

# *OUR* FORESTS



# *OUR* FUTURE



SUMMARY REPORT

OF THE WORLD COMMISSION ON FORESTS AND SUSTAINABLE DEVELOPMENT



## Summary Report World Commission on Forests and Sustainable Development

Edited by Ajit Krishnaswamy and Arthur Hanson  
Produced by Ian Darragh Communications  
Design: EarthLore Communications

Published by the World Commission on Forests and Sustainable Development  
ISBN 0-9685191-0-5  
Cdn. Cataloguing and Publication Data (CIP) available from  
the National Library of Canada, NLC No. C99-920080-1

For additional copies of this Summary Report, please contact:

World Commission on Forests and Sustainable Development (WCFSD)  
c/o International Institute for Sustainable Development (IISD)  
161 Portage Avenue East, 6th Floor  
Winnipeg, Manitoba, Canada R3B 0Y4

PHONE: (204) 958-7700 FAX: (204) 958-7710  
E-MAIL: [wcfspd@iisd.ca](mailto:wcfspd@iisd.ca)  
WEB: <http://iisd.ca/wcfspd>

For copies of the full report, contact either WCFSD, or  
Cambridge University Press  
The Edinburgh Building, Cambridge CB2 2RU, UK  
<http://www.cup.cam.ac.uk>  
40 West 20th Street, New York, NY 10011-4211, USA  
<http://www.cup.org>  
10 Stamford Road, Oakleigh, Melbourne 3166, Australia

© World Commission on Forests and Sustainable Development, 1999

### Photo Credits

Front cover: Indonesia, CIDA Photo: Virginia Boyd  
Back cover: Brazil, H. J. Burkard/First Light  
St. Lucia, CIDA Photo: Dilip Mehta



Printed on Recycled Paper

# OUR FORESTS

---

# OUR FUTURE

## Table of Contents

Summary Recommendations.....	2
Foreword: Choosing Sustainability.....	4
Forests in Crisis.....	6
Roots of the Crisis.....	10
Public and Private Interest.....	14
A Citizens' Force Called FORESTRUST.....	18
Managing Forests Sustainably.....	20
Sustaining Forests <i>and</i> Development.....	23
International Dimensions of Forests.....	26
Towards a Forest Capital Index.....	28
A Forest Security Council.....	29
Conclusion: The Fate of the Forest is in Our Hands.....	30
References.....	31
Glossary.....	32
Acknowledgments.....	35
Members of the Commission.....	36
An Invitation.....	37

## Summary Report

## World Commission on Forests and Sustainable Development



Sweden, Jan Tove Johansson/Masterfile



# Summary

## Recommendations

- 1** Stop the destruction of the earth's forests: their material products and ecological services are severely threatened.
- 2** Use the world's rich forest resources to improve life for poor people and for the benefit of forest-dependent communities.
- 3** Put the public interest first and involve people in decisions about forest use.
- 4** Get the price of forests right, to reflect their full ecological and social values, and to stop harmful subsidies.
- 5** Apply sustainable forest management approaches so we may use forests without abusing them.
- 6** Develop new measures of forest capital so we know whether the situation is improving or worsening.
- 7** Plan for the use and protection of whole landscapes, not the forest in isolation.
- 8** Make better use of knowledge about forests, and greatly expand this information base.
- 9** Accelerate research and training so sustainable forest management can become a reality quickly.
- 10** Take bold political decisions and develop new civil society institutions to improve governance and accountability regarding forest use.



Virginia Boyd/CIDA

*Above: clear-cut on a steep mountainside in Malaysia will lead to severe erosion and flooding.*

*Right: with tears of frustration, Antonio Lopes da Silva watches an out-of-control brush fire burn across his pasture land near Carajas, Brazil. The fire was started by ranchers clearing the rainforest.*



Joanna B. Pinneo/Aurora



## From the Co-Chairmen's Foreword

# Choosing Sustainability

*“The costs will become overwhelming, the longer we delay taking action.”*

We are drawing on the world's natural capital far more rapidly than it is regenerating. Rather than living on the “interest” of the “natural capital,” we are borrowing from poorer communities and from future generations.

In this report, the World Commission on Forests and Sustainable Development proposes a plan for how the world's forests can be used without being abused, and outlines what it takes in terms of policies and institutions for such a plan to be implemented.

The Commission appreciated that the complex intertwining of the earth's ecology, the world's economy, and the well being of its people is tied up with considerations about power and poverty and equity. Consequently, the Commission sought out the opinions of those whose lives are directly connected with forests. It did this through five public hearings held in Asia, Africa, Europe, Latin America and the Caribbean, and North America.

We met with forest dwelling and other local communities in developing countries who are directly dependent on forests for their economic, social, cultural and spiritual well-being. We listened to farmers from countries in the North and South who rely on forests for agricultural productivity and sustenance. We heard executives from forest industries in different parts of the world and their employees who supply wood products to society.

We took careful note of what scientists, economists, foresters, government officials and other specialists involved in national and international forest policy had to say.



Stephen Homer/CIDA

We listened to and read written submissions from individuals and community-based organizations and met with national and international NGOs.

Contributions from these groups, all of which have their stake in the future of the world's

forests, form the basis of the Commission's conclusion and recommendations. Most of these submissions support the Commission's conclusion that we are faced with a forest crisis with many dimensions. These range from highly visible barren, degraded lands in many developing countries to the less visible loss of biodiversity, forest decline, and negative impacts on global ecological cycles such as climate change.

In whatever form the crisis appears, it needs our urgent attention. We have a choice to make. Do we want to continue on a path of unsustainable development, depleting our natural capital? Or are we willing to risk a change in direction towards sustainable development that may involve some short-term political risks?

The report suggests that at this juncture a change in direction is still economically and politically possible. But the costs will become overwhelming, the longer we delay taking action. To facilitate this change, the Commission advocates radical reform of policies, calls for a new political agenda, greater civil society involvement and more science in policy-making.

Ola Ullsten  
Emil Salim



*With women taking the lead, village co-ops are managing tree nurseries in India, and have planted forests on what used to be barren land. They are already seeing the benefits: less flooding because the trees retain moisture in the soil; selective harvesting provides fuel for cooking and lumber for house construction.*



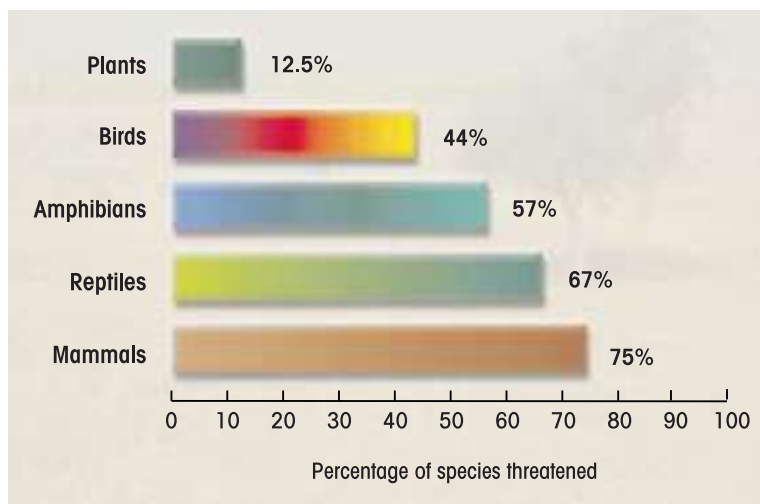
# 1 Forests in Crisis

Over the last two decades of the 20th century, rapid deforestation has taken its toll—some 15 million hectares of forests are lost annually, largely in the tropics. It is also clear that the structural integrity of much of the forest cover that remains has deteriorated. The facts are startling:

- Forests have virtually disappeared in 25 countries; 18 have lost more than 95% of their forests and another 11 have lost 90%.
- The highest current estimate of the world's remaining forested areas is about 3.6 billion hectares from an originally forested area of more than 6.0 billion hectares. The loss can be seen by comparing the maps in Figures 1.2 and 1.3. Primary forests have undergone the greatest transition.
- About 14 million hectares of tropical forests have been lost each year since 1980 as a result of changes in land-use from forest to agriculture.
- Forest decline threatens the genetic diversity of the world's plants and animals. The World Conservation Union recently calculated that about 12.5% of the world's 270,000 species of plants, and about 75% of the world's mammals are threatened by forest decline (see Figure 1.1).

Fig.1.1  
*Species threatened by the decline of forests and other natural habitat.*

Source: IUCN, 1996; IUCN, 1997



- In developing countries alone, some US\$ 45 billion per year are lost through poor forest management.
- A study carried out in 1995 suggests that the direct causes for decline in forest quality in Europe are drought, heat, pests, and a legacy of silvicultural errors. Air pollution is identified as an indirect cause of forest decline. As a result, more than one-quarter of Europe's trees show signs of significant leaf-loss. Annual European survey results show the number of completely healthy trees falling from 69% in 1988 to 39% in 1995 (EC-UN/ECE, 1996). A 1997 EC-UN/ECE study classified more than half of Europe's forests as "damaged."

The decline is relentless. We suspect it could change the very character of the planet and of the human enterprise within a few years unless we make some choices.

## Forests and Sustainable Development

It is the linkage between forests and sustainable development that motivated the Commission and those who contributed to its public hearings. There is a high level of understanding that as the health of a forest deteriorates, all of its functions and services are threatened: the protection of watersheds, the habitat it provides to maintain biodiversity, and its role in storing carbon, for example. The effects on environment, economy and society interconnect and affect one another, compounding cause and effect, transcending national boundaries, and undermining our ability to sustain forests and development. People understand these issues, worry about them, and are increasingly willing to change the way things are done.

Forests must and will be used to feed, clothe, house and otherwise satisfy basic human needs. Human demands on forests are



set to increase exponentially, not just from increase in human numbers, but also from our pattern and level of consumption, the nature of our technology for forest exploitation, our aspirations for growth and increase in wealth.

The implication for forests is that with business as usual their decline will continue. There will be further erosion of the capital resources of the earth, further reduction in the capacity of countries to meet their development needs in a sustained way, and social and political unrest related to land use.

#### The Commission concludes:

- forests can no longer be used in the same way as they have been in the past
- forest products and services must be assured through new political choices and policy decisions that ensure the survival of forests.

### The Forest Crisis Requires Radical and Urgent Action

We face a stark choice. We can either continue with current approaches that threaten the health and survival of forests. Or we can choose a path that respects and reflects the many values of forests while still recognizing their role in raising material standards of living—sustaining both forests and development. The longer the choice is delayed, the more costly the transition. We have to make radical adjustments in policies and practices in order to sustain both forests and economic development, and do so with urgency.

#### The Commission recommends:

- halting further destruction or degradation of remaining primary forests, in order to secure their environmental services for all societies and species;
- improving the allocation and management of forest lands for different purposes: conservation, production, community-based forestry;
- intensifying wood production through expansion of plantation forestry on degraded and vacant lands and improved productivity in secondary forests;
- reducing pressure on forest land for agriculture through improved productivity in farming;
- providing more extensive support to community based agro-forestry in order to reduce the pressure on primary forests for supplying subsistence products.



Hélène Tremblay/CIDA

*Clearing old-growth forest for farming in St. Lucia, West Indies.*

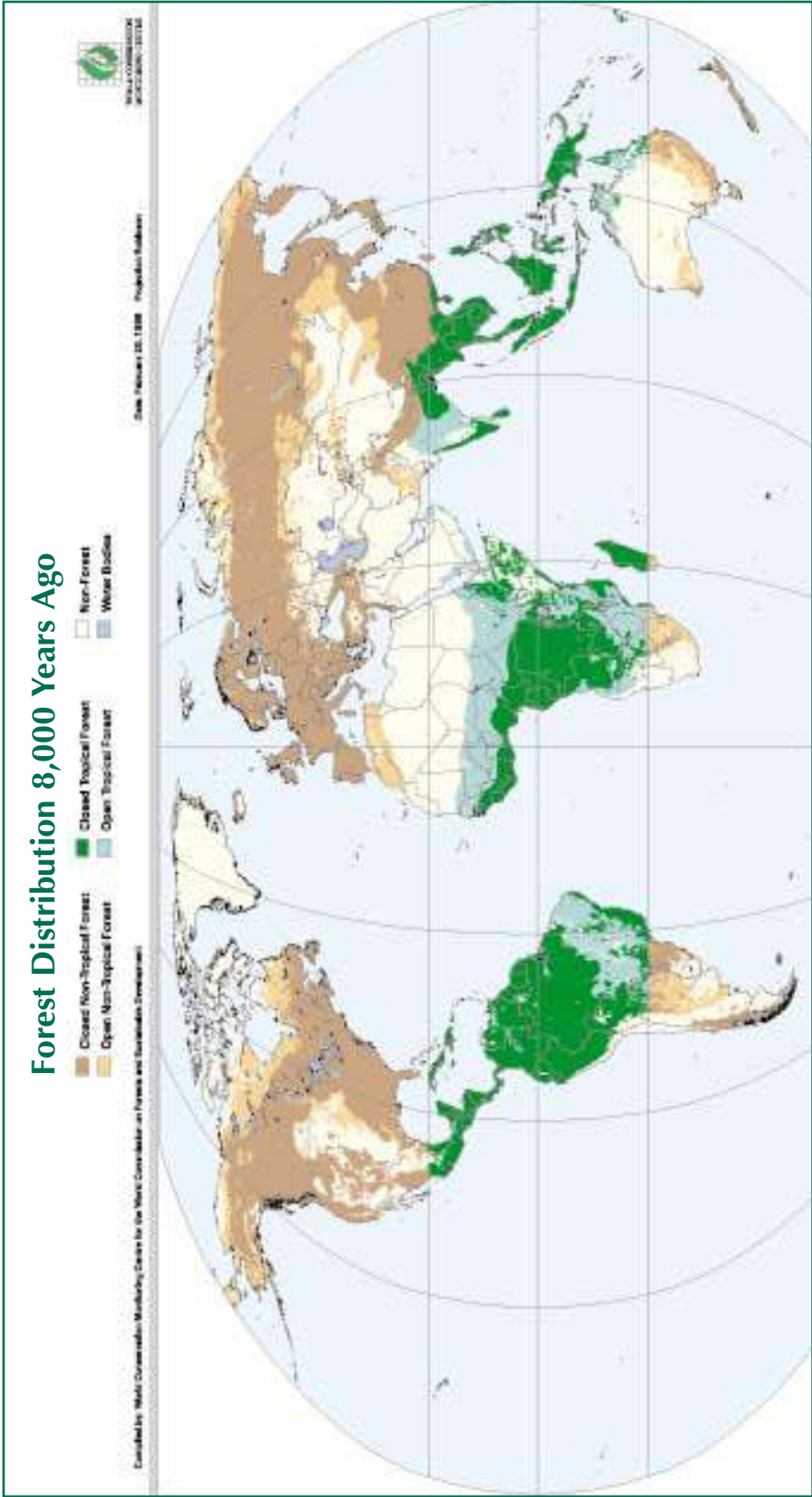


Fig. 1.2

## Forest Distribution Today

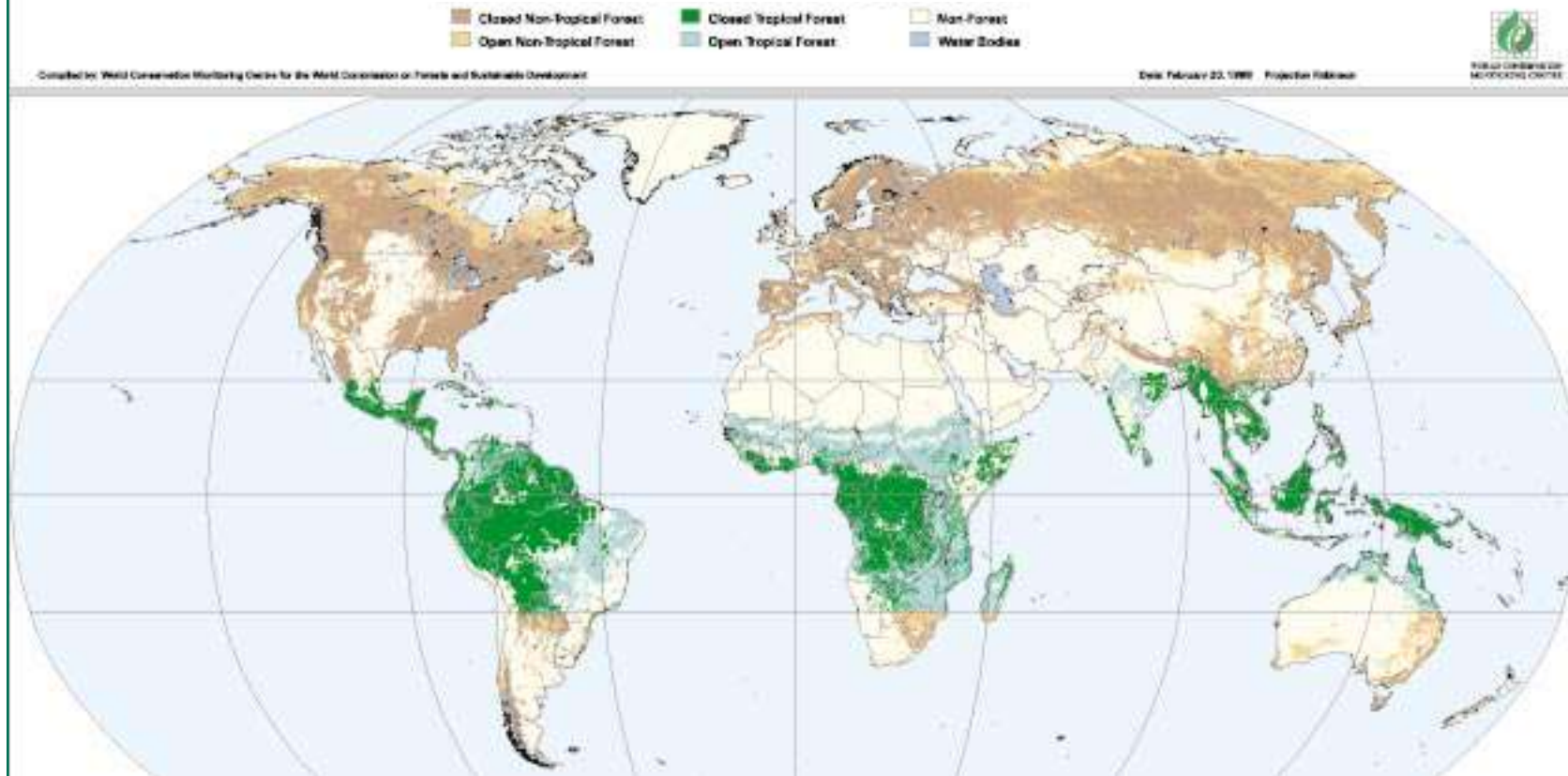
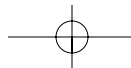


Fig. 1.3  
*The highest current estimate of the world's remaining forested areas is about 3.6 billion hectares from an originally forested area of more than 6 billion hectares.*





## 2 Roots of the Crisis

*“Forests are being squandered through subsidized activity and wholly marginal uses.”*

A complex set of forces causes forests to decline. Some are easily visible. For example, the ways in which timber is over-harvested, or forestland converted to agricultural use. Others are less visible underlying or root causes. But their destructive effects on forests are no less real.

These underlying forces are embedded in how we organize our economic and political systems, and in governance structures that emphasize private gain over the public interest. They permit policies, patterns of use, and distribution of benefits from forests that ignore the needs of those who lack political and economic power.

These economic and political arrangements cause forests to be used as if they had only the limited purpose of supplying consumables for human society. Forests are being squandered through subsidized activity and wholly marginal uses without concern for sustaining the other basic human need for a stable and secure environment. Underlying all is an ethical failure expressed through corrupt and illegal practices, and through greed and inequality in sharing of forest wealth.

The Commission considers these root causes to be of immense importance. They are why we see so many bad decisions about forest use.

### Forces Causing Forest Decline

The Commission emphasizes the ways in which missing markets distort investment and economic decisions away from conservation and towards extinction of forests. The Commission also analyzed how government policies relating to timber concessions, subsidies, land ownership and tenure lead to forest decline.

#### 1. Missing markets

Much of the real value of forests is not reflected in the calculations governing investment and management decisions about forests. Typically, the main economic value assigned to forests is the value of the timber produced. Market mechanisms today do not value the environmental and ecological services which forests provide to maintain a stable landscape and atmosphere. Markets do

#### Box 2.1

##### EXAMPLES OF POLICIES WHICH CONTRIBUTE TO FOREST DECLINE

- Timber concession terms which under-price wood, encourage waste or condone poor forestry practices
- Subsidies that encourage destructive forestry or forest land conversion to other uses
- Policies that require forest land clearing as a condition for obtaining legal titles to land ownership
- Road construction into forest areas
- Resettlement programs in forest areas
- In some cases, log export bans that may reduce domestic prices of wood, and therefore reduce incentives to plant trees and also lead to conversion of natural forest lands to other uses
- Subsidies to industrial wood processing that lead to economic inefficiency
- Plantation subsidies that may induce natural forest conversion
- Price controls and taxes that discourage investment in forest planting or conservation
- Policies to boost mining without simultaneously enforcing strict environmental safeguards

not provide signals conducive to forest conservation. In the language of economists, markets rarely capture the public good aspects of forests.

Lacking economic incentives to preserve forests, landowners usually prefer to dedicate their lands to more financially rewarding uses. Because markets do not reflect the wider values of forest resources, consumers use larger quantities of forest products than they would if higher prices reflected their full value. Absence of markets for conservation values goes a long way to explain why conservation uses of forestland often appear to be less valuable than unsustainable uses.

**The Commission recommends:**

- initiatives to assign economic values to forests other than timber be supported, with the results applied in policy formulation and reflected in market mechanisms.

**2. Timber Concession Policies**

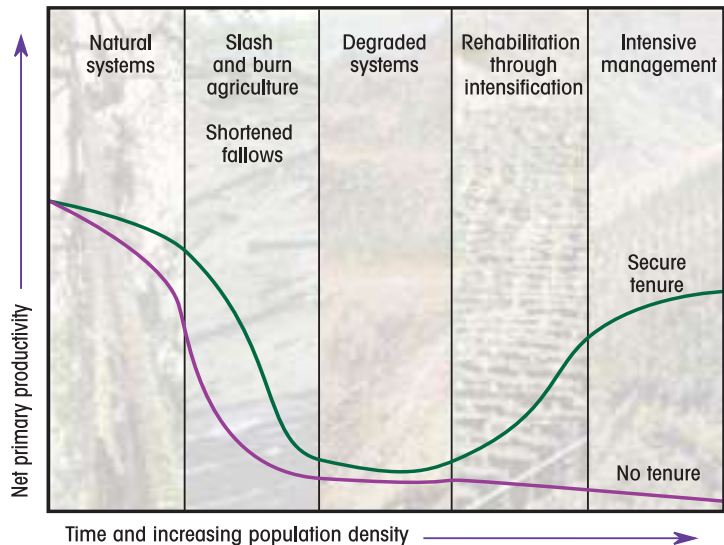
Timber concession policies represent the classic case of how a few private interests can benefit from a profligate use of public resources (see Box 2.2). Government timber concession terms routinely set stumpage prices and other concession fees at unrealistically low levels. The revenues foregone are often several times higher than the actual fees charged. Timber concessions are often decided without transparency.

**The Commission recommends:**

- public sale of timber concessions, licenses and leases through open auctions;
- timber allocation procedures be reformed to include local communities in negotiations;
- stumpage prices that properly reflect the diverse range of forest values;
- timber concession licenses be made conditional on forest management principles consistent with sustainability.

**3. “Perverse” Subsidies That Cause Forest Decline**

Subsidies occasionally play a crucial role in helping development become more



sustainable. But many of today’s subsidies in the forestry, agriculture, transportation and resource sectors encourage practices that are economically perverse, trade-distorting, ecologically destructive or socially inequitable.

Fig. 2.1  
Effect of tenure on net primary productivity  
Source: ICRAF, 1998

**The Commission suggests:**

- comprehensive review of subsidies and other incentives, which originate within and outside the forestry sector;
- reform or removal of subsidies that have perverse effects on forests.

**4. Land Ownership and Tenure**

Clearly defined, secure and enforceable property rights are a fundamental requirement for encouraging sustainable use of forests. Recent studies in Africa indicate a positive relationship between secure tenure and tree planting on farmland.

**The Commission recommends:**

- a review of land and resource tenure arrangements to make them more conducive to conservation.

**5. Governance Failure**

The co-existence of a high incidence of poverty with large endowments of forest capital in some countries is remarkable. It is

also indefensible. The custodial services of indigenous and local communities are recognized by the Convention on Biological Diversity. Yet there is no evidence of national governments involving such communities in the decision-making and benefit sharing from forest resources. It is equally a governance issue that so many communities are displaced by timber companies and other powerful interests.

The Commission has concluded that prevailing governance arrangements all too frequently exclude from consideration and decision-making disadvantaged groups such as indigenous peoples and women who are directly dependent on and affected by forest policies, uses and management. Many governments do not acknowledge traditional land ownership rights.

### 6. Gender Inequity

The Commission is of the view that gender equity is fundamentally an issue of governance. While women normally have multiple, often disproportionate responsibilities, they have little ownership or control over productive resources. This



Roger LeMoigne/CIDA

*Desperate in their daily search for firewood, villagers in West Africa overharvest the forests, turning the land into a barren desert. The result is worse poverty.*

imbalance places women in a subordinate and disempowered position. They are forever dependent and run a greater risk of being excluded from their homes and livelihoods.

#### The Commission recommends:

- the process of decision-making within a country about the use of its forest lands be opened up to widespread participation by affected groups such as women and indigenous peoples;
- specific opportunities and arrangements be created for achieving gender equality in decision-making, management, entitlements, access to credit, technical assistance and marketing supports.

### 7. Ethical Failure

The Commission sees the scale of corruption in the forest industry as one of the most intractable problems which societies have to face. Illegal practices (see Box 2.3) jeopardize the financial capacities of governments and societies to sustain both forests and development.

The Commission advocates that the ethics associated with the use of forest resources need to be brought in line with requirements of democracy, equity, transparency, conservation and sustainability.

#### The Commission recommends:

- mechanisms that involve communities in monitoring what goes on in their backyard;
- national and global governance structures that encourage transparency and redress corrupt practices.

### Box 2.2 PRIVATE GAINS AT PUBLIC EXPENSE

- In 1996, the US government spent nearly US\$15 million more on logging operations than private timber companies paid to purchase the wood.
- In 1994, the Russian government collected only from 3–20% of estimated potential revenues from stumpage fees – that is, only US\$184 million instead of between US\$0.9 and \$5.5 billion.
- In Indonesia, it is estimated that the government loses between US\$1 billion and \$3 billion in potential revenues from its forest concessions each year.
- In Cambodia, revenues forgone from timber concessions are estimated at an incredible 63% of the government's entire revenues each year.

### Box 2.3 ILLEGAL AND UNETHICAL PRACTICES IN THE FORESTRY SECTOR

#### Illegal Logging

- logging timber species protected by national or international law, such as the Convention on International Trade in Endangered Species of Fauna and Flora (CITES)
- contracting with local entrepreneurs to buy logs from protected areas outside the concession
- logging outside concession boundaries
- contracting with local forest owners to harvest in their land but then cutting trees from neighbouring public lands instead
- logging in protected areas such as forest reserves
- logging in prohibited areas such as steep slopes, river banks and water catchment areas
- removing under/oversized trees
- extracting more timber than authorized
- logging without authorization
- logging when in breach of contractual obligation
- obtaining timber concessions illegally

#### Timber Smuggling

- export/import of tree species banned under national or international law
- illegal log export/import in contravention of national bans
- obtaining declarations of lower volume exported.

#### Transfer Pricing and Other Corrupt Accounting Practices

- declaring selling forest products at prices below prevailing market prices to reduce declared profits and corporate and income taxes
- declaring buying inputs at prices above the prevailing market price to reduce declared profits and taxes
- declaring lower-priced species exported
- manipulation of debt cash flows (transferring money to subsidiaries or a parent company where debt repayment is freer than the export of profits; inflating repayments allowing untaxed larger repatriation of profits, reducing the level of declared profits and, therefore, of taxes)
- under-grading, under-measuring and under-valuing of timber and mis-classification of species
- avoiding royalties and duties by declaring a lower value of timber extracted from timber concessions

*“The lack of respect for traditional land ownership rights is destroying some of the best protectors of the forest, the indigenous populations...”*

—participant in the Commission’s public hearing for Latin America and the Caribbean.



Virginia Boyd/CIDA



# 3 Public and Private Interest

The full gamut of needs, interests, concerns and expectations in forests was reflected in the submissions made in the five regional public hearings of the Commission. The conflicts were conspicuous: between forest dwellers and corporations, between logging communities and environmental advocacy groups, between private interests and the public interest (see Box 3.1). The hearings also revealed encouraging efforts of communities and civil society organizations to respond to the challenge of restoring forests. More participation and devolution of management would not by themselves arrest forest decline. But these are desirable in their own right, and consistent with the objectives of sustainable development.

The Commission advocates the creation of mechanisms that are participatory and transparent in their operation, in order to ensure that the interests of all affected groups are represented in decision-making about forests. Such mechanisms will redress imbalances of power and help to reconcile conflicting needs.

Yet, simply reconciling competing private interests will not address the causes of forest decline.

The public interest in forests is paramount and should be secured through appropriate governance mechanisms. It exceeds the sum of all group interests. Indeed, the public interest involves the broad array of environmental functions essential for humankind as a whole.

#### The Commission believes:

- it is the responsibility of governments to perceive, articulate, defend and secure the public interest;
- it is we, as citizens, who hold in trust vital forest resources for present and future generations.

#### Poverty of Forest Dependent Communities

The extent and depth of poverty in the developing world, and the important role that forests, woodlands and on-farm trees play in contributing to poverty alleviation, were major themes of the Commission's Asia, Latin America and Caribbean, and Africa Hearings.

- 350 million of the world's poorest people depend almost entirely for their subsistence and survival on forests.

#### Box 3.1 SAME FOREST, DIFFERENT USES

Depending on your viewpoint, the same forest may have many different functions:

- a source of foreign exchange
- a place to hunt wild animals for food
- a site for recreation and education
- space for a large plantation
- protection for a watershed
- site for new settlements
- forest reserve for natural regeneration
- potential ranch for grazing animals
- a place to find new species
- a source of raw materials for industry
- a source of firewood, forage, medicines, building materials, food
- a place to live
- a sink for carbon sequestration
- large-scale agriculture or small-scale food production.

Source: adapted from FAO, 1995



- A further one billion poor people, 20% of the world's population, depend on remnant woodlands, on homestead trees, and on agro-forestry systems for their subsistence fuel wood, food and fodder needs. Many are shifting cultivators, among the politically weakest.

Forest decline thus threatens the livelihood of millions of people. Conversely, forests have the potential to contribute significantly more to their welfare and development. There are many policy interventions available to governments to realize that potential. The poverty of about one billion of the world's poorest people in about 30 heavily deforested countries would be alleviated through community forestry.

#### The Commission recommends:

- intensified agroforestry efforts;
- rapid afforestation and reforestation through community based programs;
- removal of obstacles to community forestry by ensuring secure titles, tenure and access to forest lands and resources;
- support for community forestry through credit facilities, technology, technical assistance, marketing;
- subsidies to support community forestry, made available through a percentage of revenue from timber sales;
- creation of markets for non-timber forest products;
- removal of policy bias towards large-scale timber production by introducing incentives favouring community forestry;
- support for village-level institutions;
- involvement of communities in the decision-making about allocation of forest lands.

### Indigenous Peoples

Around the world, about 60 million indigenous peoples live in forests and depend on them for subsistence. Forests are their habitat and their source of survival. A range of forest products: fruits, vegetables, roots and tubers, bush meat, spices, bark and clothing material such as animal fur and skins, oils, building materials, gums, dyes and medicinal plants contribute to their daily subsistence needs.



Hélène Tremblay/CIDA

For many forest-dwelling indigenous people, forests also have esthetic and spiritual importance. Their traditional knowledge, acquired over centuries, generally leads such communities to relate to their forest habitat in ways that protect and sustain forests. For them, the forest is an extension of their temporal and spiritual lives. Their cultural security is bound up with the security of forest lands.

Forest-dwelling indigenous communities around the world face remarkably similar problems: erosion of their traditional rights of access and use; displacement of their homes; erosion of their livelihoods; ignorance of their values, their historical custodial functions, their accumulated intellectual property; disregard or persecution by the authorities. The pressures on aboriginal peoples are expected to intensify as the demands on forests increase, and as the forest capital further declines.

Despite a history of abuses, there was little evidence in any region of the world of a constructive and systematic process on the part of political leaders to protect the rights of indigenous peoples, even though we are in the United Nations Decade for Indigenous Peoples. Issues are addressed in a scattered way across a range of United Nations agencies and intergovernmental processes. Clearly some systematic attention within a single forum dedicated to issues concerning indigenous peoples would be a more effective way of achieving comprehensive attention.

#### The Commission recommends:

- creation of a forum for Indigenous Peoples under the UN Commission on Sustainable Development;
- incorporating indigenous and local knowledge in forest management.

*The Yanomami aboriginal peoples of Brazil's Amazon Basin are losing their homelands to farmers, ranchers and gold miners.*

## Corporations and Forest Industry Workers

Large companies produce 38% of the global yearly turnover of all forest products (Carrere and Lohmann, 1996). Just 40 corporations now control some 115 million hectares of the world's forests. Their activities have contributed heavily to forest decline. The security of incomes, profits and jobs are threatened by that decline. It is encouraging that some corporations are beginning to realize that long-term success depends upon integrating profitability with environmental and social needs.

All corporations need clear signals about which forests are “out of bounds,” and codes of conduct. Public policy must insist on defining, applying and monitoring standards of management and performance indicators.

Forest industrial workers are at the front line regarding the effects of industrial practice—or malpractice, as the case may be. Their concerns are jobs and income. Jobs in the forest sector may sometimes have to be sacrificed for the sake of the public interest in protection of forests. Technology choice, improved use of waste materials, and better training can help. The role of worker organizations is vital in achieving the balance between employment, profitability, conservation and sustainable use.

*“Just 40 corporations now control some 115 million hectares of the world's forests.”*

## Public Interest and the Role of Governments

The ecological, economic and social significance of forests means that they can no longer be managed primarily for supplying timber. Nor can their management be left only to private interests. The public interest becomes more pressing as human demands increase while forest cover and quality decrease. The public interest goes beyond the material interests of a single group and it exceeds the sum of all group interests. The public interest involves securing all the environmental functions of forests.

Competing claims and competition, and the conflicts to which they give rise, are likely to get worse. It is the responsibility of governments to perceive, articulate, defend and secure the public interest in these circumstances.

The Commission advocates that governments should create mechanisms for consultation, dialogue and debate in which all private interests participate, in which the poor and the politically weak are represented, and through which the public interest also becomes a vested interest.

### The Commission recommends:

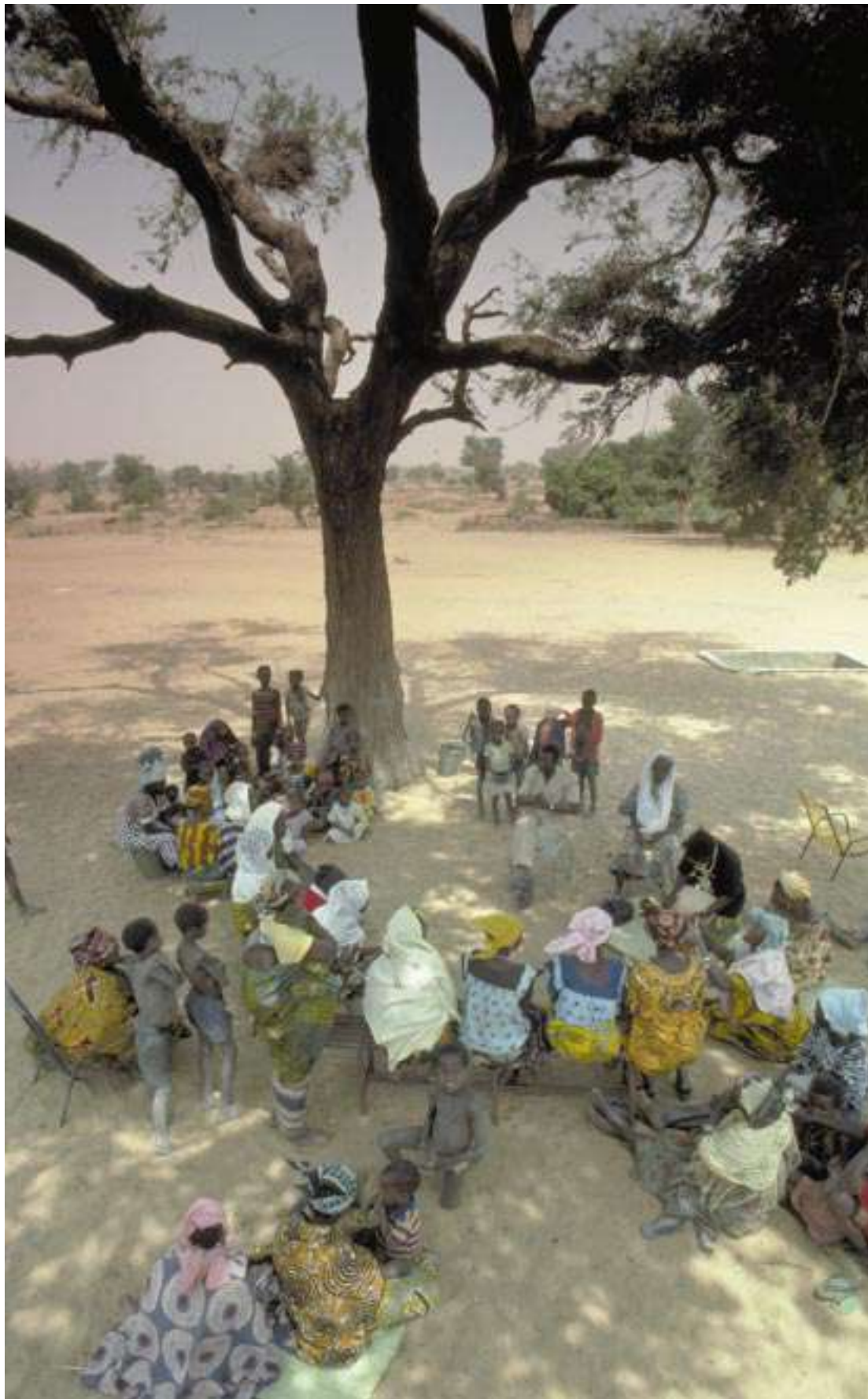
- a facilitative function in creating mechanisms of public participation;
- a representative function in advancing and securing the public interest;
- an executive function in ensuring that the outcomes of public process are reflected in policies, laws, regulations and management;
- an administrative function in reorganizing the public administration system to implement participatory policies.

## The Role of Civil Society

Citizens are becoming motivated to defend the public interest. They need effective mechanisms for a more structured participation in forest management decision making.

### The Commission recommends:

- a new institutional model called FORESTRUST, that can be applied at the global, national and local level. Such an institution would enable citizens to exercise their right to oversee how forests are being managed. It would have four key components: FOREST WATCH, FOREST OMBUDSMAN, FOREST MANAGEMENT COUNCIL, and FOREST AWARD. These components are vehicles for civil society functions such as monitoring and publicizing corruption and mismanagement; setting standards for management; and rewarding excellence (for more details, see pp.18-19).



*The Commission found community involvement in decision-making is essential for sustainable forest management. Niger, Africa.*

Roger LeMoyné/CIDA

# A Citizens' Force

*The Commission's hearings revealed an increasing consciousness among citizens of the public trust in forests. More people are becoming motivated towards instilling moral responsibility and ethical stewardship in forest management. The Commission wants to capitalize on this rise of concern for forests. It calls for new and different kinds of mechanisms that would accommodate an active involvement of local communities in decisions on forests and restore in government their sense of duty and responsibility to secure the public interest.*

*“Ultimately, it is we as citizens who hold in trust these vital resources for present and future generations. It is we, therefore, who need to be vigilant about that responsibility.”*

## FORESTRUST

Thus the Commission proposes the concept of FORESTRUST, a citizens' force envisaged as a set of global, national and local level arrangements to involve people from all parts of the world in solving the forest crisis.

As a first step the Commission wants to establish FORESTRUST INTERNATIONAL (FTI) which will serve as an international consultative forum on forest issues. FTI will be a vehicle for dialogue on equal terms between governments, industry and civil society, and for keeping forest issues high on the international agenda.

FTI also would foster the establishment of national counterparts and work with them to pursue at the national level what the international body intends to achieve globally. FORESTRUST at the local level will permit people to exercise their right of oversight about how their forests are being managed.

FORESTRUST is envisaged to have four components described in more detail on these pages.

## FOREST WATCH

*The FOREST WATCH concept is about getting the public involved in monitoring their forests. Forest Watch is expected to complement forest related information available from government sources and satellite imagery.*

FOREST WATCH is envisaged as:

- a network for information gathering, analysis, and dissemination;
- a link between local, national and international organizations involved in forest information gathering and dissemination;
- a mechanism for linking experts and communities;
- a vehicle for bringing to the public's notice any abuse of the public trust in forests;
- a system for assessing performance against criteria and indicators of SFM.

FOREST WATCH will be a challenge to mismanagement and corrupt activities related to forests. It would also allow communities to be vigilant about other development policies with a negative impact on forests.

## FOREST AWARD

*FOREST AWARD is envisaged as a mechanism for recognizing and rewarding good performance in conservation and sustainable forest management by communities, corporations and countries.*

It will rely on information collected via the other FORESTRUST functions, and from other

# Called FORESTRUST

sources. The international FOREST AWARD committee would be comprised of representatives from the major forest related stakeholder groups.

FOREST AWARD committees at the national level will make nominations to the international FOREST AWARD committee.

## FOREST OMBUDSMAN

*The international FOREST OMBUDSMAN would be an innovation among international institutions. It would pass authoritative judgments focused on issues of discrimination, abuse of the forest resource, inequity, and corruption associated with forest operations. Information on these concerns would be provided by FOREST WATCH and other sources.*

Two models could be considered for establishing the international FOREST OMBUDSMAN: an independent UN body, similar to the Human Rights Committee; or a creation of international NGOs involved in forest conservation.

- decisions of the FOREST OMBUDSMAN would be non-punitive;
- the Ombudsman's credibility would depend on it being impartial, independent and objective;
- financing for the FOREST OMBUDSMAN's work will have to be without ties or influence;
- conflict resolution could be one of the functions of the FOREST OMBUDSMAN.

The FOREST OMBUDSMAN at the national level is expected to perform similar tasks and would be modeled on existing ombudsman functions in other areas. Well-respected

prominent citizens would be expected to guide and lead the national institutions. The international FOREST OMBUDSMAN will draw from the work of its national counterparts.

## FOREST MANAGEMENT COUNCIL

*The Commission concluded that there is a need for coordinating criteria and indicators (c&i), certification standards and labeling initiatives.*

It proposes a FOREST MANAGEMENT COUNCIL (FMC) with objectives to:

- encourage the establishment of c&i and certification systems for forest management;
- support exchange of information between existing c&i and certification processes;
- promote the social and participatory aspect of forest management in existing c&i and certification processes;
- endorse international certification systems to adapt to local conditions;
- coordinate and harmonize policies on internationally traded products;
- establish standards for sustainable forest management (SFM) and support intergovernmental negotiations in this area.

FOREST MANAGEMENT COUNCIL at the national level would monitor sustainable forest management standards within individual countries. They are expected to support the efforts of buyers' groups and consumer organizations to increase the market share for sustainably produced forest products.

*“Mechanisms are required to permit citizens to have a more structured participation in the policy-making and management of forests.”*



# 4 Managing Forests Sustainably

*“SFM reflects a shift towards forest practices that integrate ecological and social concerns.”*

Many of the solutions to the forest crisis discussed in the earlier sections involve reforming governance mechanisms and restructuring markets. It is also necessary that the forest sector adjusts to the need to manage forests in the broader public interest. This section discusses some of the more important principles that the Commission believes should underlie sustainable forest management (SFM), including: localized management, participatory decision-making, landscape planning, criteria and indicators of SFM, certification, and improving research.

Much of the existing controversy about SFM derives from differing interpretations of the term. The Commission is of the view that SFM reflects a shift towards forest practices that integrate ecological and social concerns.

## The Commission recommends:

A strategy for SFM must reflect the following objectives:

- indefinitely satisfy needs for timber, fiber and non-timber forest products;
- ensure conservation of soil and water;
- sustain the resilience and renewal capacity of forests;
- support the food security and livelihood needs of forest dependent communities;
- conserve biological diversity;
- provide a more equitable sharing of the benefits from forest uses.

## Localized Management and Participatory Decision-making

The Commission believes that sustainable resource use is most likely to occur if local communities participate in managing the resources on which they depend. Participatory decision-making is a prerequisite for community involvement in forest management. There have been several cases around the world of community-based forestry

management efforts successfully integrating conservation and rural development. Most prominent among them is joint forest management (JFM) in India (see Box 4.1).

The Commission throughout its Report has emphasized localized community-based management and participatory decision-making as key components of SFM.

## The Commission recommends:

- involvement of local communities in all stages of planning and implementation of forestry projects;
- establishment of mechanisms for including local communities in monitoring forests and forest management performance through FOREST WATCH (see pp. 18-19).

### Box 4.1 LOCALIZED FOREST MANAGEMENT IN INDIA

Some of the most promising experiences in dryland forestry management come from India where Joint Forest Management (JFM) schemes have emerged as a highly influential force in restoring India's degraded forest lands (Poffenberger and McGean, 1990). JFM is a variant of community forestry widely adopted in India, in which responsibility and benefits are shared by local user groups with government forestry departments. Currently, 16 of 25 states in India have issued JFM agreements covering about 2 million hectares of forests. JFM agreements are an increasingly influential worldwide model in attempts to reverse deforestation trends and uplift disadvantaged rural groups (Jeffery, 1997).

## Landscape Planning

The key to successful economic development includes a working landscape that provides a stable base for a variety of entrepreneurial activities. In the forested zones, some of the forests will be used for timber, fiber and fuel. Some will be used for non-timber forest products. And some will be used as forest reserves and for water supplies. Such a scenario can come about only through planning for the entire landscape.

The Commission has concluded that we must reach beyond forestry. We need to institute a landscape planning and management approach, predicated on wide public participation, and supported by reliable data and scientific knowledge.

### The Commission recommends:

- implementing integrated planning and management approaches at the landscape level;
- improvement in the reliability of time-series data for a variety of goods and services;
- creation of mechanisms that would enable public administration systems to overcome the limitations of sectoral planning.

## Controversial Forestry Practices

Some controversial forest management issues frequently dominate news headlines. Can clearcutting really be a sound management technique? Is there a place for tree plantations with few species? Should large areas of forest be set aside for environmental reasons? The appropriateness of these practices can only be decided for specific situations. However, the Commission is of the view that the principles of localized management, participatory decision-making, landscape planning and ecosystem based management should be the framework for assessing forest practices such as clearcutting, plantation forestry, fire as a management tool, and protected forest areas.

## Verifying SFM: Criteria, Indicators and Certification

There has been much effort to develop criteria and indicators for assessing SFM and



Ron Watts/First Light

mechanisms for its certification. The Commission asserts that there can be no universally applicable body of criteria and indicators. Such tools have to be context-specific to include the social dimension of sustainability. The Commission notes that some international processes (ITTO Guidelines, Helsinki Process, Montreal Process; Tarapoto Proposal; FAO Regional Processes) are assisting countries to develop national frameworks to assess progress on SFM.

### The Commission recommends:

- all nations having significant forests should develop criteria and indicators specific to their situation.

Few countries have set up national certification programs for imported and domestically produced wood. Since only 20% of forest products enter international trade, there is an urgent need to establish standards to certify domestically traded products.

### The Commission recommends:

- all countries participate in international certification schemes for their forest products that enter international trade.

The Commission is of the view that for internationally traded forest products, the various criteria, indicators, and certification systems should be harmonized. This will ensure competitiveness for the products of those countries adhering to sustainability standards. The Commission is also concerned about the risk of lowering the standards of

*A patchwork of clearcuts in British Columbia, Canada.*

## Box 4.2 CERTIFICATION AND LABELING BY FOREST COMPANIES

Many forest product consumers in Europe, U.S.A. and Japan (who between them account for more than 60% of world consumption of manufactured forest products) insist that the products they purchase come from forests that have been certified as being managed sustainably. Certification is perhaps the most powerful “soft” policy instrument to be designed and

implemented outside government. Many companies whose operations are now certified have adopted sound forestry practices. As certification becomes more widespread, many forest enterprises will either be shut out of environmentally discriminating markets, or be forced to improve their forest management to enter such markets.

certification systems in order to make the system more manipulative and acceptable.

### The Commission recommends:

- harmonizing the various sets of criteria and indicators of sustainable forest management and coordinating forest certification systems through a FOREST MANAGEMENT COUNCIL;
- adoption of third party certification schemes for both domestically traded and exported products;
- product labeling in accordance with certification standards and accompanied by consumer education programs.

### Private Sector Investment and Management

The private sector has a critical role to play in SFM. In most of the major wood producing countries of the developed world, the private sector is the largest owner or manager of forests. The role of the private sector in furthering SFM in developing countries is also critical. Private capital flows to developing countries, in the form of investment and lending, now amounts to about 60% of development financing and has increased each year since 1991.

The trends of decreasing public and increasing private investment are expected to continue. In the last few years, foreign private sector investments in the forestry sector have rapidly increased in many of the forest-rich countries of the developing world. The operations of trans-national corporations (TNCs) in the forestry sector have also rapidly grown in the last decade.

### The Commission recommends:

- establishing codes of conduct for timber companies consistent with the objectives of conservation, sustainability, equity and transparency;
- imposing penalties for non-compliance with established standards;
- adherence to social and ethical accounting practices by timber corporations;
- investment in research to increase efficiency in the timber industry.

### Improving Research and Information

The Commission was struck by the inadequacy of forest data, as well as the incompatibility in definitions and measurements employed by agencies involved in forest data gathering and analysis.

### The Commission recommends:

- establishing an international network for research and training in SFM;
- financial support for this network from corporations, foundations and governments;
- greater effort by UN and other international agencies to achieve compatibility in forest data collection and mapping;
- better organization and dissemination of information to enable reliable monitoring of the state of forests;
- improved public awareness about forests through formal and non-formal education;
- disseminating forest-related information to local communities and forest users.





# 5 Sustaining Forests and Development

Sustaining forests and development requires us to manage and use forests in a fashion that does not impair their environmental functions. The global human habitat is already unstable and threatened with further destabilization. The world's forests are central to both the cause and the correction of that instability.

Forest functions are already threatened, even as human demands on those functions continue to mount. The global population is set to increase by half to around 9.5 billion by 2050 before there is any hope of it stabilizing. Rising population and consumption can potentially overwhelm the world's forests.

The Commission identified three sources of threats to forests and their functions. First are those threats that originate from competition for other land uses, especially from expanding croplands. Second are threats related to the growing global demand for wood. Third are threats exogenous to forests, the most prominent being climate change and loss of biodiversity.

## Expanding Croplands

Forests over the centuries have been converted on a massive scale for agriculture. There now exists fierce competition between needs for the forests as habitat, and equally demanding needs for increased agricultural production.

Since population is unlikely to stabilize before 2050, it will be essential to produce more food by diversifying and intensifying agricultural production. Converting woodlands to marginal farmland is the least desirable way to expand food supply.

The Commission expresses the need for a second Green Revolution. One of the lessons of the first Green Revolution was that technological advances alone cannot solve the problems of food security for the poor. Greater equity does not arise automatically from greater food production.

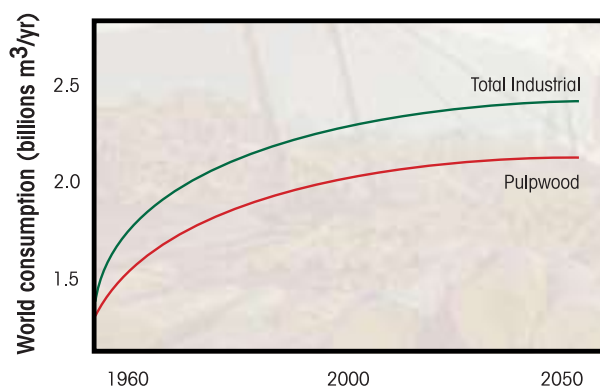
Therefore, the challenge for the New Green Revolution will be to develop technology that will make this a "poor farmers green revolution."

The Commission believes this requires:

- productivity breakthroughs for staple crops grown by poor farmers, often on marginal lands;
- diversified production, using tree crops, livestock and a variety of agricultural crops.

## Industrial Wood Demand

Recent projections of future consumption of industrial wood to the year 2050 suggest an increase from the current level of about 1.7 billion cubic meters per year to anywhere between 2 to 3 billion cubic meters per year (see Figure 5.1). By 2050 more than half of the world's industrial wood production will be for the manufacture of pulp and paper.



The possibilities for meeting and reducing these surging demands lie in improved technology for the production and use of wood. There is significant scope for reducing wasteful use of forest resources and increasing forest/tree productivity. Recycling can considerably lessen the demand for industrial wood. Consumers can influence the

Fig 5.1  
Growing industrial wood demand  
Source: Solberg et al., 1996

success of recycling by signaling their preference for recycled products and materials.

Tree plantations can meet growing demands for industrial wood from a relatively small land base. They can most efficiently be established in warm climates where growth rates far exceed those in the temperate and boreal forests.

Plantation forestry can contribute to:

- conserving remaining primary forests;
- increasing forest cover;
- increasing carbon sequestration;
- creating income and employment.

### Fuelwood Demand

Wood is a major rural and industrial energy source. Fuelwood is used for 58% of all the energy used in Africa, 15% in Latin America and 11% in Asia. In some 40 developing countries (many of them among the least developed), fuelwood accounts for more than 70% of all energy use. It is estimated that by 2050 demand for fuelwood will increase from 3.0 to 3.5 billion cubic meters per year. Rural well being in many parts of the world will continue to depend heavily on access to fuelwood supplies.

There exist several innovative technologies that focus on the energy needs of poor rural people, such as: new and more efficient kinds of wood-burning stoves, solar and wind energy. Rural energy alternatives such as these should be encouraged through greater funding for research and development.

At the same time, production of wood on farms and homesteads should be encouraged.

#### The Commission recommends:

- agro-forestry systems that produce fuelwood as a by-product;
- incentives to private investors to develop energy plantations for supplying fuelwood to urban centres and thus relieve pressure on natural forests.

### Climate Change

One of the most important environmental concerns is climate change as a result of emissions of greenhouse gases. Forests play a dual role in climate change. When forests are cut or burned carbon dioxide and methane, both heat-trapping gases, are released.

Deforestation contributes 20-25% of total carbon emissions into the atmosphere, ranking second only to the combustion of fossil fuels as a source of atmospheric carbon. Intact forests act as carbon sinks by removing carbon dioxide from the atmosphere through photosynthesis. Forests, with their soils, contain two to three times the amount of carbon currently held in the atmosphere.

Global warming is the likely consequence of rising levels of greenhouse gases in the atmosphere. Even a very moderate increase in the temperature of the atmosphere is likely to have a considerable impact on the distribution and health of forests. The warming effect becomes auto catalytic as it speeds the mortality of trees and the further release of carbon from forest soils into the atmosphere. Accelerated metabolism in forests due to climate change could place the objectives of the Climate Change Convention and the Kyoto Protocol beyond reach (Houghton, 1998).

It is important that steps be taken immediately to stabilize global climates by stopping the further accumulation of heat-trapping gases in the atmosphere. Halting further impoverishment of the remaining forests is an essential component of efforts to slow climate change, in order to maintain a habitable biosphere.

### Biodiversity Loss

Forests contain at least two-thirds of the earth's terrestrial species. The biotic diversity of forests is used in breeding economically important plants and animals. This gene bank is also drawn upon to strengthen the yield and resistance of domestic and commercial food crops, and for materials of medicinal, pharmaceutical and industrial value. Plant diversity ensures a sufficiently wide range of tree species to buffer forests and their function in regulating landscapes from disruption by pests, disease, and the vagaries of climate.

Recent assessments suggest that present rates of species extinction are between 100 and 1,000 times the natural rates. Species extinction is occurring at a time when humans have been deliberately narrowing the gene pool through intensive selection and breeding in order to increase timber and

*“Halting further impoverishment of the remaining forests is an essential component of efforts to slow climate change.”*

agricultural yields. This reduces the resilience of forests to recover from natural or human disturbance. The fact is that even before species are lost, the functional aspects of nature are severely impaired.

Steps such as increasing protected areas and reserves should be taken to avoid the irreversible loss of biodiversity. An obvious priority would be to conserve intact, undisturbed, forest—the remainder of the world’s primary forests. The Commission welcomes the leadership of the World Bank/WWF Alliance for Forest Conservation and Sustainable Use to set targets by the year 2005 of an additional 50 million hectares of new protected areas, accompanied by more effective protection of 50 million hectares of existing reserves. The Commission considers this objective desirable, but the areas inadequate.

#### The Commission recommends:

Protected areas policy should also seek to:

- halt the loss of medicinal plants and their natural habitats;
- protect cultural diversity and the rights of local people to manage and use forests;
- protect sources of non-wood forest products that provide food, income and livelihood to millions.

### Measuring the Forest Capital

How can we know with any confidence whether efforts to stem forest decline, are having a positive effect? How can we track what is happening to the forest capital over time? How can we get away from measuring systematic depletion of the forest resource as a net gain in economic growth? If indeed we value forests as an asset, and if ensuring “... the ability of future generations to meet their

own needs” is not just rhetoric, it would be useful to have such a measure to appraise the effectiveness over time of all that we do in relation to sustaining forests. We need a measure for the changing value of the forest capital of the world.

Perhaps the most intractable issue in the intergovernmental debates on forests is how to deal with the fact that forests provide common environmental services for the whole world, irrespective of their geographical location, ownership pattern, or political jurisdiction. The actions of individual countries, which result in forest decline or in enhanced global environmental services through their forests, should be essential information available in global forest negotiations.

We need new mechanisms to deal with global services from forests. The Commission advocates that efforts of economists, ecologists, statisticians and other experts be consolidated to estimate the value of ecosystems, in order to construct a measure for reflecting the value of the forests of a country—its forest capital. A forest capital index would then estimate a country’s relative contribution towards global environmental services from forests (see page 28 on Forest Capital Index).

#### The Commission recommends:

- development of the concept of Forest Capital;
- development and use of a Forest Capital Index;
- if feasible, creation of financial mechanisms on the basis of such an Index to compensate countries for ecological services from forests.

*“We need new mechanisms to deal with global services from forests.”*

### Box 5.1 IMMINENT EXTINCTION

Biologists advise that we are already amid an extinction crisis unmatched in at least 65 million years and that, if current trends continue, one-quarter of the world’s species may disappear in less than half a century. Assuming that earth is home to 10 million

species (a modest estimate), this rate of extinction means that over 130 species a day will disappear during that time. In the tropics, 15,000 species are disappearing annually, or more than 40 species per day.



# 6 International Dimensions of Forests

*“All countries with forests must recognize that they hold in trust natural resources vital to people beyond their borders.”*

The global significance of forests means that all countries with forests must recognize that they hold in trust natural resources vital to people beyond their borders. It is this concept which the Commission places at the core of its consideration of the international dimensions of forests and sustainable development.

The Commission believes major changes are needed in the multinational investments involving forests and in rules governing international trade in forest products. The Commission holds views on the intergovernmental dialogue on forests and the need for a forest convention. Current dialogues go on without achieving their intended results. The Commission calls for a group of countries which together produce or consume most of the world’s forest resources to constitute a Forest Security Council.

## Multinational Investment on Forests

In recent years, private sector investment in the forest sector has outstripped public investment (Chandrasekharan, 1996). Multinationals are welcomed by developing countries, as their capital is considered vital for development. At the same time, national authority to impose restrictions on multinational operations is weakening due to globalization of trade. This erosion of national authority is occurring at a time when

governments may need to impose forest exploitation restrictions in the interest of sustaining their forest capital.

## International Trade in Forest Products

Two conditions must be satisfied before international trade in forest products can benefit all. The sustainability of ecosystems must be guaranteed, and trade relationships should be equitable. Neither condition is currently met. Between 20% and 25% of all commercial forest production enters into international trade. A few industrialized countries command about 90% of this trade.

### The Commission recommends:

- intergovernmental discussions consider ways to increase the share of developing countries in the global forest products trade;
- developing countries be provided with financing and technology to take advantage of shorter growing cycles and lower wages to increase their market share of timber and fiber, thus reducing pressure on primary forests.

Liberalized trade is regarded as an impetus to economic growth. However, it would be counterproductive if short-term economic

### The Commission recommends:

- countries require multinationals to operate according to a code of conduct;
- the issue of multinational operations be addressed in intergovernmental discussions. Coordination and solidarity would strengthen the hand of governments that lack bargaining power with multinationals;
- civil society should have a role in monitoring the performance of

multinationals. The set of functions comprising FORESTRUST, especially the FOREST WATCH and FOREST OMBUDSMAN functions, could contribute to civil society efforts;

- governments need to create the legal framework in which multinationals could operate consistent with sustainability objectives.

growth is achieved at the expense of sustainability. The international body responsible for ensuring sustainability in trade arrangements is the World Trade Organization (WTO).

**The Commission recommends:**

- that the WTO should send clear signals that sustaining forests is the bottom line in trade arrangements;
- if trade arrangements negatively impact a nation's forests, countries must be able to rely on the WTO for support;
- the environmental and social impacts of liberalized trade in forest products need to be carefully weighed in the WTO's rulings in trade disputes;
- any resulting "trade and environment" or "trade and sustainable development" agreement must give a country recourse to protect its forest capital (IISD, 1996).

### Intergovernmental Dialogue on Forests

Forests provide common and indivisible environmental services for the whole world. Developing nations take the position that they should be compensated for the global ecological services which their current forest cover provides. Meanwhile, the undertaking of UNCED about financing the transition to sustainable development has not been realized. Levels of overseas development assistance continue to be reduced. The intergovernmental debate on forests through the UN Intergovernmental Panel on Forests, and its successor, the Intergovernmental Forum on Forests, has remained fixated on these points.

The Commission is of the view that even as this impasse exists, the intergovernmental debate on forests ignores the following fundamental realities:

- forest conservation costs are in reality investments for environment and sustainable development
- the fate of the world's poor is dependent on environmental stability
- the intergovernmental dialogue is supposed to focus on common responsibilities to secure environmental stability
- equity requires a pooling of resources

among all nations to make possible environmental stability and sustainable development

- the urgency of the forest crisis demands immediate and concerted attention.

The problem with the intergovernmental dialogue is that too many issues are being discussed in too large a forum. Where everything is a priority, nothing becomes a priority. The continuing intergovernmental discussion ought to therefore focus on a few priority issues critical to environmental stability and eliminating poverty.

### A Convention on Forests?

The Commission supports the use of international law to defend societal goals and any legal instrument or process that could help sustain forests. The Commission is of the view that if a convention is to be effective in responding to the forest crisis, it should address fundamental issues with diligence and commitment.

However, the Commission believes that:

- there is little basis for confidence in the prospects for a forest convention being implemented because of the lack of political will;
- enshrining commitments in a legally binding convention is no guarantee that those commitments will be carried out;
- there exist several international conventions which await implementation. When implemented, they would go a long way towards dealing with the objective of sustaining forests.

**The Commission urges that governments:**

- continue their debate on a convention on forests, but speedily conclude the present round of intergovernmental deliberations in view of the global forest crisis;
- take into account the proposals of the Commission in their discussion on the role of a global forest convention;
- be politically committed, within a convention, or without one, for urgent action on the issues raised in the Commission's Final Report;
- use existing regional and multilateral agreements to deal with the forest crisis.

*"The problem with the intergovernmental dialogue is that too many issues are being discussed in too large a forum."*



## Forests are More than Trees: How to Measure Their Real Value

The Commission advocates a Forest Capital Index:

**F**orests are a capital asset that sustain the global habitat. To manage this capital for the public good, societies need indicators of the status of the world's forests, and estimates of their ecological and socio-economic value.

The Forest Capital Index (FCI) is intended as a tool for international forest policy. The FCI underpins society's concern for intergenerational equity.

The FCI could:

- permit evaluation of progress in sustaining forest capital for each country;
- serve as a benchmark for assessing whether forest capital is increasing or declining;
- facilitate a global framework for valuation of forest ecosystem services;
- create market mechanisms to compensate countries for ecological services.

The FCI could provide a uniform numerical indicator of each nation's current forest capital. A suite of indicators of forest qualities might be used, such as: surface area; standing biomass; net primary productivity; species richness and diversity; age class of trees; leaf area index; soil fertility measures; soil organic matter content; and the health of forest stands. Examining the changes in these indicators over time will treat international comparisons of forest decline more equitably than absolute measures of deforestation.

Condensing the suite of ecological indicators, appropriately weighted, into one dimensionless number offers a simple tool to compare the progress of countries across numerous categories. Imputing a dollar value to the services provided by the forest then becomes possible, and can then be reflected in a workable form in the international dialogue about compensation for global forest services.

**Current Status:** *The Commission, in partnership with like-minded institutions, is actively pursuing ways of developing the FCI concept. More information about the Commission's initiatives is posted on its website: <http://iisd.ca/wcfsd>. Other institutions and individuals are invited to join the Commission in this endeavour.*

# What is Missing is Political Leadership

The Commission proposes that a Forest Security Council be established:

Certain countries, by virtue of their command over forest resources, production, trade in forest products, and consumption, should have an extraordinary duty of care for the world's forests, and should provide international leadership in the search for global forest solutions. The Commission challenges these countries to constitute themselves as a Forest Security Council (FSC).

The FSC is being proposed to complement the intergovernmental processes. Agreement on solutions in the intergovernmental process has been elusive. A major reason is that too many issues are discussed in a large forum. The FSC would be structured to overcome this limitation. The smaller group of countries constituting the FSC would focus on specific issues that directly affect them, and thus should be interested in arriving quickly at effective solutions.

### Selecting the FSC

It is desirable that the Forest Security Council (FSC) involves countries whose forest circumstances make them indispensable in any effort to halt forest decline. Identifying countries for the FSC could be based on the following considerations:

- involve countries according to their prominence in forest cover (see figures 6.1 and 6.2), wood production, imports and exports of wood, production and export of woodpulp;
- ensure that different types of forests are represented;
- ensure that all regions are represented.

On the basis of the above considerations, the Commission has indicated a preliminary group of 25 countries from which the FSC might be constituted. Those countries that initially agree to be a part of the FSC are expected to further develop the criteria for the selection of other members.

- **Asia and Oceania:** China, India, Indonesia, Malaysia, Japan, Australia
- **Europe and the CIS:** Finland, France, Germany, Sweden, Russian Federation
- **North America:** Canada, Mexico, U.S.A.
- **Africa:** Democratic Republic of Congo, Ethiopia, Ghana, Nigeria
- **Latin America and the Caribbean:** Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Venezuela

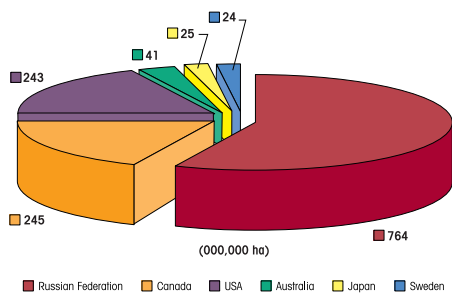


Fig. 6.1  
Countries with the most temperate and boreal forests. Source: FAO, 1997

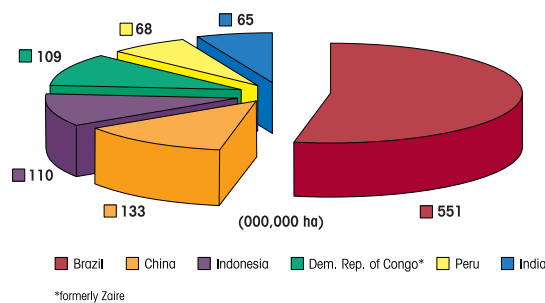


Fig. 6.2  
Countries with the most tropical forests. Source: FAO, 1997



Sherman Hines/Masterfile

## Conclusion

# The Fate of the Forest is in Our Hands

This Summary has attempted to highlight the major proposals of the Commission as outlined in its Final Report. The Commission's recommendations require more than just technical adjustments. They call for fundamental and far-reaching changes in forestry practices. As the Commission has said, the roots of the crisis are broad and deep, and the solutions go well beyond the obligations and responsibilities of the forestry sector.

Correcting the root causes of forest decline will require patience, commitment and enlightened leadership. Innovation is desperately needed if the world is to prevent the deepening of the forest crisis, and the Commission has tried to be creative in its own search for solutions.

After holding hearings on five continents, the Commission concluded that if the world is to prevent the worsening of the forest crisis, initiatives already under way must be supported, and new ways must be found to slow and ultimately reverse forest decline.

For those directly involved in planning, in policy analysis, in public service, or in political processes, a greater sense of urgency is required to build on current efforts and make them more effective. For those who use timber and paper, the challenge is to reduce consumption. For those who depend on forests for their livelihood or recreation, the obligation is to spread the message of what could be lost and how it could affect our lives. We all have a stake in the future of the world's forests. We may not have a second chance. The choice is still in our hands.

*Felling old-growth trees in the temperate rainforest of British Columbia.*



# References



- Carrere, R., and L. Lohmann.** 1996. *Pulping the South*. London, UK: Zed Books.
- Chandrasekharan, C.** 1996. "Status of financing for sustainable forestry management programmes." Workshop Report on Financial Mechanisms and Sources of Finance for Sustainable Forestry. Pretoria, South Africa, June 1996. New York: UNDP.
- Houghton, R. A.** 1998. "Forest and the Warming of the Earth," in *Forests in a Full World*. G.M. Woodwell, ed. Report of the Scientific Committee, World Commission on Forests and Sustainable Development. (in draft)
- ICRAF.** (International Centre for Research in Agro-Forestry) 1998. *More People, More Trees: The Future of Trees is on the Farm in Africa*. Paper by Pedro A. Sanchez, Anthony J. Simons, F. M. Place, Markus G. Walsh, Fiona J.C. Chandler, Cheryl A. Palm, Paul K. Konuche, and Roeland Kindt, Nairobi, October 1998: ICRAF.
- IISD.** (International Institute for Sustainable Development) 1996. *The World Trade Organization and sustainable development: An independent assessment*. Winnipeg, Canada: IISD.
- IUCN.** 1996. *1996 IUCN red list of threatened animals*. Gland, Switzerland: IUCN.
- IUCN.** 1997. *1996 IUCN red list of threatened plants*. Gland, Switzerland: IUCN.
- Jeffrey, R.** 1997. *Organizing Sustainability: NGOs and Joint Forest Management Agreements in India*. Edinburgh: Centre for South Asian Studies, University of Edinburgh.
- Poffenberger, M and B. McGeen (eds.).** 1994. *Policy Dialogue on Natural Forest Regeneration and Community Management*. Research Network Report No. (April). Honolulu: Asia Sustainable Forest Management Network.
- Solberg, B., D. Brooks, H. Pajuoja, T.J. Peck, and P.A. Wardle.** 1996. *Long-term trends and prospects in world supply and demand for wood and implications for sustainable forest management*. Joensuu, Finland: European Forest Institute and Norwegian Forest Research Institute.

Turner Valley, Alberta. Ron Stroud/Masterfile





# Glossary

**agroforestry.** A land-use system in which tree crops are planted on the same land used for raising agricultural crops or animals.

**biodiversity.** Biological diversity, which includes the diversity of species, genes and ecosystems and the evolutionary and functional processes which link them.

**carbon sequestration.** The removal and storage of carbon from the atmosphere by green plants through the process of photosynthesis, in which carbon dioxide is combined with water to form carbohydrates that can be stored in plant tissues.

**carbon sink.** An area where the rate of carbon uptake by living organisms exceeds the rate of carbon release, so that carbon is sequestered in organic or inorganic forms.

**certification.** The process of evaluation or audits by independent third parties of forest practices carried out by forest owners and managers primarily engaged in wood production. The evaluation is usually carried out in relation to widely accepted standards of sustainable forest management. Some processes focus on certifying products, while others focus on forest management systems.

**climate change.** An alteration to measured quantities (e.g. precipitation, temperature, radiation, wind and cloudiness) within the climate system that departs significantly from previous average conditions and is seen to endure, bringing about corresponding changes to ecosystems and socioeconomic activity. Associated with greenhouse gas emissions, of which fossil fuel combustion and forest decline are contributors.

**community forestry (or community forest management).** Used as an all encompassing operational term. The common denominator in community forestry is the focus on the role of local communities (usually forest-dependent) in managing neighboring forests and sharing the benefits from those forests. An important role is to foster productive relationships between communities, government agencies, and NGOs.

**concession.** A lease or contract to use a forest for the production of forest products. Concessions often take the form of commercial agreements granting loggers the right to harvest a given area of public forest land for industrial wood.

**criteria and indicators.** Criteria are rules, standards, norms, conditions, or behavior which are considered to be “good” or “ideal.” Indicators suggest what kind of measures are needed to judge the success or failure of a program. Desirable indicators are variables that summarize, quantify, measure and communicate relevant information.

**economic.** A term that today often implies a profit motive but more properly concerns a wider consideration of the demand for and supply of scarce resources, both commercial and non-commercial.

*Pleading for help, small-scale farmers in Brazil have lost their entire crop due to flooding caused by widespread clearing of forests.*



Pierre Si. Jacques/CIDA



*Huge old-growth logs in Côte d'Ivoire. Too often, governments sell cutting rights to prime timber at a fraction of its true worth, the Commission found.*

Michel Faugère/CIDA

**ecosystem-based forest management.** An approach to forest management focused on maintaining or enhancing ecosystem integrity through attempting to simulate ecological processes

**forest capital.** A weighted measure of the integrity of forest resources in a given region (say a country), expressed in area terms and based on a stated value weighting. Primary forests may be deemed to have greater integrity than other types of forests, and therefore be given more weight than modified, fragmented or planted forests.

**forest capital credits.** The notion that, since forest capital is of global value due to the global ecological services provided by forests, the forest capital concept could form the basis of a global market in tradable credits for the global services provided by forests. The forest capital credits system could build on or complement experiences with the emerging international market in carbon emissions trading.

**forest decline.** A blanket term encompassing deforestation (conversion of forests to other uses) and forest degradation (deterioration in health and quality).

#### **Framework Convention on Climate**

**Change.** The agreement signed by 154 countries at the 1992 Earth Summit at Rio de Janeiro under which climate change is monitored and addressed globally.

**global ecological services.** The role forests play in regulating global climate, energy and hydrological flows, and other key biophysical functions.

**governance.** The legal framework and institutions within which decisions are made in a society.

**greenhouse gases (GHG).** Gases which accumulate in the earth's atmosphere and trap heat. Some are naturally occurring gases, like carbon dioxide. Others are made by humans, such as halocarbons, which in addition to contributing to the greenhouse effect, also contribute to the thinning of the ozone layer.

**IFF (Intergovernmental Forum on Forests).** The nineteenth special session UN General Assembly held in June 1997 decided to continue the IPFs (see "IPF") intergovernmental policy dialogue on forests through the establishment of an ad hoc open-ended IFF under the UN Commission of Sustainable Development. The IFF decided at its first meeting in October 1997 in New York that it would meet four times by February or March 2000.

**IPF (Intergovernmental Panel on Forests).** An open-ended ad-hoc body established in 1995 by the UN Commission on Sustainable Development's (CSD) to pursue consensus on the management, conservation and sustainable development of all types of forests. The fourth and final session of the IPF was held in February 1997.

**Kyoto Protocol.** A treaty negotiated in Kyoto, Japan, in 1997 between 159 countries setting out legally binding reduction targets for six greenhouse gases averaging 5 percent emissions below 1990 levels for industrialized countries between 2008 to 2012.

**landscape management.** Managing an area or region by integrating a variety of human, cultural and historical values associated with the land that may be ecological, social or economic.

**non-timber forest products.** Medicinal plants, resins, mushrooms, rattans, wildlife and other non-wood goods obtained from forests.

**participatory forest management.** Forest management in which the decision-making involves a process of broad public involvement.

**primary forest.** A forest in a mature succession phase, whose structure and composition have resulted from unrestrained ecological processes rather than from human activity.

**private interests.** Interests of individuals, landowners, communities, corporations, and other groups and stakeholders.

**public interest.** The broader, long-term interest of society as a whole, which transcends the specific agendas of individuals or special lobby groups.

**sustainable development.** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It implies integrating traditional economic concerns with often-ignored social and environmental considerations.

**sustainable forest management (SFM).** A process, rather than a prescribed system of management. Elements may include participatory and equitable approaches to decision-making geared toward maintaining ecosystem and landscape functions while also meeting economic, social and cultural needs.

*Old-growth forest,  
Cameroon:  
more support for  
forestry research  
is needed.*



Roger LeMoigne/CIDA

# Acknowledgments



Immediately after the Earth Summit in 1992, Ola Ullsten, former Prime Minister of Sweden and Emil Salim, former Indonesian Minister of Population and Environment, supported by the Woods Hole Research Center, convened a series of meetings of world leaders to seek a way forward from deeply divided North and South positions on forests. Following calls for action from many concerned groups around the world, they responded in 1994 to a proposal by the InterAction Council of Former Heads of State and Governments, at the time chaired by former Chancellor Helmut Schmidt of Germany, to establish an independent World Commission on Forests and Sustainable Development.

Its mandate was to increase awareness of the dual function of world forests in preserving the natural environment and in contributing to economic development; to bridge the gap between the North and South; and to broaden consensus on the data, science and policy aspects of forest conservation and management. Emil Salim and Ola Ullsten were invited to co-chair the Commission. Twenty-three other persons from a variety of backgrounds and perspectives joined the Commission as members. They served in their individual capacity—and the Commission functioned as an independent body.

Public hearings were held in Jakarta, Indonesia; Winnipeg, Canada; San José,

Costa Rica; Yaoundé, Cameroon; and St. Petersburg, Russia. Internal working sessions apart from those conducted in connection with the hearings were held in Switzerland, The Netherlands, and in Trinidad & Tobago. The Commission records its deep appreciation to those who contributed as local organizers of the public hearings, submitted technical papers or participated as resource persons during the Commission's meetings, as well to others whose experience and knowledge the Commission has been privileged to draw upon. It also expresses its deep appreciation to those governments, intergovernmental organizations and private sources without whose generous financial contributions the Commission would not have been able to finalize its work.

The Commission benefited enormously from the tireless and dedicated work of its staff. A special thanks goes to the Commission's Secretary General, Dr. John Spears, for his leadership over most of the Commission's duration. Commission member Angela Cropper was given the duty of writing the Report in the form it now exists. She was assisted in that task by Mr. Karl Hansen and Dr. Ajit Krishnaswamy, who heads the Commission's Secretariat at the International Institute for Sustainable Development (IISD).



# Members of the Commission

## Co-Chairs

Ola Ullsten	Sweden
Emil Salim	Indonesia

## Members

Emeka Anyaoku	Nigeria
Charles Caccia	Canada
Kamla Chowdhry	India
Angela Cropper	Trinidad & Tobago
Christine Debrah	Ghana
B.C.Y. Freezailah	Malaysia
José Goldemberg	Brazil
Wakako Hironaka	Japan
Yolanda Kakabadse	Equador
S. Wandira Kazibwe	Uganda
Li Lukang	China
Hemmo Muntingh	The Netherlands
David Pearce	UK
Manuel Rodriguez	Colombia
Kazimierz Rykowski	Poland
Jorge Miles da Silva	Brazil
José Sarukhan Kermez	Mexico
M.S. Swaminathan	India
Margaret Taylor	Papua New Guinea
Mustafa Terrab	Morocco
Klaus Töpfer	Germany
Nikolay N. Vorontsov	Russia
George M. Woodwell	USA
Jong-Tack Yoo	Republic of Korea

## Secretary General

John Spears

## Chairperson of the Editorial Committee and Editor of the Full Report

Angela Cropper

## Chairperson of the Science Council

George M. Woodwell

## Researcher and Co-ordinator of the follow-up process

Ajit Krishnaswamy

# An Invitation



With the facilitation of the International Institute of Sustainable Development, located in Winnipeg, Canada, a follow-up process to the Commission's recommendations will continue till the end of 1999 or beyond depending on funds made available. The Commission invites research institutions,

NGOs, governments and intergovernmental organizations, business, and others to join those who are already engaged in spreading the Commission's message and supporting the implementation of its recommendations and proposed policy changes.



# OUR FORESTS

# OUR FUTURE

The world's forests are being cut and burnt at such a rapid rate that if action is not taken soon, we risk undermining their vital function in maintaining a habitable planet. Already, forest loss is contributing to the extinction of plants and animals, increased flooding and disruption of climate patterns. In many parts of the world, forest decline adds to people's social and economic distress.

After holding hearings on five continents to give voice to those who depend on forests for their livelihood, the World Commission on Forests and Sustainable Development (WCFSD) concludes: "We must urgently choose a path that respects the ecological values of forests while recognizing their role in social and economic development."

#### Key recommendations in the report include:

- the global nature of the forest crisis requires decisive international leadership and action;
- governments must ensure that the public interest prevails over private interests;
- prices and policies that truly reflect all benefits provided by forests are needed to change wasteful production and consumption patterns;
- protection of the remaining primary forests requires that future demand for wood products must be met through plantation and secondary forests;
- community involvement in decision-making is essential for sustainable management of forests.

---

*Our Forests... Our Future* is a compelling and well-documented appeal from a group of respected individuals with backgrounds in politics, policy, science and forestry from 24 different countries in both the North and South. Due to its independence and broad international representation, the Commission has been able to address the most significant global forest issues from a fresh and unique perspective.

## Summary Report

World Commission on Forests and Sustainable Development (WCFSD)  
c/o International Institute for Sustainable Development (IISD)  
161 Portage Avenue East, 6th Floor  
Winnipeg, Manitoba, Canada R3B 0Y4