



Tropical Forests and Climate Change

Statement by the International Expert Meeting on Addressing Climate Change through Sustainable Management of Tropical Forests¹

Key messages

- **Forest restoration and sustainable forest management are important measures for mitigating climate change. They also have many additional benefits, including biodiversity conservation, the provision of other ecosystem services, and the alleviation of poverty.**
- **Tropical forests and forest-dependent people are highly vulnerable to climate change. Measures to help the forests sector adapt to climate change are urgently required.**
- **Sustainable forest management can help increase the resilience of tropical forest ecosystems and forest-dependent people in the face of climate change.**
- **Bioenergy production from forestry and the substitution of fossil-fuel-intensive products by wood products could be important strategies for mitigating climate change.**
- **ITTO can play an important role in encouraging and assisting member countries to develop and implement forest-based climate change mitigation and adaptation initiatives.**

ITTO is a UN-established inter-governmental agency tasked with promoting the conservation and sustainable management, use and trade of tropical forest resources. On 30 April–2 May 2008, it convened an expert meeting to explore the role of sustainable tropical forest management in climate change mitigation and adaptation.

Participants at the meeting explored existing and possible future schemes for reduced emissions from deforestation and forest degradation (REDD), reviewed other mitigation options in the forest sector, and examined the need to assist the forest sector to adapt to climate change.

The meeting listened to the views of non-government stakeholders through representatives of ITTO's Trade Advisory Group and Civil Society Advisory Group and heard presentations from the World Bank's Forest Carbon Partnership Facility, the Forest Department of the Food and Agriculture Organization of the United Nations, the Center for International Forestry Research, the World Agroforestry Centre, a number of ITTO member countries, and experts in the field of forests and climate change. It made the following conclusions and recommendations.

¹ *International Expert Meeting on Addressing Climate Change Through Sustainable Management of Tropical Forests, held in Yokohama, Japan, on 30 April–2 May 2008, organized by ITTO with the support of the governments of Japan, Switzerland and Norway and the City of Yokohama.*



Conclusions

Mitigation

Land use change, including deforestation, mostly in the tropics, account for about 20% of global greenhouse gas (GHG) emissions. In most ITTO producer member countries, land use change constitutes by far the main source of GHG emissions.

Forests and woodlands will play many roles in climate change mitigation through emission reductions, carbon sequestration, and carbon substitution.

In many places REDD will be a necessary strategy for reducing emissions, but it will need to be complemented by other measures. Forest restoration can help remove GHGs from the atmosphere (carbon sequestration) and also has many co-benefits, including poverty alleviation, biodiversity conservation and the provision of other ecosystem services. The increased use of wood-based biofuels and wood products are options for carbon substitution.

A task of the international community is to help understand and finance the cost of reducing GHG emissions and enhancing carbon sinks through sustainable forest management. This will not only lead to good forest practice but also improve local livelihoods.

To reduce deforestation, the value of forests to landowners and forest users must be at least as great as alternative land uses. Incentives for REDD, therefore, must benefit the agents directly responsible for deforestation and forest degradation and act as an incentive for reducing this destructive behaviour. In many places, identifying and involving these responsible agents are major challenges. Any potential REDD approaches must avoid perverse outcomes, such as encouraging poor forest practice.

Countries could identify hotspots – those forest areas most under deforestation pressure – for targeted REDD activities. Demonstration activities are already testing this approach.

Sustainable forest management is not yet defined in the United Nations Framework Convention on Climate Change (UNFCCC). ITTO has a strong understanding of the principles of sustainable forest management, as well as experience in implementing it in the tropics.

To date, the Clean Development Mechanism (CDM) has not sufficiently encouraged afforestation and reforestation (as defined by the Marrakesh Accords of the Kyoto Protocol). Unless procedures are improved and transaction costs reduced, it is unlikely that the A/R CDM will contribute substantially to the enhancement of carbon sinks.

Many tropical countries have launched programs to increase the role of forests in mitigating climate change. In Brazil, the Amazon Fund is to be established with the aim of promoting effective reductions of GHG emissions from deforestation in the Amazon. In Mexico, an approach has been developed to commit, as permanent carbon sinks, those forests that are under the greatest threat of deforestation. In Africa, the Congo Basin countries aim to place at least 20% of the Basin's production forests under management plans by 2010 and have at least 7 million hectares certified as sustainably managed. While this latter initiative is not designed specifically to address climate change, it will reduce both



deforestation and the vulnerability of the region's ecosystems and people to climate change and will therefore contribute to mitigation and adaptation. These and other national and regional initiatives are worthy of international support aimed at mitigating climate change.

Robust and credible strategies to mitigate climate change through sustainable forest management should recognize the historical forest management role of Indigenous and local communities and fully involve them in decision-making and benefit-sharing.

Studies are urgently needed on the implications of climate change for sustainable forest management in the tropics, on the role of tropical forests in mitigating climate change, and on national and international approaches to meeting the costs associated with managing tropical forests in the context of climate change.

The ability of countries to monitor carbon stocks in forests is highly variable. Tools are increasingly available to assist in this task but, in many countries, effective monitoring will require significant work and capacity building to establish reliable reference data for measuring deforestation and forest degradation.

Wood is a carbon-neutral material and a renewable resource. Bioenergy production from forestry and the substitution of fossil-fuel-intensive products by wood products could be important approaches to mitigating climate change. Fuels produced from wood can have higher energy efficiency than other bioenergy sources, but production costs must be reduced and the environmental and socioeconomic impacts taken into account.

Wood is often more carbon-friendly than other commonly used building materials such as cement, plastic and steel. In certain cases, replacing one cubic metre of concrete or red brick with the same volume of timber can save around 1 ton of carbon dioxide.

In many tropical countries, the traditional use of wood as fuel is still common and the industrial use of wood for biofuel production is also likely to increase dramatically in coming years. More information is needed on the ramifications of wood-based biofuels for the forest sector, the availability of land, and climate change.

Adaptation

Tropical forest ecosystems face many potential threats due to climate change, including changed precipitation regimes and the increased incidence and severity of pests, diseases, fire and storms. They might also be vulnerable to increased immigration by and pressure from environmental refugees. However, little information is available on the nature of these threats.

The impacts of climate change on forests could exacerbate poverty and the prevalence of human disease while reducing the availability of forest-based traditional medicines and other products and services important for human wellbeing. Forest-dependent people will be particularly affected.

Low-lying coastal forests, particularly mangroves, are likely to be affected by predicted sea level rises due to climate change, with huge implications for important ecosystem services and human health. More information on possible adaptation measures in these forests is urgently required.



Sustainable forest management provides a basis for adaptation to climate change in forests by increasing resilience, but there will be an ongoing need to re-assess forest practices. Many existing forest management tools do not explicitly account for the possible impacts of climate change.

To minimize the impacts of climate change on forest ecosystems and forest-dependent people, countries will require flexible and equitable decision-making processes at local and national levels that allow for rapid and adaptable forest management responses.

Funding for forest-based adaptation is essential, but access by the forest sector to existing adaptation funds needs to be clarified and improved. More efforts are required to convince the international community of the importance of adapting the forest sector to climate change.

Recommendations

The meeting generated recommendations for ITTO, national governments, and members of the Collaborative Partnership on Forests (CPF) and other relevant organizations.

Recommendations for ITTO

Development studies	
1)	Study the implications of climate change for sustainable forest management in the tropics.
2)	Develop guidelines for climate change mitigation and adaptation options in tropical forests and for accounting for carbon in forest management plans and ITTO projects, and update the ITTO Criteria and Indicators of Sustainable Forest Management in Tropical Forests to reflect the current state of knowledge on climate change.
3)	Assist in the improvement of modalities and procedures in the A/R CDM and CDM institutions.
4)	Analyse the possibility of introducing the concept of forest restoration to the post-2012 climate change negotiation process within the UNFCCC.
5)	Study methods for accounting for the permanence of carbon in harvested tropical wood products.
6)	Commission studies on the substitution potential of wood products and their role in climate change mitigation.
7)	Analyse approaches to financing tropical forest-based initiatives to climate change mitigation and adaptation.

Capacity building	
8)	Help member countries to build forest-sector capacity to mitigate and adapt to climate change, including by: <ul style="list-style-type: none">• supporting regional collaboration on the role of tropical forests in climate change mitigation and adaptation• encouraging national consultation processes on mitigation and adaptation in the forest sector• encouraging the development of policy and institutional frameworks that support the role of tropical forests in climate change mitigation and adaptation



- supporting financial contributions to REDD and the enhancement of carbon sinks
 - supporting forestry officials in member countries to participate in climate change negotiations
- 9) Support member countries in the assessment and monitoring of forest carbon stocks and forest-based carbon emissions within their national forest inventory systems and facilitate the exchange of good practices and test-results of new methodologies and technologies.
 - 10) Support member countries in ensuring that forest policy frameworks include climate change considerations, and that tropical forest issues are taken into account in national action plans for adaptation
 - 11) Encourage and assist member countries to develop proposals for pilot projects on REDD and other forest mitigation options and for increasing the resilience of tropical forests to climate change, and consider providing finance for such projects.
 - 12) Support local people to participate in and benefit from initiatives in forest-based climate change mitigation and adaptation. In this regard, work with relevant parties, including other members of the Collaborative Partnership on Forests, to ensure that forest-dependent people benefit from REDD, the enhancement of carbon sinks in forests and payments for ecosystem services.
 - 13) Continue to promote community-based forest enterprises as a flexible strategy for assisting forest-dependent people to mitigate and adapt to climate change.
 - 14) Contribute to the development of policies and guidelines to promote sustainable wood-based biofuels in a way that does not jeopardize food security and is consistent with the principles of sustainable forest management.
 - 15) In partnership with the private sector and other stakeholders, encourage and assist governments to promote the use of carbon-friendly wood products in construction.
 - 16) Ensure that forest-based approaches to climate change mitigation and adaptation fully consider the need for good governance, equity, the involvement of civil society and local communities, respect for human rights, and poverty reduction.

Knowledge management and information sharing

- 17) Provide information and guidance on the management of tropical forest types particularly vulnerable to climate change.
- 18) Conduct a global review of best practice in rights-based approaches to REDD and forest-based carbon enhancement in the tropics.
- 19) Work with other members of the Collaborative Partnership on Forests and other relevant parties to ensure that modalities for REDD and the enhancement of carbon sinks are user-friendly.
- 20) Actively provide the UNFCCC process with information on tropical forests and the role of sustainable forest management in climate change mitigation and adaptation.

Recommendations for national governments

- 21) Increase the capacity of personnel working on forest-based climate change at the national and sub-national levels.



- 22) Increase awareness among all stakeholders, including policy-makers, of the importance of forest-based mitigation and adaptation options in national responses to climate change.
- 23) Where lacking or insufficient, develop land-use mapping and planning, inventory and monitoring to assist adaptive land management.
- 24) Undertake demonstration activities to develop and understand REDD and the enhancement of carbon sinks in the context of climate change, including through ITTO support.
- 25) Promote community-based forest enterprises as a flexible strategy for assisting local people to adapt to climate change.
- 26) Use participatory consultation processes to incorporate forests more fully in national development agendas and in approaches to the Millennium Development Goals.
- 27) Support the involvement of civil society, communities and other relevant stakeholders in national policies and actions on forest-based climate change mitigation and adaptation.
- 28) Ensure that forest-based approaches to climate change mitigation and adaptation fully consider the need for good governance, equity, the involvement of civil society and local communities, respect for human rights, and poverty reduction.
- 29) Develop public awareness programmes on the important and dynamic relationship between forests and climate change.
- 30) Study the feasibility of wood-based biofuels in climate change mitigation compared to other energy alternatives.
- 31) Where appropriate, encourage the development of community-based wood energy programmes.
- 32) Develop policies and guidelines to promote sustainable wood-based biofuels in a way that does not jeopardize food security and is consistent with the principles of sustainable forest management.

Recommendations for members of the Collaborative Partnership on Forests and other relevant organizations

- 33) Generate information on the relationship between forests and climate change and support national forest inventories and design monitoring methods to assist in generating such information.
- 34) Strengthen research on the links between climate change, forests and human wellbeing.
- 35) Provide information and guidelines on the management of forest types that are especially vulnerable to climate change.
- 36) Develop and test options for adapting the forest sector to climate change.
- 37) Help build capacity among forestry officials in member countries to increase their awareness of and participation in climate change negotiations.
- 38) Collaborate more strongly on assisting members to mitigate and adapt to climate change.
- 39) Raise awareness of the role of forests in climate change mitigation and adaptation.
- 40) 40) Facilitate free access to remote sensing for monitoring the role of forests in climate change mitigation and adaptation.