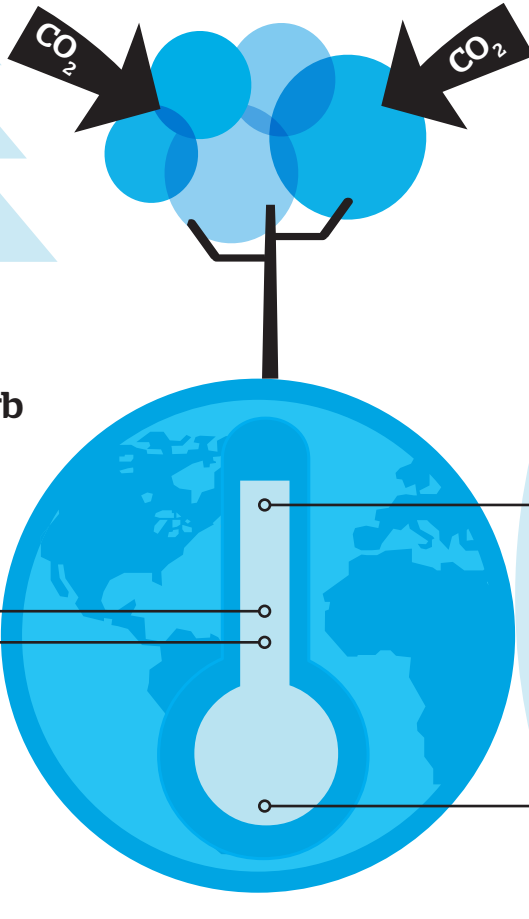
FORESTS FIGHT CLIMATE CHANGE



Forests are to reduce the effects of climate change, because:

As trees grow, they absorb large amounts of CO₂ from the atmosphere, incorporating it in their biomass.

Carbon is stored in structures with long life-spans, such as wooden buildings.



Wood in harvested wood products may act as a carbon sink, replacing more energy-demanding materials or industrial sectors.

They help to decrease greenhouse gas emissions: using wood-based biofuels reduces the need to use fossil fuels.

Between 2005 and 2010 the average annual absorption of carbon in forest biomass reached **870 million tons** in the European region.

That is equivalent to about **10%** of the greenhouse gas emissions from the European countries.

Carbon is not only stored in living trees: the stock of carbon held in dead organic matter and forest soils is also very important:

Proportions of forest carbon pools in Europe (%)

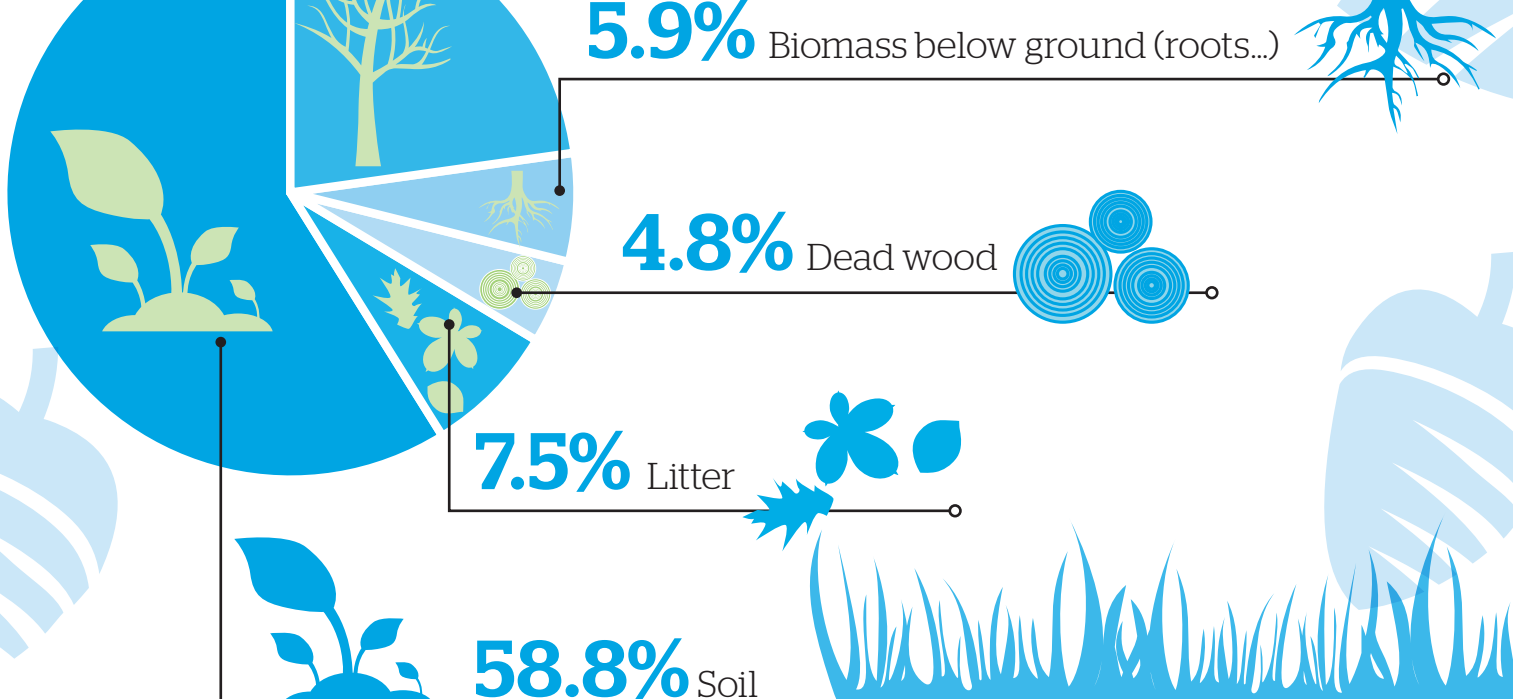
23.0% Biomass above ground (leaves, trunks, branches...)

5.9% Biomass below ground (roots...)

4.8% Dead wood

7.5% Litter

58.8% Soil



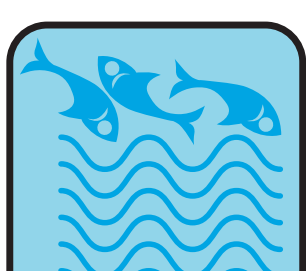
FORESTS PREVENT SOIL EROSION

When a forest is cleared, and its topsoil exposed to the effects of rain, wind and/or more intensive use, the soil often begins to erode.

The loss of soil makes it more difficult to restore the vegetation cover, and increases sedimentation in streams, rivers, lakes and the sea, affecting the species living in those ecosystems.

The role of forests in protecting soils is especially important in mountainous areas, with steep slopes, where it is easier for soil to be washed away, and areas with extreme climates.

FORESTS REGULATE THE HYDROLOGICAL CYCLE



They are like natural sponges: regulating surface and groundwater flows, and helping to preserve water resources, both in quality and quantity.

They are also crucial in the prevention and mitigation of water-related risks, such as floods, droughts, and landslides.

FORESTS PROVIDE UNIQUE HABITATS

Forests are home to thousands of animal and plant species.

Conservation of this biodiversity is key for the provision of food and raw materials, as well as medicines that are already known or yet to be discovered.



In Europe about **37 million hectares** of forests have been protected with the main objective of protecting biodiversity.

Forest Europe growing life
Ministerial Conference on the Protection of Forests in Europe

Source: FOREST EUROPE, UNECE and FAO 2011: State of Europe's Forests 2011. Status and Trends in Sustainable Forest Management in Europe. http://www.forest-europe.org/full_SoEF