

A close-up photograph of a person's arm, wearing a white sleeve and a black watch, reaching into a forest to touch a young green plant. The background is filled with dry, tangled branches and some green foliage.

Restoring the forests

Introducing the *ITTO Guidelines for the Restoration, Management and Rehabilitation of Degraded and Secondary Tropical Forests**

Today, vast areas of tropical forests are so damaged that their future is in serious doubt.

But all is not lost. We now have tools—forest restoration techniques—to give these forests a helping hand.



* Developed by the International Tropical Timber Organization in collaboration with the Center for International Forestry Research (CIFOR), the Food and Agriculture Organization of the United Nations (FAO), IUCN – the World Conservation Union, and the World Wide Fund for Nature (WWF) International

Restoring the forests

Healthy forests play an important role in the lives of millions and possibly billions of people: they discharge clean water into streams and reservoirs, dish up hundreds of edible plants and animals, dispense a potent brew of medicines, and stand ready to supply industrial and local needs for timber and fuelwood. By definition, degraded land and degraded forests cannot do these jobs properly. Water becomes soiled, valuable plants and animals vanish, and supplies of timber and fuelwood dwindle.

ITTO's new *Guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests* are part of a substantial effort by ITTO and its partners to deal with degraded forest and forest land. They were developed by a team of experts from ITTO and organizations such as CIFOR, FAO, IUCN, WWF International and national agencies, combining a vast quantity of scientific information with the field experiences of many tropical forest stakeholders.

The *Guidelines* cover three main categories of forest. *Degraded primary forests* are primary (or 'original') forests in which the structure, processes, functions and dynamics of the initial forest have been altered beyond the short-term resilience of the ecosystem.

Secondary forests are composed of woody vegetation regrowing on land that was largely cleared of its original forest cover. *Degraded forest lands* are former forest lands severely damaged by excessive harvesting, poor management, repeated fire or 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. The estimated



PREREQUISITES

The basic conditions for the successful restoration, rehabilitation and management of degraded and secondary forests include:

- the **strong support and participation of local stakeholders** 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;
- **short-term economic benefits for local forest users**—these must be in addition to any potential future benefits;
- a **sound understanding of the complexities and dynamics of the forest ecosystem** and of the interacting socioeconomic and political systems; and
- an **analysis of land capability** and an understanding of and legal definition of overall land-use relationships.

area covered by tropical forests and lands in these three categories is an immense 850 million hectares (see table).

What is to be done with these lands? The first thing, say the *Guidelines*, is to consider the role that degraded forests and forest lands play in their landscapes—or could play, if properly restored and managed. It is often unrealistic and probably unnecessary to reforest and restore every bare hill and every degraded creek line in a landscape. In balancing the needs of conservation and production, restoration efforts should aim to re-establish functionality; that is, degraded lands should be reforested, and degraded and secondary forests should be managed to the extent that the land regains and maintains its capacity to deliver the products and services required of it. In many cases, it may be better

to focus restoration activities on the recovery and maintenance of primary processes such as hydrology, nutrient cycling and the production of locally useful products than attempting to replace the original forest structure.

Critically, governments and other funding sources need to offer financial resources to stakeholders and supportive organizations to promote and implement forest restoration and management. In so doing they will be investing in the medium- and long-term capacity of the land to provide a range of local, national and international goods and services.

Degraded and secondary forests make valuable contributions to rural livelihoods, particularly those of the poor

– Principle 2 of the *Guidelines*

Restoring the forests

Estimated extent of degraded and secondary forests by category in tropical Asia, tropical America and tropical Africa in 2000* (million 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



A. Gaviria

Management strategies

The *Guidelines* make a distinction between three principal management strategies:

- **forest restoration**, which aims 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 original forest;
- **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.

These strategies are not mutually exclusive; all three may need to be deployed in a landscape. The successful implementation of any strategy will require that several basic conditions are met (see box page 3).

Isolated trees and patches of trees play an important role in seed dispersal and seedling establishment. They should be protected in agricultural land to improve habitat and to facilitate recovery if the land is abandoned.



J. Casana

ITTO funds more than a dozen projects with a significant component related to the field-level restoration of degraded forest and forest lands and the management of secondary forests. In Ghana, for example, a long-running project implemented by the December 31st Women's Movement, a non-governmental organization, is assisting women in several rural communities to establish and manage planted forests on degraded land as a way of empowering them to improve their lives and address needs in the communities. A recent independent evaluation of the project concluded that the project's success in mobilizing beneficiaries and their communities to create valuable forest assets has encouraged women in other communities to adopt similar approaches. Moreover, the national government has introduced a national reforestation program aimed at planting 20,000 hectares per year, using the project's experience in community reforestation as a basis for its approach.

Secure land tenure, land-user rights and property rights are fundamental to the restoration, management and rehabilitation of degraded and secondary forest

– Principle 5 of the *Guidelines*

Restoring the forests

The role of the guidelines

The *Guidelines* 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 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 objectives, principles and recommendations of the guidelines are divided into two sections, which are 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 stated. Under each main objective, a number of principles, and under each principle a number of recommended actions, are listed. Section I comprises 31 principles and 105 actions.

Conserving and restoring biological diversity, including genetic resources, is a particular concern in all programs to restore, manage and rehabilitate degraded and secondary forests

– Principle 21 of the *Guidelines*



Giving the forests a helping hand

The seven objectives are:

- 1 attain commitment to the management and restoration of degraded and secondary forests;
- 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 to enhance 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 to: public policy-makers, such as government agencies dealing with rural landscapes (forest departments, planning, finance); development and extension agencies; and civil-society, 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 to: civil-society, private and communal extension agencies; forest practitioners working at a site level; and education, training and research institutions.

A. Cavirita



Where degradation has brought about failures in ecosystem functioning, rehabilitation and restoration activities should be targeted along riparian strips, steep slopes, field boundaries, and so on.

EMPOWERING



Sufficient resources must be committed to initiate activities for the restoration, management and rehabilitation of degraded and secondary forests

– Principle 26 of the *Guidelines*

The area of degraded tropical forest lands will undoubtedly continue to grow for some time yet; the forces that promote degradation remain far more powerful than those that would put a stop to it. Yet in one way at least, forest degradation can be empowering: when a resource of great value such as primary forest is degraded, a society's most powerful people tend to lose interest in it. This gives people on the economic margins

the chance to gain greater access to a resource, albeit a depleted one. In many cases this will lead to deforestation, because agriculture is usually a more economically attractive land-use, but it can also provide opportunities for community-led restoration, rehabilitation and secondary forest management—particularly when supported by funds from outside.

ITTO will continue to assist communities in its member countries to implement sound forest policies through its wide-ranging project program. The ITTO *Guidelines*, and such assistance, will encourage people who believe in the important roles played by forests to keep working towards forest restoration, rehabilitation and management. As more people see the local consequences of drastic forest loss, ITTO expects such encouragement to be increasingly welcomed.

Printed copies of 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 below); they can be downloaded from www.itto.or.jp



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