

ITTO's most recent policy document describes what is needed to restore, manage and rehabilitate degraded and secondary tropical forests



Reforestation watershed: mules are useful for transporting seedlings for the reforestation of Peru's Urumba Basin (see article page 14). Photo: A. Gaviria

THE extent of forest degradation in the tropics is vast: some 350 million hectares of tropical forest land have been so severely damaged that forests won't grow back spontaneously, while a further 500 million hectares have forest cover that is either degraded or has regrown after initial deforestation (see table next page).

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Such large areas of damaged forest and land are cause for concern, but they also represent a potential resource of immense value. In close collaboration with several other organisations¹, ITTO recently developed and published the *ITTO Guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests* to help countries and communities realise this potential. This substantial document provides a powerful introduction to the issues confronting the policy-makers, forest practitioners, extension workers and others who want to help restore and manage degraded or secondary forests.

What are degraded and secondary forests?

A **degraded primary forest** is a primary forest in which the initial cover has been adversely affected by the unsustainable harvesting of wood and/or non-wood forest products so that its structure, processes, functions and dynamics are altered beyond the short-term resilience of the ecosystem; that is,

the capacity of the forest to fully recover from exploitation in the near to medium term has been compromised.

A **secondary forest** comprises woody vegetation regrowing on land that was largely cleared of its original forest cover (ie carried less than 10% of the original forest cover). Secondary forests commonly develop naturally on land abandoned after shifting cultivation, settled agriculture, pasture, or failed tree plantations.

Degraded forest land is former forest land severely damaged by the excessive harvesting of wood and/or non-wood forest products, poor management, repeated fire, grazing or other disturbances or land-uses that damage soil and vegetation to a degree that inhibits or severely delays the re-establishment of forest after abandonment.

Management strategies

Management strategies for degraded and secondary forests should aim to regain ecosystem integrity: that is, the maintenance of the potential to provide a certain set of goods and services for which the site is suited, implying the maintenance of biological diversity, ecological processes and structure, and sustainable cultural practices. The guidelines make a distinction between three principal management strategies:

- **forest restoration**, the aim of which is to assist the natural processes of forest recovery in a way that the species composition, stand structure, biodiversity, functions and processes of the restored forest will match, as closely as feasible, those of the site-specific original forest;

¹the Food and Agriculture Organization of the United Nations, the Center for International Forestry Research, IUCN – The World Conservation Union, and the World Wide Fund for Nature International, among others

Potential resource

Estimated extent of degraded and secondary forests by category in tropical Asia, tropical America and tropical Africa in 2000* (millions of hectares, rounded to the nearest 5 million hectares)

	Asia 17 countries	America 23 countries	Africa 37 countries	Total
Degraded primary forest and secondary forest	145	180	175	500
Degraded forest land	125	155	70	350
Total	270	335	245	850

*Compiled by Jürgen Blaser and César Sabogal for the ITTO guidelines using extrapolations from various earlier estimates

- **secondary forest management**, which aims to increase the capacity of secondary forests to generate important environmental and social services for a wide range of beneficiaries on a sustainable basis; and
- **the rehabilitation of degraded forest lands**, which aims to re-establish site productivity and protective functions and many of the ecological services provided by a functional forest or woodland ecosystem.

Some basic conditions for the restoration, rehabilitation and management of degraded and secondary forests can be enumerated. For example:

- the strong support and participation of local stakeholders is needed in the planning, implementation and monitoring of activities. The rights and responsibilities of ownership, including customary claims and rights, must be clearly defined and mutually agreed;
- local forest users must obtain some short-term economic benefits, which must be in addition to any potential future benefits;
- there must be a sound understanding of the complexities and dynamics of the forest ecosystem and of the interacting socio-economic and political systems; and
- land capability must be analysed and overall land-use relationships must be understood and legally defined.

Informed choices can be made on the management strategy and silvicultural techniques to be applied in a particular situation. But even when the knowledge and experience of local people, foresters and ecologists are fully deployed, the outcome will rarely be totally predictable. Thus, an adaptive approach should be taken in which the responses of the forest to treatments are monitored and management is altered in the light of experience.

The role of the guidelines

The *ITTO Guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests* are intended to:

- provide a knowledge base on key policy, socioeconomic, legal, institutional, ecological and silvicultural issues that need to be taken into account in the planning and implementation of appropriate strategies and viable options for the restoration of degraded primary forests, the management of secondary forests, and the rehabilitation of degraded forest land;
- help planners to integrate the restoration, conservation and management of degraded and secondary tropical forests and degraded forest lands at the local and landscape levels;
- collate and build on relevant experiences in the use and management of degraded and secondary forests;
- stimulate the adoption of appropriate and adaptive management practices for conserving and enhancing the production capacities of degraded and secondary forests; and

- help create a policy focus on degraded and secondary forests at the local, national and international levels to promote their sustainable and equitable management and use, prevent degradation and inappropriate conversion, and guide the development of such forests according to clearly defined management strategies.

The guidelines provide a checklist of prime objectives, principles and recommended actions which, it is hoped, will constitute an international reference standard for the management, restoration and rehabilitation of degraded and secondary forests and provide a framework for the development of more specific guidelines at the regional, national, local and site levels. The objectives, principles and recommendations are divided into two sections, described below.

Section I: Policy, planning and management principles and recommended actions: in this section, seven main objectives for the restoration, management and rehabilitation of degraded and secondary forests are defined. Under each main objective, a number of principles, and under each principle a number of recommended actions, are listed. Section I comprises a total of 31 principles and 105 actions. The seven objectives are:

- 1) Attain commitment to the management and restoration of degraded and secondary forest landscapes;
- 2) Formulate and implement supportive policies and appropriate legal frameworks;
- 3) Empower local people and equitably share costs and benefits;
- 4) Employ integrated approaches to resource assessment, planning and management;
- 5) Take an adaptive and holistic approach to forest management, emphasising environmental and social values;
- 6) Promote economic efficiency and financial viability; and
- 7) Guarantee participatory monitoring and evaluation as a basis for adaptive management.

This section is particularly directed at public policy-makers, such as government agencies dealing with rural landscapes (departments of forestry, planning, finance), development and extension agencies, civil society, NGOs and private and communal extension agencies.

Section II: Stand-level principles and recommended actions: in this section, 18 principles and 55 actions are listed under a specific objective concerned with the restoration of degraded forests, the management of secondary forests and the rehabilitation of degraded forest lands at the site level. It is particularly directed at civil society, NGOs and private and communal extension agencies; forest practitioners and people working at a site level; and education, training and research institutions.

The ITTO Guidelines for the restoration, management and rehabilitation of degraded and secondary forests are available in English, French and Spanish from the ITTO Secretariat in Yokohama (address on page 2); they can be downloaded from www.itto.or.jp