

Summary

This eighth biennial issue of *State of the World's Forests* considers the unfolding future of forests and forestry at the subregional, regional and global levels. Based on the most recent of FAO's periodic forest sector outlook studies, it examines the impacts that external factors such as demographic, economic, institutional and technological changes may have on forests. With globalization and improved communications, the regional scenarios will be increasingly interlinked. However, some countries and regions are better prepared to face the upcoming challenges and take advantage of emerging opportunities, while others still lack essential institutional, legal and economic conditions to manage their forest resources in a sustainable manner.

PART 1: REGIONAL OUTLOOK

Africa

The forest situation in Africa presents enormous challenges, reflecting the larger constraints of low income, weak policies and inadequately developed institutions. The growing population and rising prices of food and energy will exacerbate the situation, especially as increased investments in infrastructure open up new areas. Progress in implementing sustainable forest management is expected to be slow, with forest loss likely to continue at current rates.

The forest outlook will depend greatly on political and institutional developments – on improved efficiency and accountability in the public sector; greater inclusiveness, competitiveness and transparency in market institutions; and an informal sector that provides increased livelihood opportunities for the poor. Focusing on products and services required locally and globally and strengthening local institutions can be important ways of addressing forest resource depletion. Such efforts should build on local knowledge and experience of sustainable resource management integrating agriculture, animal husbandry and forestry.

Asia and the Pacific

Considering the great diversity in Asia and the Pacific, several scenarios are expected to unfold. While forest area will stabilize and increase in most of the developed countries and

some of the emerging economies, the low- and middle-income forest-rich countries will witness continuing declines as a result of expansion of agriculture, including the production of biofuel feedstock.

Demand for wood and wood products will continue to increase in line with the growth in population and income. Growth in the demand for primary commodities owing to rapid industrialization of emerging economies is likely to result in forest conversion in other countries within and outside the region. While the region is a leader in planted forest development, it will continue to depend on wood from other regions, as land and water constraints will limit the scope for self-sufficiency in wood and wood products. The demand for forest environmental services will increase as incomes rise, and conservation involving local communities is likely to receive greater emphasis.

Europe

Forest resources in Europe are expected to continue to expand in view of declining land dependence, increasing income, concern for protection of the environment and well-developed policy and institutional frameworks. The provision of environmental services will remain a primary concern, especially in Western Europe, and rules and regulations will make wood production less competitive than in other regions.

Forest management will continue to serve a wide variety of purposes. Economic viability is likely to remain a challenge, especially for small-scale forest owners, but the increased demand for woodfuel could change this. While the forest industry, especially in Western Europe, may continue to lose competitiveness with other regions in labour-intensive segments, it is likely to retain leadership in the production of technologically advanced products. Within the region, the differences in forestry between Eastern and Western Europe are likely to diminish as Eastern Europe catches up economically.

Latin America and the Caribbean

Forests and forestry in Latin America and the Caribbean will be influenced by the pace of economic diversification and changes in land dependence. In Central America

and the Caribbean, where population densities are high, increasing urbanization will cause a shift away from agriculture, forest clearance will decline and some cleared areas will revert to forest. However, in South America, the pace of deforestation is unlikely to decline in the near future despite low population density. High food and fuel prices will favour continued forest clearance for production of livestock and agricultural crops for food, feed and biofuel to meet the global demand. Sustainable forest management will continue to be a challenge in a number of countries where land tenure is poorly defined.

Latin America and the Caribbean has considerable opportunities to benefit from the growing demand for global public goods provided by forests, especially carbon sequestration and storage, but realizing the potential will require substantial improvements in policy and institutional frameworks. Planted forests will increase, promoted by private investments and continuing global demand for wood and wood products from Asia. However, it is unlikely that the increased planting rate will be sufficient to offset continuing deforestation.

North America

The near future of North American forestry will depend on how quickly the region reverses the recent economic downturn and its impact on the demand for wood and wood products, especially in the United States of America. The forest sector will also need to address challenges of climate change, including increasing frequency and severity of forest fires and damage by invasive pest species. Wood will be increasingly demanded as a source of energy, especially if cellulosic biofuel production becomes commercially viable; this development would likely result in much larger investments in planted forests.

Canada and the United States of America will continue to have fairly stable forest areas, although the divestment of woodlands owned by large forest companies could affect their management. In Mexico, changes in the deforestation rate will depend on the pace of transition from an agrarian to an industrial economy and reduced dependence on land as a source of income and employment. While the

economic viability of the forest industry may fluctuate and even decline, the provision of environmental services will continue to gain in importance, driven by public interest.

Western and Central Asia

The outlook for forests and forestry in Western and Central Asia is mixed. Income growth and urbanization suggest that the forest situation will improve or remain stable in some countries, but the picture is less promising for a number of low-income agriculture-dependent countries. Forest degradation will persist in countries that are relatively well off but have weak institutions. Overall, the forest sector is given low priority in public investments.

Adverse growing conditions limit the prospects for commercial wood production. Rapidly increasing incomes and high population growth rates suggest that the region will continue to depend on imports to meet demand for most wood products. Provision of environmental services will remain the main justification for forestry, especially arresting land degradation and desertification, protecting watersheds and improving the urban environment. Institution building, particularly at the local level, is needed in order to facilitate an integrated approach to resource management.

PART 2: ADAPTING FOR THE FUTURE

Global wood products demand

The income that owners derive from managing forests to meet the demand for goods and services is a primary determinant of investment in forest management. Demographic changes, economic growth, regional economic shifts and environmental and energy policies will be decisive in the long-term global demand for wood products.

Production and consumption of key wood products and wood energy are expected to rise from the present to 2030, largely following historical trends. The most dramatic change will be the rapid increase in the use of wood as a source of energy, particularly in Europe, as a result of policies promoting greater use of renewable energy. The highest growth rates will continue to be in Asia, which will

be the major producer and consumer of wood-based panels and paper and paperboard (although per capita consumption will remain higher in Europe and North America). Industrial roundwood production in Asia will be far short of consumption, increasing the dependence on imports.

The potential for large-scale commercial production of cellulosic biofuel will have unprecedented impacts on the forest sector. Increasing transport costs will also influence the demand for wood products. These factors and others, including changes in exchange rates, will influence the competitiveness of the forest sector and affect production and consumption of most forest products.

Industrial roundwood will be increasingly likely to come from planted forests in the future. This continuing shift presents interesting opportunities and challenges for forest management.

Meeting the demand for environmental services of forests

Growth in income coupled with greater awareness will increase the demand for environmental services provided by forests such as clean air and water, mitigation of climate change and unspoilt landscapes. While income growth also enhances the ability of society to meet the costs of environmental protection, economic growth is often accompanied by increased environmental impacts. In particular, countries with rapidly growing economies often go through a period when forest resources are exploited and their environmental services decline accordingly. Maintaining forest environmental services requires striking a balance between the production of goods and the provision of services.

Regulatory approaches for helping to secure forests' ability to meet the demand for environmental services include protected areas, instruments for sustainable forest management and green public procurement policies.

Market approaches include certification, carbon markets and payments for environmental services (PES). Third-party certification of forests will continue to spread, although obtaining a premium to cover implementation costs remains a challenge. Systems for providing appropriate payments to forest owners as a means of supporting forest conservation are receiving considerable attention; they have long existed for recreational services and are now being adopted for watershed protection, biodiversity conservation and carbon sequestration. Such schemes are expected to increase in number; stable institutional and legal frameworks are a prerequisite for their success.

Ongoing discussions about including options for reducing emissions from deforestation and forest degradation (REDD) in global climate change negotiations have raised many hopes. However, providing incentives to desist from deforestation involves complex policy, institutional and ethical issues that must be considered.

Changing institutions

The shifting balance among forest sector institutions – public agencies, the private sector, civil-society organizations, the informal sector and international organizations – will play an important part in society's adaptation to social, economic and environmental change. With the emergence of new players, the institutional landscape has become more complex. In general (although not in all countries), the playing field is becoming more level, partly as a result of new information and communication technologies. Much-needed pluralism provides new opportunities for small and medium enterprises and community organizations. If government forestry agencies that have historically dominated the scene fail to adapt to change, they could fade into irrelevance.

With the increasing pace of globalization, new players such as timber investment management organizations (TIMOs), real estate investment trusts (REITs), sovereign wealth funds and carbon-trading institutions could alter the global institutional map. Institutions will face tremendous pressure to balance fragmentation and to consolidate efforts.

Developments in forest science and technology

Visualizing the future of forest science and technology is difficult given the rapid pace of change. Innovation has significantly improved the capacity of the forest sector to meet the changing demands of society and will continue to do so. However, many developing countries have little or no credible science capacity, and this lack hinders their long-term development. Even in many developed countries, forest science and technology capacities have eroded.

However, research continues to break new ground in all areas of forestry, from production, harvesting and processing to wood energy and the provision of environmental services. Relatively new fields such as biotechnology, nanotechnology and information and communication technologies contribute to these developments. The value of indigenous knowledge is increasingly being recognized.

The growth of commercially driven private-sector research and the declining capacity of public-sector research raise a number of issues. Vast populations that cannot afford to pay for improved technologies are often excluded from the benefits of private-sector research. This accentuates disparities in access to knowledge, with consequences for income and living standards.

More concerted efforts are needed to address imbalances and deficiencies in scientific and technological capacity. Challenges include reducing barriers to the flow of technologies among and within countries, ensuring that social and environmental issues are mainstreamed, and transcending traditional sectoral boundaries to take advantage of scientific and technological developments outside the forest sector.

Postscript: challenges and opportunities in turbulent times

As *State of the World's Forests 2009* goes to press (late 2008), the world is experiencing a steep economic decline. The contraction of the housing sector and the subprime mortgage crisis in the United States of America have severely affected financial markets, triggering an economic slowdown involving almost all countries and transforming previously upbeat economic forecasts.

What impacts will these changes have on the forest sector? The collapse of the housing sector has reduced the demand for a wide array of wood and wood products, leading to mill closures and unemployment. New investments are slowing as a result, affecting all wood industries.

The demand for environmental services has also changed as a result of reduced ability and willingness to pay for such services. Carbon prices have remained highly volatile. Future climate change arrangements may face challenges as countries give priority to tackling the economic crisis.

Potential negative impacts on forest resources could include reduced investment in sustainable forest management and a rise in illegal logging as the decline

in the formal economic sector opens opportunities for expansion of the informal sector. Land dependence, which had been easing, could increase, raising the risk of agricultural expansion into forests, deforestation and reversal of previous forest gains. However, there could also be positive impacts – reduced wood demand could lessen pressure on forests, while conversion of forest for large-scale cultivation of commercial crops such as oil-palm, soybeans and rubber could slow as their prices fall.

It is impossible to know when the global economy will begin to recover. However, such crises also offer opportunities to chart new paths of development. The forest sector could benefit from the pursuit of a “green path” to development – through building up of natural resource capital (e.g. through afforestation and reforestation and increased investments in sustainable forest management), generation of rural employment and active promotion of wood in green building practices and renewable energy. Certainly, this change of path will require fundamental institutional changes, but the crisis may bring about greater willingness to accept and implement long-overdue reforms.