



STATE  
OF THE WORLD'S  
FORESTS

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# Foreword

The *State of the World's Forests* reports every two years on the status of forests, recent major policy and institutional developments and key issues concerning the forest sector. This is the fifth edition of the publication, the purpose of which is to provide current and reliable information to policy-makers, foresters and other natural resource managers, academics, forest industry and civil society.

In line with the extensive preparations for the World Summit on Sustainable Development (WSSD), the last two years saw rich and stimulating discussions unfold in the international arena. The recent global economic downturn has contributed its own set of dynamics, and the forest and other sectors are struggling to absorb the impacts.

Choosing the topics for this edition of the *State of the World's Forests* from among the many options was a difficult task. In the spirit of collaboration, we took a slightly different approach from in the past and asked external authors to contribute whole chapters on major issues. The result is contributions from key intergovernmental and non-governmental organizations and from individuals contributing in their personal capacity, in addition to pieces researched and written by FAO staff. Such a mix is entirely consistent with the theme of the *State of the World's Forests 2003* – “partnerships in action” – and reflects how the forest sector must operate in today's environment.

An effort has been made to cover many subjects that are especially relevant to discussions taking place in international fora today. Part I presents recent developments and areas of current attention in forest resources; the management, conservation and sustainable development of forests; the institutional framework; and the international forest policy dialogue. Part II contains five chapters, each addressing a particular subject in more detail. The first examines the links between forests and poverty alleviation, a topic now being widely discussed in response to renewed interest in exploring the full potential of forests to bring about positive change. The second chapter notes the importance of forests in managing freshwater resources, the scarcity of which is becoming an urgent issue, as recognized by the United Nations designation of 2003 as the International Year of Freshwater. How the sustainable use of forests contributes to the conservation of biological diversity is dealt with in the third chapter as a supplement to ongoing and, at times, controversial deliberations. The fourth chapter examines issues related to imbalances in science and technology capacity between developing and developed countries and among different segments of the forest sector. The plight of Africa is given special attention in the last chapter, which describes trends in fiscal policies in forestry. The devastating impact of HIV/AIDS is also highlighted, as are recently published findings of the FAO Forestry Outlook Study for Africa.

Trying to strike a balance between including a sufficient number of key topics and doing them justice within the constraints dictated by length meant that coverage of some topics had to be general rather than exhaustive. In this regard, we would like to think that they provide grist for the mill for future editions of the *State of the World's Forests*.

The FAO Forestry Department is pleased to release the *State of the World's Forests 2003* and hopes that readers will find it informative and thought provoking. Comments are most welcome, as are suggestions for the next edition.



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# Summary

## PARTNERSHIPS IN ACTION

As the international policy dialogue continues, attention is now moving from words on paper to action on the ground. Through innovative partnerships and better linkages across sectors, governments, organizations and civil society are collaborating more than at any time in the past to resolve issues of fundamental importance to the environment and to the achievement of sustainable development. Alleviating poverty and improving food security are closely linked to these objectives, and forests are an integral part of the solution.

The United Nations Forum on Forests (UNFF), established in October 2000, will meet for a third time in May 2003 to consider ways to facilitate and promote further sustainable forest management worldwide, including through the implementation of the proposals for action of the Intergovernmental Panel on Forests (IPF) and the Intergovernmental Forum on Forests (IFF). At that time, participants will exchange experiences and lessons learned as they seek to overcome barriers to progress.

The *State of the World's Forests 2003* provides an overview of major developments in the sector in the past few years and focuses on selected key issues.

## SITUATION AND DEVELOPMENTS IN THE FOREST SECTOR

### Forest resources

In 2001, FAO published the most comprehensive assessment of global forest resources ever undertaken. Since the release of the Global Forest Resources Assessment 2000 (FRA 2000), an international meeting of experts has concluded that future FAO studies of this kind should remain broad and contain information on the range of forest goods and services. The *State of the World's Forests 2003* elaborates on two related areas: the link between agricultural expansion and

deforestation; and the conversion and conservation of mangroves.

In coming years, enormous population increases, combined with growing per capita consumption, will continue to result in agricultural expansion on new lands, mostly through deforestation. Preliminary findings of an FAO study indicate that agricultural land is expanding in about 70 percent of countries, declining in 25 percent and roughly static in 5 percent. In two-thirds of the countries where agricultural land is expanding, forest area is decreasing, but in the other one-third forests are expanding. In 60 percent of the countries where agricultural land is decreasing, forests are expanding. In most of the rest (36 percent), forests are decreasing.

Pressure from dense populations in coastal areas has led to the conversion of many mangrove forests to other uses, and numerous case studies have described losses over time. It appears that mangrove deforestation continues, albeit at a slightly lower rate in the 1990s than in the 1980s, when large-scale conversion for aquaculture and tourism infrastructure took place in Asia, the Caribbean and Latin America. Now, most countries require environmental impact assessments prior to approving requests for conversion to other uses.

### Management, conservation and sustainable development of forests

As forests are complex ecosystems that must be managed in a balanced and sustainable way, one of the main challenges today is to reconcile the often conflicting priorities of those who depend on forests for a variety of goods and services.

Trees are of critical importance in countries with low forest cover, in both urban and rural settings. Among other functions, they help combat desertification, provide basic necessities and protect biological diversity, crops, settlements and watersheds. A summary of six

case studies carried out in low forest cover countries (LFCCs) in 2002 describes the challenges that LFCCs face in enhancing the role of planted forests and trees outside forests; outlines the causes and effects of forest degradation; identifies common issues; and suggests potential ways forward.

Twenty-eight percent of the world's closed forests are mountain forests, and their importance for sustainable mountain development was highlighted during the International Year of Mountains – 2002. The need for better knowledge about their role in mountain ecosystems was also emphasized, as was the need for more integrated policies and management practices.

A look at forests in the Mediterranean basin reveals that measures must be taken to decrease the risk of wildfire in the northwest and to reduce deforestation and forest degradation in the southeast.

In a concerted effort to combat the negative consequences of forest fires, environment ministers of the Association of Southeast Asian Nations (ASEAN) signed an agreement, in June 2002, to strengthen cooperation and reinforce preventive measures in the region. Its implementation will complement the efforts of Project FireFight South East Asia, a joint initiative of the World Wide Fund for Nature (WWF) and the World Conservation Union (IUCN), to address harmful forest fires better through policy and law reforms.

In tropical forests, the unsustainable hunting of wild animals for meat and other products remains an alarming issue. Preliminary data from ongoing studies support concerns that wildlife, especially in Africa, is being drastically reduced, posing serious threats to food security, forests and their ecological integrity.

The *State of the World's Forests 2003* emphasizes the major roles of forests in the context of climate change: as a source of carbon dioxide (CO<sub>2</sub>) when they are destroyed or degraded; as a sensitive indicator of a changing climate; as a source of biofuels for the substitution of fossil fuels; and as a CO<sub>2</sub> sink, when they are managed sustainably. It also notes the many issues that

need to be resolved when negotiations for the next commitment period under the Kyoto Protocol begin in 2005.

### **Institutional framework**

In recent years, the forest sector has undergone fundamental changes, largely as a result of restructuring, shifts in ownership patterns and wider recognition of the multiple benefits that forests provide. It is expected that by 2050, 40 percent of the world's forests will be managed or owned by communities and individuals. The amount of support that groups and institutions receive to increase their human, physical and financial capacity to take advantage of emerging opportunities needs to keep pace.

Recent emphasis on environmental protection, food security and poverty alleviation calls for new approaches to, among other things, forestry education. With today's changing imperatives, curricula need to be updated and modes of delivery modernized. In response, groups of universities are establishing consortia to offer issue-driven programmes to audiences around the world through courses, workshops, seminars and conferences.

Decentralization of authority and other responsibilities in the forest sector is expected to increase considerably in the coming years. The *State of the World's Forests 2003* identifies successful efforts to date, but also notes that resulting changes bring risk and raise new issues. In order to assess impacts more accurately, studies are under way to shed light on conditions that favour and hamper decentralization. Various promising approaches for sharing benefits from forest goods and services are also highlighted, as are the challenges associated with their implementation.

Issues related to illegal logging and corruption in the sector are being discussed more openly than ever before. Governments, private industry and non-governmental organizations (NGOs) are continuing their efforts to curb forest crime, while policy research institutions and agencies are stepping up analyses of its magnitude and impacts. Discussions around the world are generating additional pressure to take action.

Government policies in other sectors can have a profound impact on sustainable forest management, often in unexpected ways. Conversely, forests can provide an entry point to resolve issues that cross sectors, such as poverty alleviation, food security, corruption and illegal activities. When external interventions are likely to have undesirable effects on forests, the forest community needs to participate in problem solving before decisions are made. This requires institutional capacity building, empowerment of civil society and dissemination of the most current information to foster change.

### **International forest policy dialogue**

With the establishment of UNFF in October 2000, attention is now turning to issues surrounding the implementation of sustainable forest management. While progress is encouraging, difficult matters are yet to be resolved such as financing, trade, capacity building, transfer of environmentally sound technology and future international arrangements. In April 2001, the Collaborative Partnership on Forests (CPF) was launched to support UNFF and to improve cooperation among members on forest issues. Less than a year later, it established the informal CPF Network to facilitate information exchange and to assist CPF in its work related to UNFF, especially pertaining to the IPF/IFF proposals for action.

The policy debate on forests and forest biological diversity has been unfolding in the past few years in both the Convention on Biological Diversity (CBD) and UNFF. The two fora consider their roles complementary and recognize the need to collaborate. In light of recent decisions, there is growing concern over potential duplication of efforts and lack of adequate resources to support extensive work programmes.

The overview of the international forest policy dialogue includes a review of developments over the past few years in forest-related conventions and in processes related to criteria and indicators for sustainable forest management.

In response to a call from the international forest community to consider national forest programmes as an important means for addressing key issues, a group of countries, institutions and NGOs established the National Forest Programme Facility. This focuses on information exchange, knowledge sharing and capacity building and seeks to link forest policy and planning with broader national strategies, particularly those related to poverty alleviation.

The World Summit on Sustainable Development (WSSD), held in Johannesburg in August/September 2002, recognized the significant contributions that forests make to the health of the planet and its inhabitants by noting the need for greater political commitment and better linkages with other sectors through effective partnerships. WSSD identified UNFF and CPF as key mechanisms to facilitate the implementation of sustainable forest management at the national, regional and global levels.

## **SELECTED CURRENT ISSUES IN THE FOREST SECTOR**

### **Forests and poverty alleviation**

An issue that has attracted renewed attention in recent years is the potential of forests to alleviate poverty, particularly in developing countries. The contribution that they make to poor households is often unrecorded in national statistics, so that much research needs to be done to shed light on the ways in which forests can help rural people avoid, mitigate or rise out of poverty. Research is also needed to show where forest conservation and poverty alleviation converge as policy goals, and where they diverge.

Changes that may favour a greater role for forests in alleviating poverty include decentralization of authority and other responsibilities; more secure forest tenure; better governance; increased access to markets; new technologies; and a greater willingness of society to pay for environmental services. Maximizing this potential requires, among other approaches, establishing a people-centred agenda; removing

regulatory restrictions; creating partnerships between poor people and forest enterprises; and integrating forestry into rural development and poverty reduction strategies.

At the dawn of the new millennium, certain enabling conditions present cause for optimism, although poor people are unlikely to benefit substantially unless they achieve a degree of political power and influence. Those who depend on natural forests stand to suffer most from their disappearance and degradation. Thus, such people could be an important constituency in mobilizing conservation efforts. The design of effective programmes will depend on greater understanding of the relationship between forests and rural livelihoods; of ways to increase income from forests; and of the significance of cross-cutting issues and political trends.

### **Role of forests in the management of freshwater resources**

Warnings of freshwater scarcity put forth at the end of the twentieth century are proving to be accurate, to the point that lack of water now threatens food security, human health and livelihoods. Forests can have an important role in supplying freshwater, but their management must complement water management.

Mountainous forested watersheds require special attention as they are among the most important freshwater-yielding areas in the world but are also source areas for landslides, torrents and floods. Although land use and freshwater are inextricably linked, they are rarely managed in concert despite clear evidence of the connection between upstream and downstream uses of land and water.

While not a panacea, forests can provide real economic and environmental benefits that can best be identified within a watershed framework. Treating water as a commodity rather than a free good can result in economic incentives that translate into better management. Policies and institutions can provide incentives and means for achieving freshwater objectives, from the local watershed level to the river basin level.

Inequities in terms of who pays for and who benefits from changes in upland and downstream resource use can be resolved through intersectoral cooperation and expanded economic analysis. The new water economy will help justify land use changes to enhance water supplies. By the same token, inhabitants who improve forests or reduce downstream losses through other land uses will need to be adequately compensated.

### **How sustainable use of forests can contribute to conserving biological diversity**

In the past few decades, the values that society attaches to the range of forest goods and services have changed more rapidly and profoundly than ever before. Such trends are expected to continue, if not to accelerate, and call for diverse approaches to forest management. The *State of the World's Forests 2003* explores the relationship between the sustainable use of forests and the conservation of biological diversity.

Forest practices can have different impacts on various components of biological diversity, benefiting some while harming others. Given the variability of natural systems and the lack of any single measure of biological diversity, developing appropriate indicators to help monitor the effects of forest management interventions with a view to improving prevailing practices is a major challenge. Work is under way, however, to design indicators for application at the national and forest management unit levels.

If local people benefit from enterprises that depend on the sustainable use of forest resources, they can reasonably be expected to support the conservation of these ecosystems and the biological diversity contained in them. A study of 39 sites in Asia and the Pacific concluded that a community-based enterprise strategy can indeed lead to conservation, as long as it is linked to external factors such as market access and as long as the enterprise is able to adapt to changing circumstances.

For sustainable forest management to include efficient conservation of biological diversity, both firm government action and alliances with

stakeholders are needed. The exact combination of goods and services to be provided from a particular forested region should take into account balanced resource use on a national scale and should be defined based on dialogue among government, industry, academic institutions, local communities and NGOs.

### **Science and technology in the forest sector**

Improvements in science and technology are critical to the sustainable management of forests and their capacity to meet demand for goods and services. However, resources to maintain and strengthen research capacity are inadequate, with significant imbalances between developed and developing countries; government and industry; and different segments of the forest sector.

In many countries where forests could have a critical role in sustainable development and enhancing livelihoods, there is little research capacity. In addition, investment has traditionally gone towards improving wood production and processing technologies, so that other ecosystem functions and social dimensions, such as poverty alleviation, are often neglected. In many tropical countries, most forestry activities that involve a large number of people are in the informal sector, where there is very little investment in research. This raises the question of how the needs of small enterprises and local communities can be met, given their importance in providing basic goods, creating jobs and generating cash incomes.

If current weaknesses in forest science and technology persist, the gap between developed and developing countries is likely to widen. It will also be difficult to adopt sustainable forest management on a wider scale and to address the growing number of social and environmental issues related to forest resource use. Collaboration through networks can add value to research and development efforts. Some partnerships of this nature are making a positive difference, using limited resources effectively.

### **Recent trends in fiscal policies in the forest sector in Africa**

Public expenditure on forestry in Africa is lower than in other regions, and a lack of available financial resources suggests that sustainable forest management will not be achieved on the continent in the foreseeable future. However, some changes are suggested that might help to improve the situation: stressing the socio-economic benefits of forests; setting forest charges based on market mechanisms; moving towards simpler charges; decentralizing revenue collection and expenditure; sharing costs and benefits with local people; and transferring more control and ownership of forest resources to the private sector, including local communities.

The extent to which sustainable forest management can be financed from private sources depends very much on the profitability and risks associated with investing in the sector. In the few countries in Africa that have well-developed private operations, it may be possible to encourage the private sector to finance a significant portion of investment. However, most production is small-scale and informal, so it is unrealistic to expect producers to finance activities to any great extent. Thus, it seems likely that the public sector and public financing will continue to play an important part in sustainable forest management.

Added to other problems that Africa faces in the forest sector is HIV/AIDS. As more people succumb to the infection, household resources will decline drastically, increasing the dependence on forests. Traditional knowledge and skills will be lost with the deaths of many professionals and technicians. High absenteeism from employment and declining economic productivity will severely limit the capacity to manage forests sustainably, and public investment in forestry will decrease as precious financial resources are diverted to combat the disease.

### **CONCLUSION**

In recent years, despite high rates of deforestation in many regions, progress in

implementing sustainable forest management around the world has been steady and encouraging. However, if the full potential of forests and trees outside forests to provide environmental, economic, social and cultural benefits is to be realized, the pace of further improvements must be more rapid. Scientific and technological advances can do much to bring about required changes, but innovative partnerships within and across sectors are

perhaps more critical in the search for meaningful long-term solutions. WSSD witnessed the renewal of commitments, at the highest political level, to restore the health of the planet and to strengthen efforts to achieve sustainable development. The extent to which leaders stand behind the Johannesburg Declaration and translate the Plan of Implementation into action will be a test of their willingness to bring about positive results. ♦

