Forest Biodiversity

Forest biodiversity refers to all forms of life found in forests, including trees, plants, animals, fungi and micro-organisms, and their roles in nature. The complexity and rich diversity of life found in forests provides many vital services to human beings.

Nonetheless, humans are destroying forest biodiversity at an alarming rate. The conversion of forests to agricultural land, overgrazing, unsustainable management, introduction of invasive alien species, infrastructure development, mining and oil exploitation, man-made fires, pollution and climate change are all having negative impacts on forest biodiversity. This loss and degradation of forests makes landscapes more fragile and diminishes the services provided by forests to humans.

People have come to realize that forests offer much more than just timber. Forests provide recreational opportunities and contribute to our health and well-being. Not only do they regulate local temperatures and protect drinking water supplies, they also act as carbon sinks and mitigate climate change. Forests also play important economic, social, and cultural roles in the lives of many people, especially those of indigenous communities.

Traditional medicine is often based on natural products and plants found in forests. By destroying forests, we may be destroying an undiscovered cure for diseases. Therefore, many countries are starting to restore forests, and to use existing forests more sustainably, and to conserve remaining primary forests, in line with the new Strategic Plan for Biodiversity for the period 2011–2020.
Fast Facts

- Tropical, temperate and boreal forests host the vast majority of the world’s terrestrial species.
- Some 80% of people in developing countries rely on traditional medicines—up to half of these medicinal substances originate from plants found mainly in tropical forests.
- Two thirds of all major cities in developing countries depend on surrounding forests for their supply of clean water.
- Over the last 8000 years about 45% of the Earth’s original forests has disappeared, most of which was cleared during the past century.
- Approximately 13 million hectares of the world’s forests are lost to deforestation each year, an area the size of Greece.
- Emissions resulting from deforestation may contribute up to 20% of annual global greenhouse gas emissions.
- Natural forests are among the best stores of carbon. The world’s forests contain more carbon than the entire atmosphere.
- Over three quarters of the world’s accessible fresh water comes from forested watersheds.
- More than six million hectares of primary tropical forests, which are especially rich in biodiversity, are lost each year.

Learn More

CBD Technical Series 41, 43 and 47 ➔ www.cbd.int/ts
UNEP Climate Change Science Compendium ➔ www.unep.org/compendium2009
UN Forum on Forests (UNFF) ➔ www.un.org/esa/forests
Food and Agriculture Organization of the UN (FAO) Forestry Department ➔ www.fao.org/forestry
Centre for International Forestry Research (CIFOR) ➔ www.cifor.cgiar.org
UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN REDD) ➔ www.un-redd.org
Montréal Process ➔ www.rinya.maff.go.jp/mpci
Forest Stewardship Council (FSC) ➔ www.fsc.org
WWF Ecological Footprint ➔ http://footprint.wwf.org.uk