



STATE OF THE

# World's Forests

# 2007

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2007

FAO



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# Foreword

**FAO'S BIENNIAL** *State of the World's Forests* series offers a global perspective on the forest sector, including its environmental, economic and social dimensions.

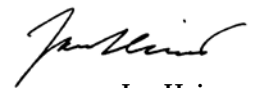
Two years is a short time in the life of a forest, and in most international processes, too. So what is new in forestry since the last edition of *State of the World's Forests*? First, the release of the results of the Global Forest Resources Assessment 2005 (FRA 2005) has provided new information, more comprehensive than ever, for evaluating the state of the forests. The Kyoto Protocol has come into force, with significant implications for forestry. New initiatives have been developed, such as networks for information sharing and action on forest invasive species, efforts to link national forest programmes and poverty reduction strategies, and the development of guiding principles on planted forests and fire management. Even the structure and look of *State of the World's Forests* are new.

This seventh edition examines progress towards sustainable forest management. The analysis reveals that some countries and some regions are making more progress than others. Most countries in Europe and North America have succeeded in reversing centuries of deforestation and are now showing a net increase in forest area. Most developing countries, especially those in tropical areas, continue to experience high rates of deforestation and forest degradation. The countries that face the most serious challenges in achieving sustainable forest management are, by and large, the countries with the highest rates of poverty and civil conflict.

Part I reviews progress at the regional level. This section was developed from six regional reports prepared for discussion in 2006 by FAO's six regional forestry commissions. Each regional summary is structured according to the seven thematic elements of sustainable forest management that were agreed by international fora as a framework for sustainable forest management. The regional reports synthesize the most current information available, including data gathered by FAO for FRA 2005 (which was, in turn, based on country reports submitted to FAO and the contributions of over 800 people, including 172 national correspondents), the FAOSTAT online database (compiling economic information provided by countries) and recent FAO regional forestry sector outlook studies, as well as input from FAO partners.

Part II presents selected issues in the forest sector, addressing the latest developments in 18 topics of interest to forestry. In a few pages each, FAO specialists present the state of knowledge or latest activities on themes ranging from climate change and desertification to wildlife management and wood energy.

FAO is pleased to publish *State of the World's Forests 2007* and trusts that readers will find it stimulating and informative.



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# Acronyms

APFISN	Asia–Pacific Forest Invasive Species Network
ARC	Alliance of Religions and Conservation
C&I	criteria and indicators
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CIFOR	Center for International Forestry Research
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMIFAC	Conference of Ministers in Charge of Forests in Central Africa
COFO	FAO Committee on Forestry
CPF	Collaborative Partnership on Forests
FISNA	Forest Invasive Species Network for Africa
FRA	Global Forest Resources Assessment
GDP	gross domestic product
GISP	Global Invasive Species Programme
ICIMOD	International Centre for Integrated Mountain Development
ICRAF	World Agroforestry Centre
IEA	International Energy Agency
IPPC	International Plant Protection Convention
ISPM	International Standard for Phytosanitary Measures
ITTA	International Tropical Timber Agreement
ITTO	International Tropical Timber Organization
IUCN	World Conservation Union
IUFRO	International Union of Forest Research Organizations
IYDD	International Year of Deserts and Desertification
JRC	Joint Research Centre of the European Commission
MCPFE	Ministerial Conference on the Protection of Forests in Europe
NEPAD	New Partnership for Africa's Development
NGO	non-governmental organization
NWFP	non-wood forest product
OECD	Organisation for Economic Co-operation and Development
PROFOR	Program on Forests
REDLACH	Red Latinoamericana de Cooperación Técnica en Manejo de Cuencas Hidrográficas
REDPARQUES	Red Latinoamericana de Cooperación Técnica en Parques Nacionales, otras Áreas Protegidas, Flora y Fauna Silvestres
SADC	Southern African Development Community
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNEP-WCMC	World Conservation Monitoring Centre (UNEP)
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
USDA	United States Department of Agriculture
WWF	World Wide Fund for Nature



# Summary

**THIS SEVENTH BIENNIAL** issue of *State of the World's Forests* considers progress towards sustainable forest management at the regional and global levels. The overall conclusion is that progress is being made, but is very uneven. Some regions, notably those including developed countries and having temperate climates, have made significant progress; institutions are strong, and forest area is stable or increasing. Other regions, especially those with developing economies and tropical ecosystems, continue to lose forest area, while lacking adequate institutions to reverse this trend. However, even in regions that are losing forest area, there are a number of positive trends on which to build.

The biggest limitation for evaluating progress is weak data. Relatively few countries have had recent or comprehensive forest inventories. With many partners, FAO is assisting countries in carrying out national forest assessments and strengthening forestry institutions, but progress is slow, owing in part to the scarcity of financial resources.

## PROGRESS TOWARDS SUSTAINABLE FOREST MANAGEMENT

### Africa

During the 15-year period from 1990 to 2005, Africa lost more than 9 percent of its forest area. In a typical year, Africa accounts for more than half of the global forest area damaged by wildfire. Deforestation and uncontrolled forest fires are especially severe in countries suffering from war or other civil conflict. Most forests in Africa are owned by national governments, and the national forest agencies in many countries lack the financial resources required to manage the forest resources sustainably.

But the picture is not all gloomy. Forests are obtaining political support and commitment at the highest levels in Africa. For example, the Conference of Ministers in Charge of Forests in Central Africa

(COMIFAC) ranks among the world's most effective examples of regional collaboration among countries to address serious environmental issues. During the period from 2000 to 2005, African countries designated over 3.5 million hectares of forest to be managed primarily for conservation of biological diversity, raising the total to almost 70 million hectares. A majority of countries in the region have adopted new forest policies and forest laws, and efforts are being made in many countries to improve law enforcement and governance.

### Asia and the Pacific

The good news for the Asia and the Pacific region is that net forest area increased between 2000 and 2005, reversing the downward trend of the preceding decades. However, the increase was limited to East Asia, where a large investment in forest plantations in China was enough to offset high rates of deforestation in other areas. The net loss of forest area actually accelerated in Southeast Asia, and, in South Asia, a small increase in forest area during the 1990s was followed by a small decrease between 2000 and 2005.

However, there are a number of positive trends in the region that support an optimistic view of the future. Rapid economic growth in the two largest countries, China and India, may help to create the conditions for sustainable forest management. Economic development appears to be a necessary condition for deforestation to cease. Employment in the forest sector and trade of forest products are both increasing. Forest institutions in the region are getting stronger in a number of countries, and the long-term trend towards more participatory decision-making continues.

On the other hand, economic development creates new problems. There is evidence that illegal logging is increasing in some countries in the region in response to the high demand for log imports in other countries with rapidly growing economies. Forest disturbances by pests

and diseases pose a significant threat to forests, and this is an important issue for new forest plantations. Forest fires may increase in severity if the global climate continues to become warmer and more variable.

### Europe

It is tempting to conclude that Europe has achieved sustainable forest management. Forest area is increasing in most countries, and the positive trends exceed the negative. Forest institutions are strong, and changes in forest policies and institutions are largely positive. The Ministerial Conference on the Protection of Forests in Europe (MCPFE) is the strongest regional political mechanism to address forest issues in the world.

However, there are a number of areas of concern. Employment in the forest sector continues to decline, and the forest sector's contribution to the economy is declining in comparison with that of many other sectors. Forests remain vulnerable to disturbances that are likely to increase if the global climate continues to change as many experts predict. Countries with economies in transition are striving to improve support and guidance to owners of newly privatized forests.

### Latin America and the Caribbean

Latin America and the Caribbean joins Africa as the two regions that are losing their forests at the highest rates. The annual net rate of loss between 2000 and 2005 (0.51 percent) was higher than that of the 1990s (0.46 percent). Countries in the region are fighting an uphill battle to retain their primary forests, but they are making considerable efforts, including an annual increase of over 2 percent in the area of forest designated primarily for conservation of biological diversity.

Regional and subregional cooperation to address forest issues is gaining strength. Latin American countries have formed networks to fight forest fires, to increase the effectiveness of protected area management and to improve watershed management. Employment and trade in the forest sector are increasing, and institutions are getting stronger. Several countries in the region are among the global leaders in innovative approaches to forest management, such as payments for environmental services.

### Near East

Largely because of the arid climate, the forest sector in the Near East region represents a small part of the economy. Countries in the region rely heavily on forest product imports. However, there have been significant investments in forest plantations in recent years. In comparison with other regions, trees outside forests are important for both the environment and the economy.

Countries that are experiencing conflict are having the most difficulty managing their forests and controlling deforestation. Several countries have been successful in using incentives to promote good forest management. Despite the problems and limitations faced by countries in the region, progress is being made to develop strategies and implement programmes that effectively address local conditions.

### North America

The North America region includes only three countries: Canada, Mexico and the United States of America; but all three have significant forest resources and highly developed forest institutions. Net forest area is stable in Canada and the United States of America. It is declining in Mexico, but the rate of decrease is slowing and is much less than the rate of forest loss in Central America. North American forests account for 17 percent of the world's forest area and 40 percent of the world's wood removals, suggesting that the region's forests are relatively productive and the commercial sector is relatively advanced.

However, while the region's forest resources remain abundant, the forest sector's contribution to the regional economy is declining. Employment in the forest sector is fairly flat, and the region as a whole has fallen from a major net exporter of forest products to a major net importer. This reversal is mainly a result of the sharp decline in the forest products trade balance of the United States of America, whose forest products exports exceeded its imports in the early 1990s but now trail them by half.

### The global view

Forestry makes a valuable contribution to sustainable development in all parts of the world, but progress towards sustainable forest management has been uneven. The world has just under 4 billion hectares of forest, covering about 30 percent of the world's land area. From 1990 to 2005, the world lost 3 percent of its total forest area, an average decrease of some 0.2 percent per year.

Many countries have demonstrated the political will to improve management of their forests by revising forest policies and legislation and strengthening forestry institutions. Most countries manage forests for multiple uses, and increasing attention is being paid to the conservation of soil, water, biological diversity and other environmental values. However, the continuing decline in primary forests in most tropical countries is a matter of serious concern.

The world is faced with an increasingly complex challenge: is it possible to achieve sustainable forest management and to achieve equitable economic progress at the same time?

## SELECTED ISSUES IN THE FOREST SECTOR

### Climate change

Evidence is mounting that forests will be profoundly affected by climate change, such as the increasing damage to forest health caused by proliferation of fire, pests and diseases. At the same time, new investments in forests to mitigate climate change lag behind the optimistic expectations of many following the entry into force of the Kyoto Protocol in 2005.

### Desertification

While all dry regions of the world are affected by land degradation, the world's highest rate of desertification is taking place in sub-Saharan Africa, where agricultural productivity is declining at a rate of almost 1 percent per year. Effective action to combat desertification requires an integrated approach, including investments in afforestation.

### Forest landscape restoration

There is an emerging global consensus that forests need to be managed from a broad multidisciplinary perspective. The forest landscape restoration concept emphasizes the importance of bringing people together to develop practices that restore the balance among the ecological, social, cultural and economic benefits of forests and trees, within the broader pattern of land uses.

### Forestry and poverty reduction

Many countries are shifting strategies to address more effectively the need for the forest sector to contribute to poverty reduction, starting with the recognition of forest benefits, which are systematically undervalued in almost all countries.

### Forestry sector outlook

Global forest sector outlook studies provide countries with critical information to manage their forests. Each regional study involves broad stakeholder participation in comprehensive reviews of the socio-economic changes affecting the region and the global economy. Five regional studies have been completed, and a new study is under way to extend the earlier outlook for Asia and the Pacific from 2010 to 2020.

### Forest tenure

Secure forest tenure and access to forest resources are prerequisites to sustainable forest management. At the global level, 84 percent of forest lands and 90 percent of other wooded land are publicly owned. The area of forests owned and administered by communities doubled from 1985 to 2000, reaching 22 percent in developing countries.

The transfer of forest management and user rights needs to be (but often is not) accompanied by adequate security of tenure and the capacity to manage these resources.

### Harvesting

Good harvesting practices can be profitable and can significantly reduce the environmental impacts of forest harvesting. However, inappropriate harvesting methods are still used widely throughout the tropics. Illegal logging and lack of awareness are among the main reasons. A number of regional and national codes of practice have been adopted, but implementation remains slow.

### Invasive species

Awareness of the problem of forest invasive species has become heightened in recent years. Land-use changes, forest management activities, tourism and trade facilitate potentially harmful introductions. Numerous international and regional programmes and instruments, binding and non-binding, have been developed to address the problem, of which a number have direct or indirect implications for forests and the forest sector.

### Monitoring, assessment and reporting

In recent years, significant progress has been made in monitoring, assessment and reporting on forests. Criteria and indicators are used to monitor progress towards sustainable forest management, especially at the national level. New tools are being developed to improve monitoring, assessment and reporting as relates to international commitments, but a heavy reporting burden remains, with new obligations in many fora. A major future challenge will be to mobilize the resources to invest in basic information and knowledge management to ensure that forest-related decisions are based on sound data.

### Mountain development

Since the International Year of Mountains in 2002, mountain issues have gained increasing attention. The membership and visibility of the Mountain Partnership are rapidly expanding (over 130 government, private and non-governmental organization [NGO] members). This growth underscores the need for improved approaches and increased investments in the livelihoods of the more than 700 million people who live in mountain regions.

### Payment for environmental services

Conventional wisdom suggests that forest benefits are undervalued by markets; the question is what to do about it. Some countries have developed payment-for-environmental-services schemes as a way to reward forest owners for the production of non-market benefits. As a prerequisite to such schemes, countries may wish to ensure

that charges and taxes on forest producers are effectively established and collected and that the proceeds are reinvested in the forest.

### **Planted forests**

Planted forests continue to expand, and their contribution to global wood production is approaching 50 percent of the total. New information gathered in 2005 on trends in planted forests indicates that the areas of forests planted for production and of those planted for protective purposes are both steadily increasing in all regions except Africa.

### **Trade in forest products**

Forest products trade continues to expand. In 2004, trade in industrial roundwood was 120 million cubic metres, or about 7 percent of global production, with a value of US\$327 billion. Each of these figures established records for trade in the forest sector. As trade has boomed, a number of developed countries have adopted public procurement policies to promote the use of legally or sustainably produced forest products.

### **Urban forestry**

The urbanization of society poses immense challenges for forestry and has new impacts on forests. Urban forestry is increasingly recognized as an important economic and social component of effective urban planning.

### **Voluntary tools for sustainable forest management**

A continuum of tools for advancing sustainable forest management is available to policy-makers and forest managers, ranging in approach from incentive-based and voluntary to legally binding, and in scope from local to global. These include criteria and indicators, certification, codes and guidelines, and initiatives to promote forest law enforcement.

### **Water**

Several interesting recent studies challenge conventional views on the relationship between forests and water. More trees may not always result in more water for humans, and fewer trees may not result in catastrophic floods.

### **Wildlife management**

Several important wildlife species experienced severe declines in the past century. Unsustainable hunting and trading in wildlife and wildlife products, and conflicts between humans and wildlife (including injuries or death to both, as well as damage to property and crops), are persistent problems. A challenge for policy-makers is to balance conservation of wildlife resources with the livelihood requirements of local populations.

### **Wood energy**

As the price of oil soars, alternative energy sources are receiving increased attention. In Africa, wood is by far the major source of energy; in other regions, wood may become a major energy source in the future as it was in the past.