

Strategic framework *for* forests *and* climate change

A proposal by the *Collaborative Partnership on Forests*
for a coordinated forest-sector response to climate change

executive summary

The Collaborative Partnership on Forests (CPF) has prepared this document to support the United Nations Framework Convention on Climate Change (UNFCCC) process, particularly the Bali Action Plan, as well as the Non-Legally Binding Instrument on All Types of Forests of the United Nations Forum on Forests and other agreements, and in response to the need for concerted action on forests and climate change. It lays the groundwork for a coordinated response from the forest sector to climate change, notably through the widespread adoption of sustainable forest management and its integration into broader development strategies.

The Collaborative Partnership on Forests

The CPF is a voluntary arrangement among 14 international organizations and secretariats with substantial programmes on forests. CPF members cover practically all disciplines related to the forests and climate change interface, emphasizing practical actions on the ground and reportable outcomes. The CPF is part of an international arrangement on forests, the objectives of which are to promote the management, conservation and sustainable development of all types of forests and to strengthen long-term political commitment to this end.

CPF members are:

The Center for International Forestry Research (CIFOR), the Food and Agriculture Organization of the United Nations (FAO), the Global Environment Facility (GEF) Secretariat, the International Tropical Timber Organization (ITTO), the International Union for Conservation of Nature (IUCN), the International Union of Forest Research Organizations (IUFRO), the Convention on Biological Diversity (CBD) Secretariat, the United Nations Convention to Combat Desertification (UNCCD) Secretariat, the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), the United Nations Forum on Forests (UNFF) Secretariat, the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat, the World Agroforestry Centre (ICRAF), and the World Bank.

Forests cover nearly one-third of the earth's land surface, harbour three-quarters of its terrestrial biodiversity and account for almost half its terrestrial carbon pool. Deforestation, forest degradation and other changes in forests contribute an estimated 17.4% of global greenhouse gas emissions.

According to FAO estimates, the total forest area continues to decrease but the rate of net loss is slowing. In the period 2000–05, 13 million hectares of forest were deforested, on average, each year. In 2000–05, 5.7 million hectares were added annually to the forest estate, giving a net annual forest loss of 7.3 million hectares, which was a lower rate than during the period 1990–2000. The estimated average global rate of forest carbon depletion is 1.6 gigatonnes per year, which is about 0.25% of total forest carbon. Tree-planting in agricultural landscapes is rising and efforts are under way to provide estimates of tree cover in such systems.

Deforestation and forest degradation have direct and indirect causes. The main direct cause is the expansion of agriculture. Indirect causes include policies that subsidize non-forest land use, as well as poverty, poor governance, and high prices for agricultural commodities.

Forests can contribute to the mitigation of climate change through carbon sequestration, carbon substitution, and carbon conservation. The extent to which they do so is a function of their management and the effectiveness of policies at the local, national and global levels.

Forests are much more than pools of carbon: they house a large part of the world's biological wealth, perform an important role in the provision of water and other ecosystem services, sustain many Indigenous cultures, and support the livelihoods of hundreds of millions of people. Therefore, comprehensive and integrated sustainable development approaches are needed to combat deforestation and forest degradation and to expand the role of forests as carbon sinks.

Forest-based approaches can make a substantial contribution to climate change mitigation. They are not, however, a panacea for climate change and should be pursued simultaneously with other measures, including a shift towards low-carbon energy production and measures to assist the forest sector to adapt to climate change.

Message 1: Sustainable forest management provides an effective framework for forest-based climate change mitigation and adaptation

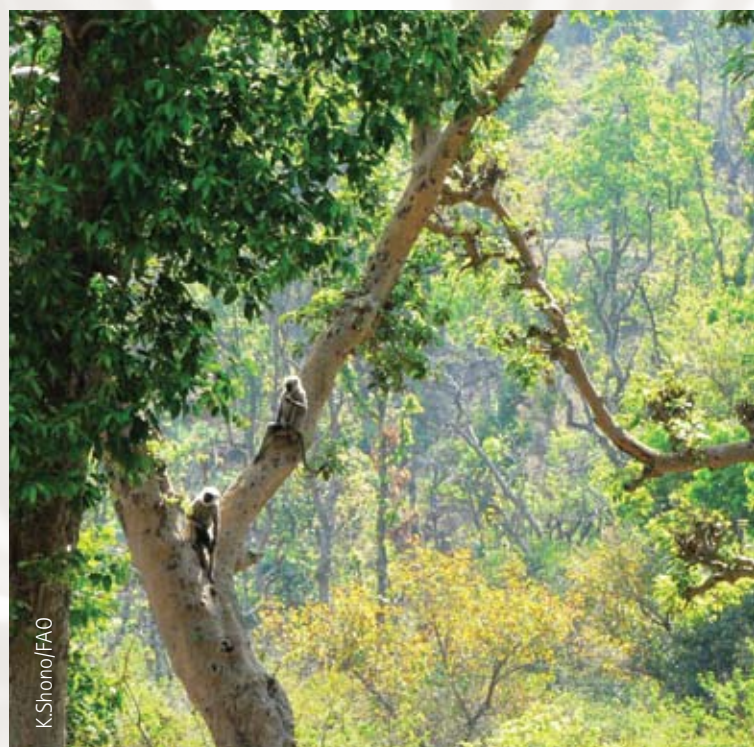
Sustainable forest management (SFM) provides a flexible, robust, credible and well-tested framework for simultaneously reducing carbon emissions, sequestering carbon, and enhancing adaptation to climate change. At the same time it can help supply environmentally friendly forest products, protect biodiversity, secure freshwater supplies, and provide other essential ecosystem services.

SFM encompasses seven thematic elements: 1) extent of forest resources; 2) biological diversity; 3) forest health and vitality; 4) productive functions of forests; 5) protective functions of forests; 6) socioeconomic functions; and 7) the legal, policy and institutional framework. It can be applied to forests in which wood production takes place, including planted forests, as well as to protected forests and to degraded forests in need of restoration.

Protected forest areas increase the resilience of ecosystems and landscapes to climate change and can provide a 'safety net' for climate change adaptation through their genetic resources and ecosystem services. Inadequate funding for the management of protected areas, however, poses a significant threat to climate change mitigation and adaptation and needs to be addressed.

Wood is a renewable resource and, when obtained from sustainably managed forests, an efficient material for storing carbon. Although wood-harvesting temporarily reduces carbon storage in the forest, a large part of the harvested carbon can be stored in wood products, potentially for many decades. When wood is used in long-term products such as housing and furniture, the reduction in greenhouse gas emissions is substantial compared to other, more energy-intensive and carbon-intensive substitutes such as concrete, steel, aluminium and plastics.

Sustainably managed forests are a valuable, renewable and carbon-neutral source of biomass for energy. Compared to other renewables such as solar, hydro and wind, wood-based bioenergy plantations require relatively little capital or technological development and could be an especially efficient land use on abandoned agricultural land and on soils too poor to produce annual crops.



Under SFM, harvested trees are replaced by others through regeneration, replanting or other silvicultural measures; many forests have been managed in this way for centuries without measurable declines in condition or productivity. Carbon lost during harvesting is eventually restored through new growth. Managed unsustainably, however, forests can lose carbon stock and productivity.

Forest plantations, which supply over 60% of industrial roundwood, are already important carbon sinks and pools and their role in climate change mitigation is likely to increase in importance.

Compared to other forest biomes, arid and semi-arid forests have low carbon values. Such forests can, however, act as buffers between agricultural lands and denser forests and thereby play an important role in carbon conservation. In some cases, semi-arid lands might also be suitable candidates for forest-based mitigation schemes.

Message 2: Forest-based climate change mitigation and adaptation measures should proceed concurrently

Implicit in SFM is an adaptive approach, which will help ensure that forest management changes to suit changing conditions. Measures that might assist forest ecosystems to adapt to climate change include the conservation of genetic variation, reduced impact logging, increasing the size and connectedness of buffer zones, and policies that ensure effective management responses to ecological change.

Under certain circumstances, climate change mitigation might take precedence over adaptation, especially in the short term. In forests, however, both are critical and should proceed concurrently. Adaptation and mitigation objectives are interlinked and compatible and policy approaches to address them can be mutually supportive.

The impacts of climate change are likely to affect poorer countries disproportionately and policy approaches to adaptation should therefore particularly address their needs. Many forest-dependent communities are highly vulnerable to the effects of climate change and will require financial and technical assistance in order to adapt.

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Measures for climate change mitigation and adaptation should also aim to ensure the continued (or increased) delivery of other forest-related benefits – ‘co-benefits’. To do so will require strong engagement between the conservation and development communities, climate-change policymakers, governments, and other stakeholders, including Indigenous communities. Often, tradeoffs between all the potential benefits of forests will be needed, and these should be negotiated between all stakeholders.

Afforestation and reforestation activities have been included in the Clean Development Mechanism (CDM) since 2001, but so far only one such project has been implemented due to high transaction costs. Given the potential of afforestation and reforestation in carbon sequestration, CDM procedures should be simplified.

Message 3: Inter-sectoral collaboration, economic incentives, and the provision of alternative livelihoods are essential for reducing deforestation and forest degradation

The Bali Action Plan identifies forest-based mitigation, particularly reduced emissions from deforestation and degradation (REDD), as a viable mechanism for reducing greenhouse gas emissions. Within a framework of SFM, increasing the forest area through afforestation and reforestation, restoring degraded forests, and substituting carbon-intensive materials with wood and fossil fuels with wood-based biofuels are also viable strategies for climate change mitigation. All such strategies can generate increased revenues and employment, thereby providing economic alternatives to forest conversion.

An overriding principle of policy approaches to the role of forests in climate change mitigation and adaptation must be coordination at the regional and national levels. For REDD and SFM to succeed, their elements must be integrated into national development strategies and part of holistic national land-use planning. Moreover, they should be incorporated in national forest programmes or other equivalent national forest policy frameworks.

National and local forest administrations are well placed to facilitate the implementation of forest-based climate change adaptation and mitigation measures. Given that most of the underlying causes of deforestation are generated outside the forest sector, they do, however, need to increase their collaboration with those governmental agencies dealing with agriculture, water, energy and other relevant sectors and with other stakeholders, including Indigenous people, community groups, forest owners, the private sector, research institutes, NGOs and national planning and financing entities.

There have been many attempts to calculate the costs of REDD, especially in tropical countries. The financial flows needed are usually estimated as the opportunity costs of converting forests to other land uses and are in the order of several billions to tens of billions of dollars annually.

Schemes to offset the opportunity costs of forest conversion are not, in themselves, sufficient to prevent carbon emissions from forests. Those forests 'saved' by REDD, or reforested, restored or afforested, will still need to be managed.

Current global climate change arrangements provide no incentives for reducing deforestation and only very limited incentives for reforestation and afforestation. One reason for this is concern about leakage, in which the protection of one forest area merely displaces deforestation activities to other areas that are unprotected, as well as other issues such as baselines, additionality and permanence. SFM provides a suitable framework for addressing such issues within the forest sector, but cross-sectoral approaches will also be needed.

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The implementation of forest-based measures to mitigate climate change will require significant start-up funds and sustainable financing over decades. Such funding is currently unavailable in most developing countries and forest communities in which REDD and other measures will be undertaken. Several new forest carbon funds have been created, including by the World Bank and the Global Environment Facility. The UNFCCC has also created a fund to assist adaptation measures. There are concerns, however, that subsistence systems such as shifting cultivation and agroforestry might not qualify for REDD funding. Enabling smallholder farmers to benefit from carbon funds can be an incentive for the intensification of tree-planting on farms as part of mitigation and adaptation efforts.

While foreign direct investment is essential, the bulk of private investment remains domestic across all sectors. Private investment in SFM in developing countries should be encouraged, particularly through the establishment of small and medium-sized enterprises.

Under any new climate change finance scheme, especially REDD, care must be taken to prevent perverse effects, such as rewarding unscrupulous behaviour and disadvantaging those countries and communities that are already conserving, sustainably managing and expanding their forests. Climate change mitigation funds will be most effective when they encourage SFM, including forest conservation, rehabilitation and restoration.

Message 4: Capacity-building and governance reforms are urgently required



Many countries, particularly developing countries, have insufficient financial or technical resources to design, implement and monitor effective measures for forest-based climate change mitigation and adaptation. Building in-country capacity is an area in which CPF members can play an important role. Technology transfer is a major issue in current intergovernmental climate negotiations; many of the technologies and much of the knowledge required to implement mitigation activities exist today but are not universally available.

Many forest communities suffer disproportionately from conflicts, humanitarian crises and corruption, which often then spread nationally and internationally. The property rights of many forest communities are insufficiently recognized, and the human, civil and political rights of Indigenous peoples, women and other marginalized groups in forest areas are frequently limited.

Forestry is evolving towards more participatory forms that place greater emphasis on the involvement of local people and the contributions that forests make to local livelihoods. There is a risk, however, that climate change mitigation and adaptation measures could swamp such change. There has been little systematic analysis of the potential social

implications of proposed climate change mitigation mechanisms, especially for the poor. Many Indigenous communities have serious concerns that global and national REDD schemes will further interfere with their rights, livelihoods, customs and traditions. They are demanding, therefore, that future policies recognize and adhere to the principles articulated in the UN Declaration on the Rights of Indigenous Peoples.

Current international discussions imply that using financial incentives to dissuade forest owners from clearing or degrading their forests will be sufficient to achieve substantial carbon emissions reductions. Such incentives will only work, however, if a number of preconditions are met. There must be clear property rights and good forest governance, for example, and an SFM regime should be in place. Poorly directed, REDD incentives could further marginalize poor forest-dependent communities, exacerbate problems of forest governance, and hinder the application of SFM.

A key issue for effective post-2012 forest-based arrangements on climate change is accelerating progress in national and international governance reforms to ensure equity and fairness in the costs and benefits of forest-related mitigation and adaptation.

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There is an increasing awareness among both policymakers and scientists that the forest science-policy interface must be strengthened if long-term sustainable strategies for the forest sector's contribution to climate change mitigation and adaptation are to be developed. Such a strengthening will be best achieved through interdisciplinary research and through sustained interactions between scientists, policymakers and practitioners. More support for research is urgently required and, in this regard, cross-sectoral policy efforts should be strengthened.

Message 5: Accurate forest monitoring and assessment helps informed decision-making but requires greater coordination at all levels



The robust monitoring of forest status and area change is necessary for the design, implementation and verification of climate change commitments. Considerable synergies can be achieved by integrating carbon monitoring requirements in overall forest inventory and monitoring efforts that address the full range of forest goods and services.

Carbon change in forests is usually estimated as a function of forest biomass using conversion factors. Remote sensing and imagery analysis, followed by ground verification, can be used to measure forest area and estimate forest biomass. Currently, however, there is no widely accepted standard practice for measuring forest carbon stocks remotely at the regional or national scales. Of all sources, net emissions of carbon from tropical land-use change are the most uncertain, with a wide range of estimates. The main causes for the inaccuracies are related to the data used to calculate rates of deforestation, the carbon stocks of the forest being cleared, and the fate of carbon after clearing.

National forest monitoring systems need to deliver cost-effective, quality-controlled information on changes in carbon stocks on a regular basis. In many countries, existing systems are still unable to do so, although steps have been taken to increase monitoring capacity and to make use of new technologies. The full range of efforts to

produce consistent, reliable data and analysis on the flux of carbon in forests, including for the setting of realistic reference emissions levels, could be harmonized through stronger collaboration among the main actors at the national and global levels.

The setting of national baselines and accountability measures for forest-based climate change mitigation is a prime candidate for further scientific research. Research is also needed into the socioeconomic implications of broadening the concept of SFM to include the management of carbon pools, and into the potential ecological and carbon impacts of resultant changes to forest management.



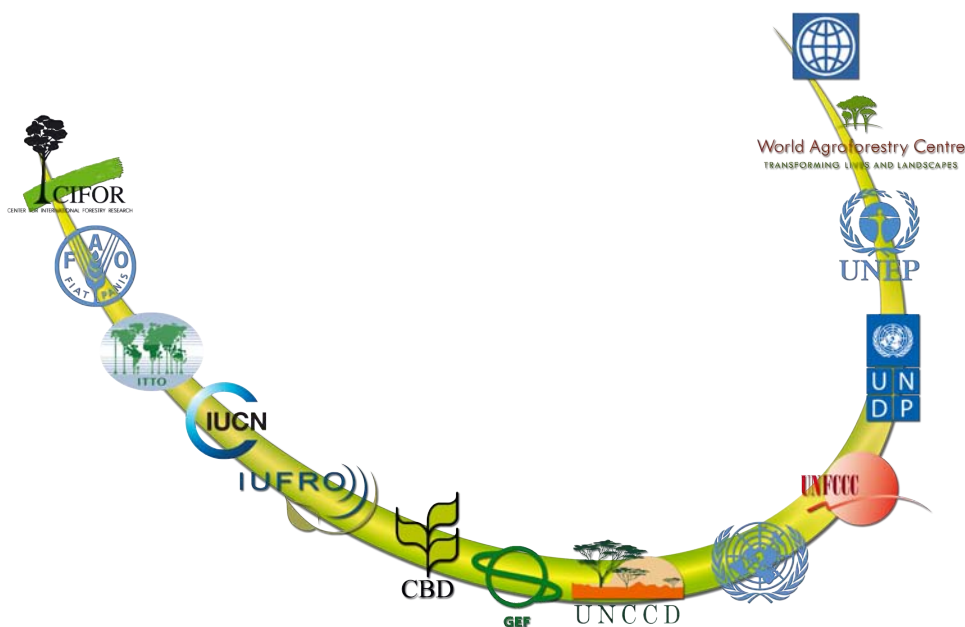
Message 6: CPF members are committed to a collaborative and comprehensive approach to forest-based climate change mitigation and adaptation

With their broad experience in the promotion of SFM, forest conservation, poverty alleviation and forest governance, the members of the CPF can greatly facilitate comprehensive approaches to the role of forests in climate change mitigation and adaptation. The CPF itself provides a mechanism by which its members can coordinate their climate-related actions.

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CPF members are working together to provide information, support the implementation of SFM, and inform the development and negotiation of forest-based climate change policies at all levels. Within their respective mandates, they are also committed to working collaboratively to assist countries to:

- Incorporate adaptation and mitigation, including REDD and other climate change initiatives, into national forest programmes, and integrate national forest programmes within national development strategies through multi-stakeholder consultations.
- Build capacity for SFM and forest-based climate change mitigation and adaptation.
- Enhance the biophysical adaptation of forests to climate change while safeguarding the livelihoods of forest-dependent communities and small forest owners and protecting forest biodiversity and other essential forest services.
- Reduce and eventually eliminate unsustainable forest activities, thus reducing greenhouse gas emissions and enhancing forest-based carbon sequestration and storage.
- Enhance capacity to design, monitor, verify and report on climate change mitigation and adaptation efforts.
- Improve the science-policy interface and ensure that decision-making at all levels is based on timely, reliable and scientifically sound information.
- Explore ways of securing international and national financing and private-sector investment to assist countries in achieving compliance with the provisions of arrangements on climate change and other conventions and instruments related to forests.
- Work in concert with other sectors such as agriculture, energy, transport, urban development and law enforcement towards realizing these elements.



This is a summary of a report by the CPF titled *Strategic Framework for Forests and Climate Change: A Proposal by the Collaborative Partnership on Forests for a Coordinated Forest-sector Response to Climate Change*. The full report can be obtained at www.fao.org/forestry/cpf-climatechange.

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