

This chapter refers to the four programme areas resulting from the negotiations held at the fourth session of the Preparatory Committee.

A Sustaining the multiple roles and functions of all types of forests, forest lands and woodlands

Basis for action There are major weaknesses in the policies, methods and mechanisms adopted to support and develop the multiple ecological, economic, social and cultural roles of trees, forests and forest lands. Many developed countries are confronted with the effects of air pollution and fire damage on their forests. More effective measures and approaches are often required at the national level to improve and harmonize policy formulation, planning and programming; legislative measures and instruments; development patterns; participation of the general public, especially women and indigenous people; involvement of youth; roles of the private sector, local organizations, non-governmental organizations and cooperatives; development of technical and multidisciplinary skills and quality of human resources; forestry extension and public education; research capability and support; administrative structures and mechanisms, including intersectoral coordination, decentralization and responsibility and incentive systems; and dissemination of information and public relations. This is especially important to ensure a rational and holistic approach to the sustainable and environmentally sound development of forests. The need for securing the multiple roles of forests and forest lands through adequate and appropriate institutional strengthening has been repeatedly emphasized in many of the reports, decisions and recommendations of FAO, ITTO, UNEP, the World Bank, IUCN and other organizations.

Objectives

- a** To strengthen forest-related national institutions, to enhance the scope and effectiveness of activities related to the management, conservation and sustainable development of forests, and to effectively ensure the sustainable utilization and production of forests' goods and services in both the developed and the developing countries; by the year 2000, to strengthen the capacities and capabilities of national institutions to enable them to acquire the necessary knowledge for the protection and conservation of forests, as well as to expand their scope and, correspondingly, enhance the effectiveness of programmes and activities related to the management and development of forests;
- b** To strengthen and improve human, technical and professional skills, as well as expertise and capabilities to effectively formulate and implement policies, plans, programmes, research and projects on management, conservation and sustainable development of all types

of forests and forest-based resources, and forest lands inclusive, as well as other areas from which forest benefits can be derived.

Management-related activities Governments at the appropriate level, with the support of regional, subregional and international organizations, should, where necessary, enhance institutional capability to promote the multiple roles and functions of all types of forests and vegetation inclusive of other related lands and forest-based resources in supporting sustainable development and environmental conservation in all sectors. This should be done, wherever possible and necessary, by strengthening and/or modifying the existing structures and arrangements, and by improving cooperation and coordination of their respective roles. Some of the major activities in this regard are as follows:

- a** Rationalizing and strengthening administrative structures and mechanisms, including provision of adequate levels of staff and allocation of responsibilities, decentralization of decision-making, provision of infrastructural facilities and equipment, intersectoral coordination and an effective system of communication;
- b** Promoting participation of the private sector, labour unions, rural cooperatives, local communities, indigenous people, youth, women, user groups and non-governmental organizations in forest-related activities, and access to information and training programmes within the national context;
- c** Reviewing and, if necessary, revising measures and programmes relevant to all types of forests and vegetation, inclusive of other related lands and forest-based resources, and relating them to other land uses and development policies and legislation; promoting adequate legislation and other measures as a basis against uncontrolled conversion to other types of land uses;
- d** Developing and implementing plans and programmes, including definition of national and, if necessary, regional and subregional goals, programmes and criteria for their implementation and subsequent improvement;
- e** Establishing, developing and sustaining an effective system of forest extension and public education to ensure better awareness, appreciation and management of forests with regard to the multiple roles and values of trees, forests and forest lands;
- f** Establishing and/or strengthening institutions for forest education and training, as well as forestry industries, for developing an adequate cadre of trained and skilled staff at the professional, technical and vocational levels, with emphasis on youth and women;
- g** Establishing and strengthening capabilities for research related to the different aspects of forests and forest products, for example, on the sustainable management of forests, research on biodiversity, on the effects of air-borne pollutants, on traditional uses of

forest resources by local populations and indigenous people, and on improving market returns and other non-market values from the management of forests.

Financial and cost evaluation \$2.5 billion, including about \$860 million from the international community on grant or concessional terms.

B Enhancing the protection, sustainable management and conservation of all forests, and the greening of degraded areas, through forest rehabilitation, afforestation, reforestation and other rehabilitative means

Basis for action Forests world-wide have been and are being threatened by uncontrolled degradation and conversion to other types of land uses, influenced by increasing human needs; agricultural expansion; and environmentally harmful mismanagement, including, for example, lack of adequate forest-fire control and anti-poaching measures, unsustainable commercial logging, overgrazing and unregulated browsing, harmful effects of airborne pollutants, economic incentives and other measures taken by other sectors of the economy. The impacts of loss and degradation of forests are in the form of soil erosion; loss of biological diversity, damage to wildlife habitats and degradation of watershed areas, deterioration of the quality of life and reduction of the options for development.

The present situation calls for urgent and consistent action for conserving and sustaining forest resources. The greening of suitable areas, in all its component activities, is an effective way of increasing public awareness and participation in protecting and managing forest resources. It should include the consideration of land use and tenure patterns and local needs and should spell out and clarify the specific objectives of the different types of greening activities.

Objectives

- a** To maintain existing forests through conservation and management, and sustain and expand areas under forest and tree cover, in appropriate areas of both developed and developing countries, through the conservation of natural forests, protection, forest rehabilitation, regeneration, afforestation, reforestation and tree planting, with a view to maintaining or restoring the ecological balance and expanding the contribution of forests to human needs and welfare;
- b** To prepare and implement, as appropriate, national

forestry action programmes and/or plans for the management, conservation and sustainable development of forests. These programmes and/or plans should be integrated with other land uses. In this context, country-driven national forestry action programmes and/or plans under the Tropical Forestry Action Programme are currently being implemented in more than 80 countries, with the support of the international community;

c To ensure sustainable management and, where appropriate, conservation of existing and future forest resources;

d To maintain and increase the ecological, biological, climatic, socio-cultural and economic contributions of forest resources;

e To facilitate and support the effective implementation of the non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests, adopted by the United Nations Conference on Environment and Development, and on the basis of the implementation of these principles to consider the need for and the feasibility of all kinds of appropriate internationally agreed arrangements to promote international cooperation on forest management, conservation and sustainable development of all types of forests including afforestation, reforestation, and rehabilitation.

Management-related activities Governments should recognize the importance of categorizing forests, within the framework of long-term forest conservation and management policies, into different forest types and setting up sustainable units in every region/watershed with a view to securing the conservation of forests. Governments, with the participation of the private sector, non-governmental organizations, local community groups, indigenous people, women, local government units and the public at large, should act to maintain and expand the existing vegetative cover wherever ecologically, socially and economically feasible, through technical cooperation and other forms of support. Major activities to be considered include:

- a** Ensuring the sustainable management of all forest ecosystems and woodlands, through improved proper planning, management and timely implementation of silvicultural operations, including inventory and relevant research, as well as rehabilitation of degraded natural forests to restore productivity and environ-

When aborigines used fire to open up this Australian forest land it resulted in trees and shrubs resistant to fire damage colonizing the forests. The fire also assisted some seeds to germinate.



A stark aerial image of ancient forest in Washington State, USA. Below: This Amazonian land has been forest for 60 million years. It is now barren having suffered the effects of soil erosion when it was cleared.

mental contributions, giving particular attention to human needs for economic and ecological services, wood-based energy, agroforestry, non-timber forest products and services, watershed and soil protection, wildlife management, and forest genetic resources;

b Establishing, expanding and managing, as appropriate to each national context, protected area systems, which includes systems of conservation units for their environmental, social and spiritual functions and values, including conservation of forests in representative ecological systems and landscapes, primary old-growth forests, conservation and management of wildlife, nomination of World Heritage Sites under the World Heritage Convention, as appropriate, conservation of genetic resources, involving in/situ and ex situ measures and undertaking supportive measures to ensure sustainable utilization of biological resources and conservation of biological diversity and the traditional forest habitats of indigenous people, forest dwellers and local communities;

c Undertaking and promoting buffer and transition zone management;

d Carrying out revegetation in appropriate mountain areas, highlands, bare lands, degraded farm lands, arid and semi-arid lands and coastal areas for combating desertification and preventing erosion problems and for other protective functions and national programmes for rehabilitation of degraded lands, including community forestry, social forestry, agroforestry and silviculture, while also taking into account the role of forests as national carbon reservoirs and sinks;

e Developing industrial and non-industrial planted forests in order to support and promote national ecologically sound afforestation and reforestation/regeneration programmes in suitable sites, including upgrading of existing planted forests of both industrial and non-industrial and commercial purpose to increase their contribution to human needs and to offset pressure on primary/old growth forests. Measures should be taken to promote and provide intermediate yields and to improve the rate of returns on investments in planted forests, through interplanting and underplanting valuable crops;

f Developing/strengthening a national programme and/or master plan for planted forests as a priority, indicating, *inter alia*, the location, scope and species, and specifying areas of existing planted forests requiring rehabilitation, taking into account the economic aspect for future planted forest development, giving emphasis to native species;

g Increasing the protection of forests from pollutants, fire, pests and diseases and other human-made interferences such as forest poaching, mining and unmitigated shifting cultivation, the uncontrolled introduction of exotic plant and animal species, as well as developing and accelerating research for a better understanding of problems relating to the management and regeneration of all types of forests; strengthening and/or establishing appropriate measures to assess and/or check inter-border movement of plants and related materials;

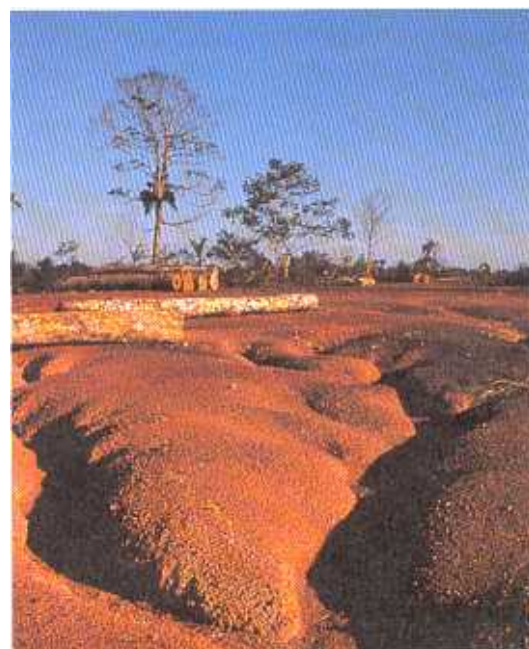
h Stimulating development of urban forestry for the greening of urban, peri-urban and rural human settlements for amenity, recreation and production purposes and for protecting trees and groves;

i Launching or improving opportunities for participation of all people, including youth, women, indigenous people and local communities in the formulation, development and implementation of forest-related programmes and other activities, taking due account of the local needs and cultural values;

j Limiting and aiming to halt destructive shifting cultivation by addressing the underlying social and ecological causes.



DANIEL DAVIES/ISTOCK PHOTOS



Financial and cost evaluation \$10 billion, including about \$3.7 billion from the international community on grant or concessional terms.

C Promoting efficient utilization and assessment to recover the full valuation of the goods and services provided by forests, forest lands and woodlands

Basis for action The vast potential of forests and forest lands as a major resource for development is not yet fully realized. The improved management of forests can increase the production of goods and services and, in particular, the yield of wood and non-wood forest products, thus helping to generate additional employment and income, additional value through processing and trade of forest products, increased contribution to foreign exchange earnings, and increased return on investment. Forest resources, being renewable, can be sustainably managed in a manner that is compatible with environmental conservation. The implications of the harvesting of forest resources for the other values of the forest should be taken fully into consideration in the development of forest policies. It is also possible to increase the value of forests through non-damaging uses such as eco-tourism and the managed supply of

For the developing countries, environmental protection is closely linked with the fight against poverty. When we speak of sustainable development, we are thinking of economic growth with social equity and preservation and care for natural resources. In the last decade the world has shown its capacity to reach agreements which only yesterday seemed impossible. It requires awareness, imagination and generosity to harmonize interests and make common welfare prevail. International agreement on the environment is possible and we can and must reach it. The destiny of mankind depends on it.

H.E. Mr Patricio Aylwin Azocar
President
The Republic of Chile

genetic materials. Concerted action is needed in order to increase people's perception of the value of forests and of the benefits they provide. The survival of forests and their continued contribution to human welfare depends to a great extent on succeeding in this endeavour.

Objectives

- a** To improve recognition of the social, economic and ecological values of trees, forests and forest lands, including the consequences of the damage caused by the lack of forests; to promote methodologies with a view to incorporating social, economic and ecological values of trees, forests and forest lands into the national economic accounting systems; to ensure their sustainable management in a way that is consistent with land use, environmental considerations and development needs;
- b** To promote efficient, rational and sustainable utilization of all types of forests and vegetation inclusive of other related lands and forest-based resources, through the development of efficient forest-based processing industries, value-adding secondary processing and trade in forest products, based on sustainably managed forest resources and in accordance with plans that integrate all wood and non-wood values of forests;
- c** To promote more efficient and sustainable use of forests and trees for fuelwood and energy supplies;
- d** To promote more comprehensive use and economic contributions of forest areas by incorporating eco-tourism into forest management and planning.

Management-related activities Governments, with the support of the private sector, scientific institutions, indigenous people, non-governmental organizations, cooperatives and entrepreneurs, where appropriate, should undertake the following activities, properly coordinated at the national level, with financial and technical cooperation from international organizations:

- a** Carrying out detailed investment studies, supply-demand harmonization and environmental impact analysis to rationalize and improve trees and forest utilization and to develop and establish appropriate incentive schemes and regulatory measures, including tenurial arrangements, to provide a favourable investment climate and promote better management;
- b** Formulating scientifically sound criteria and guidelines for the management, conservation and sustainable development of all types of forests;
- c** Improving environmentally sound methods and practices of forest harvesting, which are ecologically sound and economically viable, including planning and management, improved use of equipment, storage and transportation to reduce and, if possible, maximize the use of waste and improve value of both wood and non-wood forest products;
- d** Promoting the better use and development of natural forests and woodlands, including planted forests, wherever possible, through appropriate and environmentally sound and economically viable activities, including silvicultural practices and management of other plant and animal species;
- e** Promoting and supporting the downstream processing of forest products to increase retained value and other benefits;
- f** Promoting/popularizing non-wood forest products and other forms of forest resources, apart from fuelwood (e.g., medicinal plants, dyes, fibres, gums, resins, fodder, cultural products, rattan, bamboo) through programmes and social forestry/participatory forest activities, including research on their processing and uses;
- g** Developing, expanding and/or improving the effectiveness and efficiency of forest-based processing industries, both wood and non-wood based, involving such aspects as efficient conversion technology and

improved sustainable utilization of harvesting and process residues; promoting underutilized species in natural forests through research, demonstration and commercialization; promoting value-adding secondary processing for improved employment, income and retained value; and promoting/improving markets for, and trade in, forest products through relevant institutions, policies and facilities;

- h** Promoting and supporting the management of wildlife, as well as eco-tourism, including farming, and encouraging and supporting the husbandry and cultivation of wild species, for improved rural income and employment, ensuring economic and social benefits without harmful ecological impacts;
- i** Promoting appropriate small-scale forest-based enterprises for supporting rural development and local entrepreneurship;
- j** Improving and promoting methodologies for a comprehensive assessment that will capture the full value of forests, with a view to including that value in the market-based pricing structure of wood and non-wood based products;
- k** Harmonizing sustainable development of forests with national development needs and trade policies that are compatible with the ecologically sound use of forest resources, using, for example, the ITTO Guidelines for Sustainable Management of Tropical Forests;
- l** Developing, adopting and strengthening national programmes for accounting the economic and non-economic value of forests.

Financial and cost evaluation \$18 billion, including about \$880 million from the international community on grant or concessional terms.

D Establishing and/or strengthening capacities for the planning, assessment and systematic observations of forests and related programmes, projects and activities, including commercial trade and processes

Basis for action Assessment and systematic observations are essential components of long-term planning, for evaluating effects, quantitatively and qualitatively, and for rectifying inadequacies. This mechanism, however, is one of the often neglected aspects of forest resources, management, conservation and development. In many cases, even the basic information related to the area and type of forests, existing potential and volume of harvest is lacking. In many developing countries, there is a lack of structures and mechanisms to carry out these functions. There is an urgent need to rectify this situation for a better understanding of the role and importance of forests and to realistically plan for their effective conservation, management, regeneration, and sustainable development.

Objectives

- a** To strengthen or establish systems for the assessment and systematic observations of forests and forest lands with a view to assessing the impacts of programmes, projects and activities on the quality and extent of forest resources, land available for afforestation, and land tenure, and to integrate the systems in a continuing process of research and in-depth analysis, while ensuring necessary modifications and improvements for planning and decision-making. Specific emphasis should be given to the participation of rural people in these processes;
- b** To provide economists, planners, decision makers and local communities with sound and adequate updated information on forests and forest land resources.

Management-related activities Governments and institutions, in collaboration, where necessary, with

Top: Food from the forest - just one of the many valuable forest based resources.

Middle: the promotion of efficient, rational and sustainable utilization of all types of forest, and not just for the provision of

Bottom: demonstrators express their concern over the logging of Brazilian forests outside the Brazilian Embassy in London, England.



appropriate international agencies and organizations, universities and non-governmental organizations, should undertake assessments and systematic observations of forests and related programmes and processes with a view to their continuous improvement. This should be linked to related activities of research and management and, wherever possible, be built upon existing systems. Major activities to be considered are:

- a** Assessing and carrying out systematic observations of the quantitative and qualitative situation and changes of forest cover and forest resources endowments, including land classification, land use and updates of its status, at the appropriate national level, and linking this activity, as appropriate, with planning as a basis for policy and programme formulation;
- b** Establishing national assessment and systematic observation systems and evaluation of programmes and processes, including establishment of definitions, standards, norms and intercalibration methods, and the capability for initiating corrective actions as well as improving the formulation and implementation of programmes and projects;
- c** Making estimates of impacts of activities affecting forestry developments and conservation proposals, in terms of key variables such as developmental goals, benefits and costs, contributions of forests to other sectors, community welfare, environmental conditions and biological diversity and their impacts at the local, regional and global levels, where appropriate, to assess the changing technological and financial needs of countries;
- d** Developing national systems of forest resource assessment and valuation, including necessary research and data analysis, which account for, where possible, the full range of wood and non-wood forest products and services, and incorporating results in plans and strategies and, where feasible, in national systems of accounts and planning;
- e** Establishing necessary intersectoral and programme linkages, including improved access to information, in order to support a holistic approach to planning and programming.

Financial and cost evaluation \$750 million, including about \$230 million from the international community on grant or concessional terms.