

PRESS RELEASE

Forest Biodiversity provides an “Insurance Policy” against Climate Change

Montreal, 26 October 2009 –Maintaining and restoring biodiversity in forests promotes their resilience to human-induced pressures and is therefore an essential “insurance policy” to safeguard against climate-change impacts, according to a study released yesterday by the Convention on Biological Diversity (CBD).

Because primary forests are generally more resilient than modified natural forests or plantations, it is crucial that policies and measures that promote their protection yield both biodiversity conservation and climate change mitigation benefits, in addition to a full array of ecosystem services.

Those are among the findings of the CBD Technical Series No. 43 on *Forest Resilience, Biodiversity and Climate Change*, launched on the margins of the XIII^o World Forestry Congress in Buenos Aires, Argentina. The study, a synthesis of the relationship between biodiversity, resilience and stability in forest ecosystems, provides compelling rationale for the conservation and sustainable use of biodiversity for any forest-based climate change mitigation and adaptation efforts.

“Diversity is a key factor for human well-being: diversity of natural resources and of cultural practices, linked to biodiversity, increases resilience,” said Robert Nasi, Programme Director, Environmental Services and Sustainable Use of Forests with the Center for International Forestry Research in Bogor, Indonesia.

Much of the attention in the present debate on climate change has focused on the carbon-storage capacity of forests and their role in mitigation. The international climate-change negotiations now recognize the value of ecosystem-based adaptation, but the study suggests that, in reality, ecosystem-based mitigation and adaptation are two sides of the same coin. Thus, protecting primary forests and restoring managed or degraded forest ecosystems are key to reducing anthropogenic emissions and helping society adapt to the impacts of climate change. It further stresses that the resilience inherent to intact forest ecosystems—fully functional units of plants, animals, micro-organisms, and fungi—provide the best insurance against climate change, and help ensure that forests meet the needs of present and future generations.

According to the Intergovernmental Panel on Climate Change (IPCC) and the Food and Agriculture Organization of the United Nations (FAO), forests are major reservoirs of terrestrial biodiversity and contain about 50 per cent of the world’s terrestrial biomass carbon stocks. The IPCC further states that emissions from deforestation and degradation remain a significant (about 18-20%) source of annual greenhouse-gas emissions into the atmosphere. Hence, the conservation, appropriate management and restoration of forests will be a significant factor in climate-change mitigation.

The carbon pool is largest in old primary forests, especially in the wet tropics, which are stable forest systems with high resilience. Therefore, reducing emissions from deforestation and forest degradation (REDD) activities should take biodiversity conservation into consideration, as this helps maintain forest ecosystem resilience and the long-term stability of the carbon pool.

The resilience of a forest ecosystem in the face of changing environmental conditions is determined by its biological and ecological resources. Of particular importance are: diversity of species, including micro-organisms; the genetic variability within species; and the regional pool of species and ecosystems. Resilience is also influenced by the size of forest ecosystems—the larger and less fragmented, the better—and by the condition and character of the surrounding landscape.

If pushed past an ecological “tipping point”, forest ecosystems could transform into a different forest type. In extreme cases, a new non-forest ecosystem state could emerge, for example from forest to savannah. The new ecosystem state would invariably be poorer in terms of both biological diversity and in its ability to deliver ecosystem goods and services.

Because of their reduced biodiversity, plantations and modified natural forests face greater disturbances and risks for large-scale losses due to climate change than primary forests. The study says that risks can be partly mitigated by following a number of forest-management recommendations, which include:

- Maintaining genetic diversity in forests by avoiding practices that select only certain trees for harvesting;
- Reducing non-natural competition by controlling invasive species
- Reducing reliance on non-native tree crop species for plantation, afforestation or reforestation projects; and
- Ensuring national and regional networks of protected areas, incorporating these networks into national and regional planning for large-scale landscape connectivity.

Ahmed Djoghlaif, Executive Secretary of the Convention said, “The 400 scientific papers we analysed for this report arrived at the same conclusion: biodiversity is essential for resilience and ecological stability. These findings have vast implications for the global and national policy agenda, both for the conservation and sustainable use of forests, as well as for climate change mitigation and adaptation.”

CBD Technical Series No.43 is available at www.cbd.int/doc/publications/cbd-ts-43-en.pdf

The Convention on Biological Diversity (CBD)

Opened for signature at the Earth Summit in Rio de Janeiro in 1992, the Convention on Biological Diversity is an international treaty for the conservation and sustainable use of biodiversity and the equitable sharing of the benefits from utilization of genetic resources. With 192 Parties, the CBD has near-universal participation among countries committed to preserving life on Earth. The CBD seeks to address all threats to biodiversity and ecosystem services, including threats from climate change, through scientific assessments, the development of tools, incentives and processes, the transfer of technologies and good practices and the full and active involvement of relevant stakeholders including indigenous and local communities, youth, NGOs, women and the business community. The headquarters of the Secretariat of the Convention are located in Montreal.

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