Climate change

The Montreal Process criteria and indicators provide a tool to integrate and understand the effects of climate change on a country's forests as well as the role of forests in mitigating and adapting to climate change.

The Montréal Process was one of the first international initiatives to identify the need for indicators related to the global carbon cycle (Criterion 5). This has helped member countries develop approaches to carbon accounting, enhancing carbon sinks and increasing consciousness of the importance of sustainable forest management for climate mitigation.

The Korea Forest Research Institute developed a "Carbon Tree Calculator" program to enhance the public awareness of the role of forests as carbon sinks. The program calculates emissions from daily life and the number of trees needed to offset the emissions and is being widely used for the purposes of education in Korea. Through the enhancement of public awareness, the government of Korea hopes to stimulate interest in the role of sustainable forest management policies and programs in mitigating and adapting to climate change.

China is implementing the first Afforestation and Reforestation / Clean Development Mechanism project, while Argentina, Uruguay and Chile, with the cooperation of Japan, are enhancing national capacities on the Afforestation and Reforestation / Clean Development Mechanism.

In Japan, the Montréal Process criteria and indicators have helped the people recognize the contribution of healthy and vital forests to the mitigation of climate change through carbon sequestration and storage. This has led to the introduction of policy measures under which the national and local governments, forest owners, forest-related industries and non-profit organisations work together for the improvement and conservation of forests.

The Guangxi Project in China is an example of a multi-purpose forest project. Forests have been planted for carbon sequestration and research purposes, as well as a range of other benefits identified in Montreal Process criteria and indicators including biodiversity conservation, employment creation and environmental improvement.

New Zealand research on the use of life cycle analysis to calculate the carbon footprint for forest products and to identify possible supply chain emission reductions also offers the potential for corrective actions and future monitoring and reporting. Initial results from one company's operations show potential for a 16-25% carbon emission reduction.

All member countries are developing methods to report on forest carbon budgets. Relationships developed through the Montréal Process made it easier for Canada to share its knowledge and experience developing carbon budget models with Russia and Mexico.

Bioenergy

The Montréal Process criteria and indicators provide a framework by which to monitor, assess and report on the sustainability of forest biomass production.

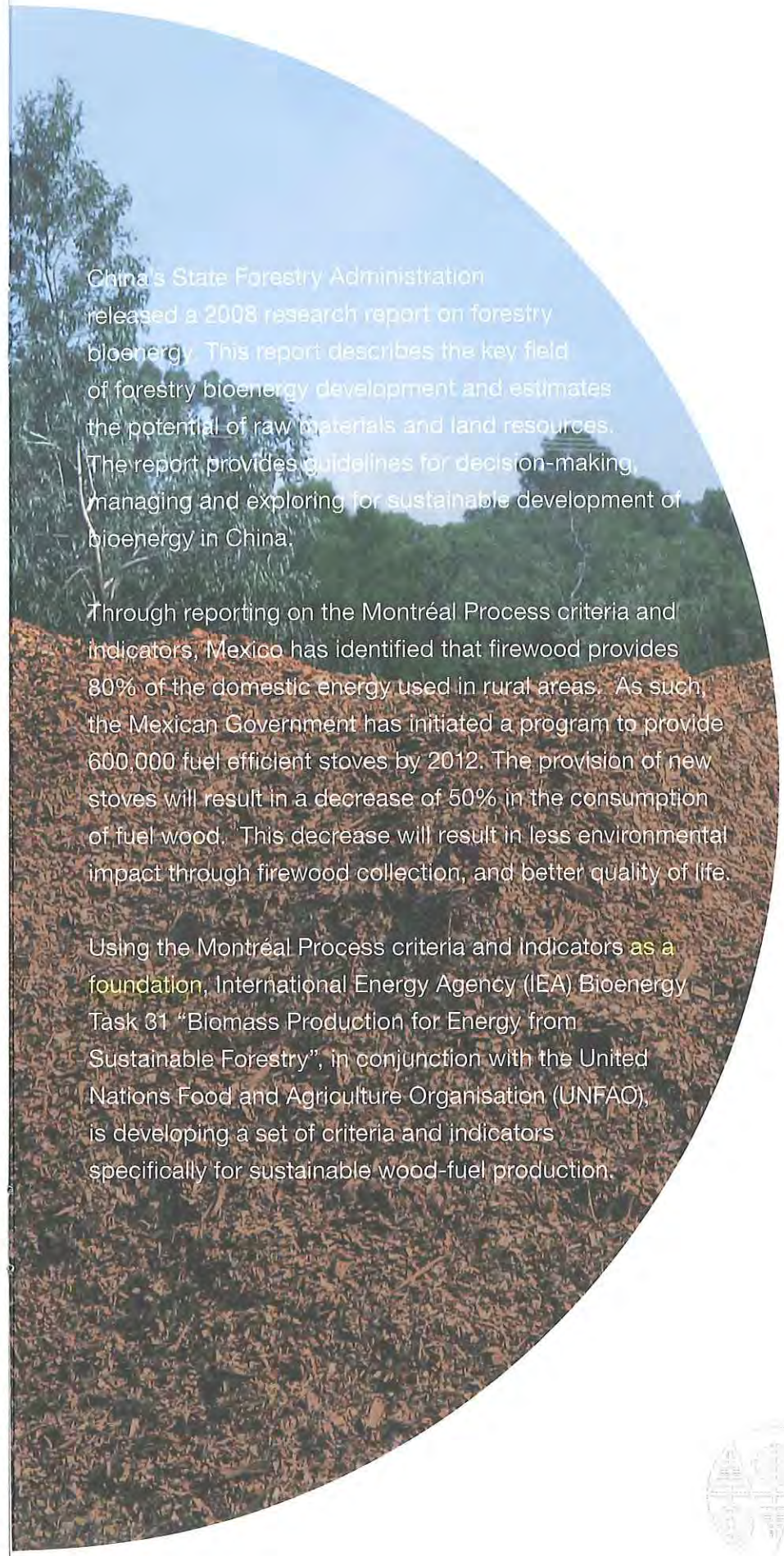
Globally the demand for forest biomass as an energy resource is increasing. The Montreal Process provides a set of criteria and indicators that allows policy developers to make informed decisions about the sustainable utilisation of forest residues, forest by-products, and forest fuel crops in meeting current and future energy demands.

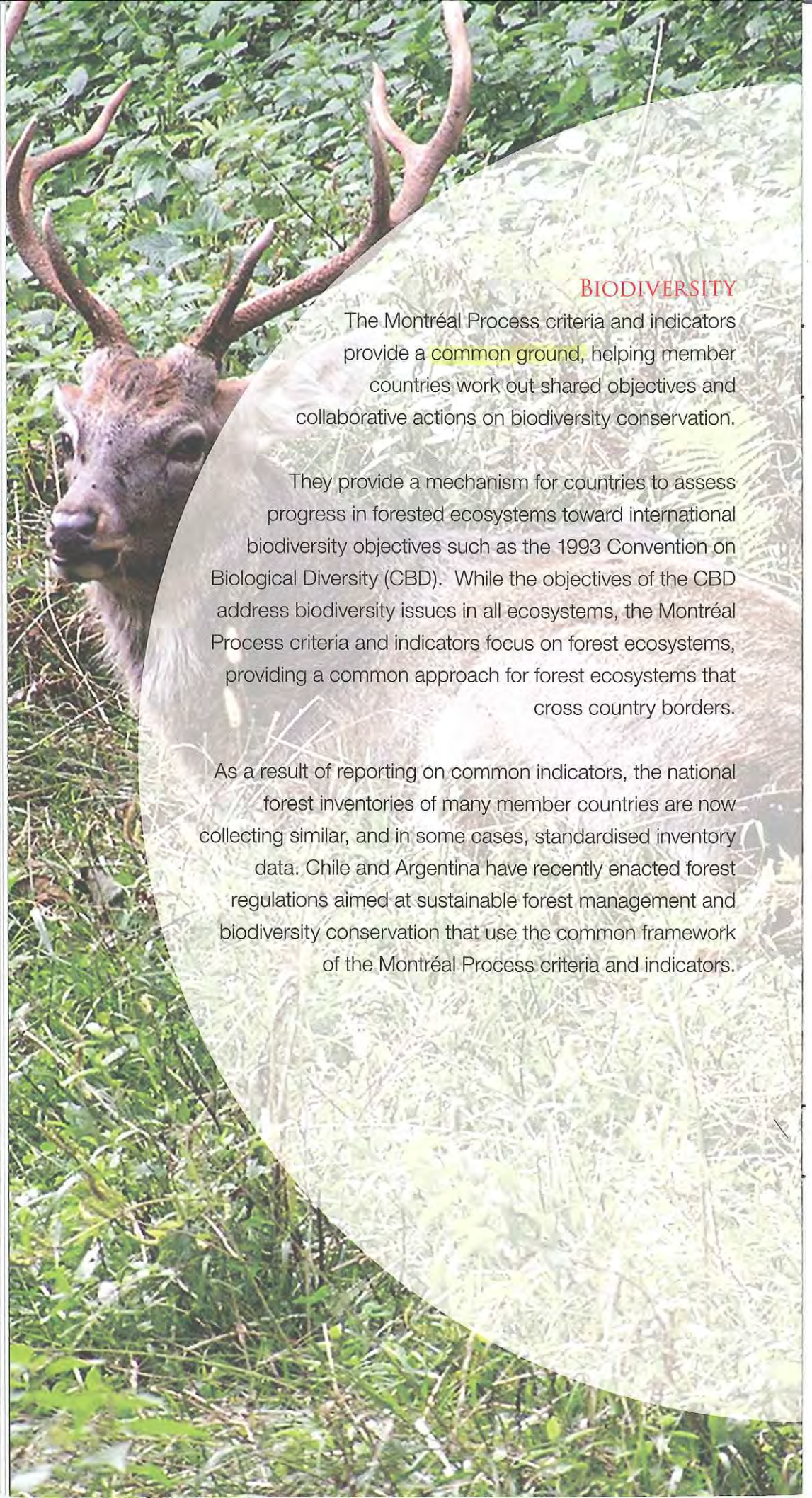
Harvesting of biomass for energy production and the development of forest products for bioenergy has the potential to increase demands on forest resources beyond those of traditional harvesting of forest products. The issue of certification of forest products for bioenergy has been raised in the context of these increased demands.

In Japan the number of boilers in timber processing plants has increased by 35% in the last five years. This increase has contributed to the reduction of wood wastes in the plants as well as contributing to the mitigation of climate change through avoided emissions from fossil fuels.

Through public-private consortiums the Chilean government is strongly supporting the development of biofuels while recognizing the significant potential of forests for firewood supply as domestic energy used in rural areas.

In Canada, bioenergy's share of the total energy used by the sector increased from 47% in 1980 to 57% in 2005 while the use of energy sourced from fossil fuels has declined. As a result of fuel switching, along with improvements to energy efficiency, the Canadian forest sector's fossil fuel GHG emissions dropped by 6% between 1980 and 2005, despite a 21% increase in energy use in the sector and a 50% increase in pulp and paper production.





Biodiversity

The Montréal Process criteria and indicators provide a common ground, helping member countries work out shared objectives and collaborative actions on biodiversity conservation.

They provide a mechanism for countries to assess progress in forested ecosystems toward international biodiversity objectives such as the 1993 Convention on Biological Diversity (CBD). While the objectives of the CBD address biodiversity issues in all ecosystems, the Montréal Process criteria and indicators focus on forest ecosystems, providing a common approach for forest ecosystems that cross country borders.

As a result of reporting on common indicators, the national forest inventories of many member countries are now collecting similar, and in some cases, standardised inventory data. Chile and Argentina have recently enacted forest regulations aimed at sustainable forest management and biodiversity conservation that use the common framework of the Montréal Process criteria and indicators.

This comparability among forest inventories has allowed the North American Forest Commission (NAFC) – made up of Canada, Mexico, and the United States – to commence work to produce continental forest information products, such as forest ecosystem maps and disturbance databases. These products are based on ecosystem boundaries rather than political boundaries and lay the ground work for continent-wide conservation and management strategies to be developed to help protect biodiversity across North America.

In particular, the NAFC is working on models to predict the most likely areas for insect infestations and is planning to develop guidelines for assisted migration – essentially helping species move into new suitable habitat when their existing habitat becomes unsuitable due to rapidly changing environmental conditions. These maps will also be featured in the Commission for Environmental Cooperation's Environmental Atlas for North America, providing standardized information to the public and policy makers.

Russia, Korea, Japan, New Zealand, and China are all undertaking individual projects in temperate and boreal forests of high conservation value that address forest ecosystem health and vitality as well as other values and which will contribute to the collective view of biodiversity status within these forests through Montréal Process country reports.

ACTIVITIES

A comprehensive criteria and indicators framework was developed as a collaborative activity by all member countries and has been incorporated in policy in a number of those countries.

The first set of full country reports on the Montréal Process criteria and indicators was produced in 2003.

Following this a review of the indicator set was undertaken. The review confirmed the soundness of the framework overall. The language of the indicators was simplified and the supporting technical notes revised for clarity. Beyond refining the existing indicators some new ones were developed. These new indicators reflect the concepts of avoided fossil fuel emissions, ecosystem services, the resilience of forest based communities, and the importance of forests to people.

During 2009 and 2010 all countries will complete their second country reports. For the first time this will enable countries to comprehensively assess progress towards sustainable forest management ~~b~~based on indicator trends.

This wholly voluntary initiative has now existed for 14 years with continuous membership from all 12 original member countries. During this time it has built significant national and international momentum, significantly influenced the national and international understanding of sustainable forest management. Linkages have been built with other Criteria and Indicator Processes and Organisations such as the Ministerial Council for Protection of Forests in Europe (MCPFE), the International Tropical Timber Organisation (ITTO), and the United Nations Food and Agriculture Organisation (UNFAO), and is recognised as an organisation under the United Nations Forum on Forests (UNFF).

Network of knowledge

Communication and capacity building has been a great strength of the Montréal Process since its inception. Sharing of experiences and knowledge has enabled the development and application of the Montréal Process criteria and indicators framework used by all member countries.

Through the International Model Forest Network, Argentina, Canada, Chile, China and Russia are among a number of countries that are collaborating on methods to demonstrate sustainable forest management using the Montréal Process criteria and indicators. They have found innovative, low-cost, and long-term solutions to the challenges facing advocates and practitioners of sustainable forest management.

Australia has developed an integrated approach to reporting - coordinated by the national Montréal Process Implementation Group. Information flows from the state and territories to the federal level for inclusion in the national State of the Forests Report. As the quality of reporting improves, so too does the value of criteria and indicators for decision making.

Since 1994, the United States has been hosting an on-going dialogue regarding the use of criteria and indicators and sustainable forest management through a Roundtable on Sustainable Forests. Roundtables in the water and rangeland sectors are now engaging in the use of their own set criteria and indicators modelled after the Montréal Process criteria and indicators.

New Zealand has used membership in the Montréal Process and the Montréal Process criteria and indicators to increase their focus and investment in sustainable forest management research.

Argentina, Chile, and Uruguay are working together with Paraguay and the United Nations Food and Agriculture Organization (UNFAO) on a project to strengthen national capacities for the implementation of criteria and indicators. One desired output from this project is a process for the integration, use, and administration of regional forestry information in a consistent manner.

For the purpose of sharing the knowledge acquired through the Montréal Process, Japan organizes an international training course every year inviting officers of the developing countries on the Pacific Rim to Japan. Participants are given opportunities to learn the basics and application of the criteria and indicators.

Future steps

In 2008 the Montréal Process member countries agreed a strategic action plan charting future activities. A key focus is to build on the foundations developed since 1994 and continue to enhance and demonstrate the relevance and value of the Montréal Process criteria and indicators, strengthen capacity to make progress towards sustainable forest management, and enhance collaboration and cooperation across the spectrum of sustainable forest management activity.

Some specific activities planned for the period 2009 to 2013 by the Working Group and individual countries are:

- Exploring means of communicating the wealth of knowledge brought together under the criteria and indicators. These include new means of visualising information, and presenting it through different media and in a range of forms needed for policy makers, practitioners and the wider community;
- Exploring approaches to identify and monitor trends in forest degradation to support increasing focus on climate change impacts and adaptation needs by member countries;
- Exploring options for international activities focussed on temperate and boreal forests to coincide with the 2011 international year of forests;
- Developing approaches to allow member countries to use criteria and indicators as a forward-looking planning or strategic tool, as well as a reporting framework;
- Continuing to build the international forest science, policy, and technical networks across member countries and reaching out into other processes and sectors where criteria and indicators could be developed.

For more information on the Montréal Process, the Montréal Process Criteria and Indicators, go to www.mpci.org.

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