

Forest biodiversity

Forests are among the most important repositories of terrestrial biological diversity. Together, tropical, temperate and boreal forests offer diverse sets of habitats for plants, animals and micro-organisms.

Forests provide a wide array of goods and services. Forest trees and shrubs play a vital role in the daily life of rural communities in many areas, as sources of timber, fuelwood, food, fodder, essential oils, gums, resins and latex, pharmaceuticals, shade, as contributors to soil and water conservation, and as repositories of aesthetic, ethical, cultural and religious values. Forest animals are a vital source of nutrition and income to many people, are used for medicinal purposes, have important cultural roles, and have vital roles in forest ecology, such as pollination, seed predation and dispersal, seed germination, herbivory, and predation on potential pest species.

Forest biological diversity is needed to allow species to continuously adapt to dynamically evolving environmental conditions, to maintain the potential for improvement to meet human needs and changing end-use requirements, and to support ecosystem functions.

FAO and forest biodiversity

The FAO Forestry Programme addresses one of the most important, complex and controversial issues of modern times - how to maximise the potential of forests, trees and related resources to improve people's economic, social and environmental conditions while ensuring that the resource is conserved to meet the needs of future generations. Efforts towards the sustainable management of forests and woodlands are key elements in forest biological diversity conservation policies and programmes.

At policy level, FAO collaborates with a number of international bodies and initiatives in the forestry agenda, including the recently established United Nations Forum on Forests (UNFF), and the Collaborative Partnership on Forests (CPF). Among the activities undertaken in follow-up to UNCED, FAO is the UN lead agency in regard to Chapters 11 (Combating Deforestation) and 13 (Mountains) of Agenda 21; and co-ordinates the activities of the International Year of Mountains (2002). A number of FAO Statutory and technical bodies focus on specific areas of forest biological diversity. This includes the Panel of Experts on Forest Gene Resources, which guides the work of FAO in the matter and complements the work of the Commission on Plant Genetic Resources for Food and Agriculture.

The recent FAO publication State of the World's Forests 2003 provides a nutshell summary of the latest figures on forest cover and change (a basic indicator of biological diversity), by country and region. Information is based on the findings of the Forest Resources Assessment (FRA) 2000. The FRA programme also includes a number of special studies and information on biological diversity assessment.

The sustainable use of forest products other than wood (such as mushrooms, fruits, aromatic plants, honey, fibres, bamboo, rattan, resins and gums) is addressed in the Promotion and Development of Non-Wood Forest Products (NWFP) Programme. The NWFP programme, in addition to the preparation of relevant case studies, methodologies and assessments, publishes the annual newsletter non-wood news and the monthly e-mail journal NWFP-Digest-L.

Assessing the environmental and social impacts of forest uses is increasingly recognised as a need, and a useful tool in support of sustainable forest management. Negative impacts on forest plant and animal resources and on ecological functions of the forests are caused by poorly planned and implemented extraction of timber and non-timber products, logging and transport roads, construction of facilities for logging camps or for recreational activities in the

forests, and by waste accumulation. Direct and indirect impacts on human health, and on cultural and social foundations also occur in an around areas of active forest utilization. Issues and tools related to environmental assessment of forest uses are presented in the [Environment and Forest utilization](#) webpage.

For more information on FAO's activities in relation to forest biodiversity, visit the [FAO's Forestry website](#).

Selected documents

[Biodiversity and the Ecosystem Approach in Agriculture, Forestry and Fisheries](#)
Satellite event on the occasion of the Ninth Regular Session of the Commission on Genetic Resources for Food and Agriculture (2003)

[State of the World's Forest](#) (2003)

[Criteria and Indicators for Assessing the Sustainability of Forest Management: Conservation of Biological Diversity and Genetic Variation](#) (2002)

[Status and Trends in Indicators of Forest Genetic Diversity](#) (2002)

[Criteria and Indicators for Sustainable Forest Management: A Compendium](#) (2001)

[Global Forest Resources Assessment 2000 \(FRA 2000\): Main Report](#) (2000)

[Non-Wood News: Commercial Use of Biodiversity: Ethical and Legal Aspects](#) (2000)

[Forest inventories and biodiversity. Unasyiva - No. 196](#) (1999)

[More than wood - Special options on multiple use of forests](#) (1999)

[Domestication and Commercialization of Non-Timber Forest Products in Agroforestry Systems: Indigenous Knowledge and Ethnobotany](#) (1998)

[The FAO Model code of forest harvesting practices](#) (1996)

[Tropical Forest Resources and Biodiversity: The Risks of Forest Loss and Degradation. Unasyiva - No. 181](#) (1995)

Related links

[CIFOR Centre for International Forestry Research](#)

[EUFORGEN European Forest Genetic Resources Programme](#)

[Dendrome: Forest Tree Genome Database](#)

[ICRAF International Centre for Research in Agroforestry](#)

[ITTO The International Tropical Timber Organisation](#)

[IUFRO The International Union of Forestry Research Organisations](#)

[UNFF United Nations Forum on Forests](#)