Combating poverty through better land and forest use

IFAD's contribution to sustainable forest management

Land degradation and deforestation: Interrelated global environmental issues

Despite widespread recognition of the problem, and an international consensus and commitment to tackle its causes and effects, **land degradation** is still on the rise, affecting new areas and geographical zones. Defined as a reduction in the capacity of land to perform ecosystem functions and services that support society, land degradation is a major, global environmental and development issue – already identified during the United Nations Conference on Desertification more than 30 years ago. It now affects **one fourth of total land surface**, up from 15 per cent in 1991, with cumulative effects on forests, cropland and rangeland (figure 1). Land degradation occurs in all continents, affecting not only dry areas, as commonly thought, but also humid regions.

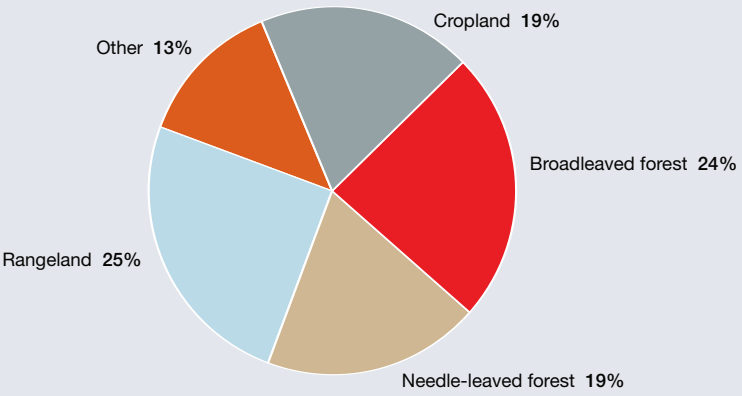
Land degradation in arid, semi-arid and dry areas, known as **desertification**, is a special cause for concern. Drylands include those regions in which water scarcity limits the production of crops, forage, wood and other ecosystem services. They cover about **30 per cent of the world's terrestrial surface** and are home to 900 million people. Drylands are among the world's most fragile ecosystems. Poor communities, tribal peoples and pastoralists inhabiting these regions are especially vulnerable to desertification and degradation of ecosystem services, which threaten their current livelihoods and endanger future improvements in their well-being.

Land degradation is caused by a combination of factors, and in particular by **misuse and mismanagement of land and soil**. It damages ecosystem functions and services, thereby risking livelihoods, economies and societies. Some assessments estimate the annual cost of land degradation at US$40 billion. About 1.5 billion people, nearly 25 per cent of the world's population, depend directly on land that is being or is already degraded.

IFAD GEF

FIGURE 1

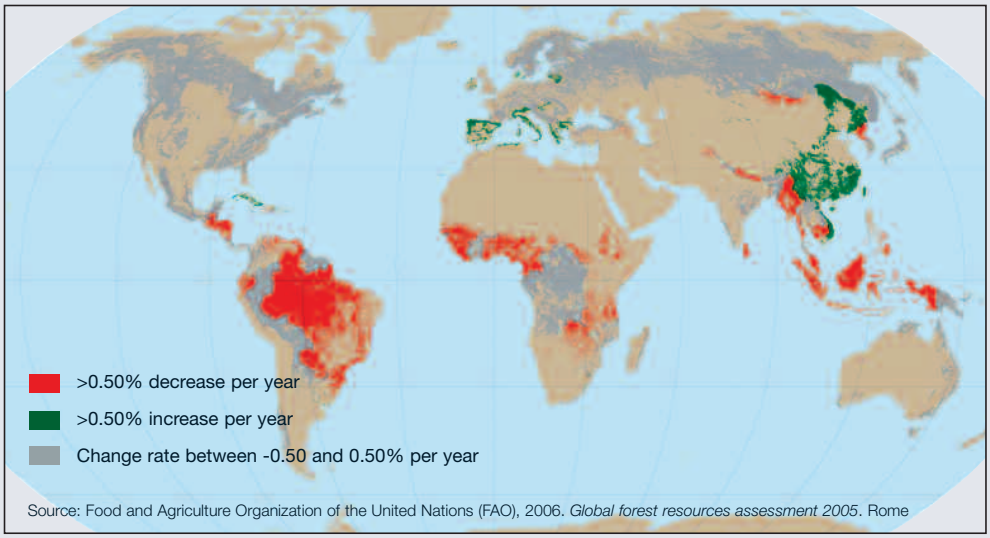
Land being degraded by use



Source: Based on Bai et al., 2008. *Global assessment of land degradation and improvement 1*. Rome: FAO/Wageningen: ISRIC

MAP

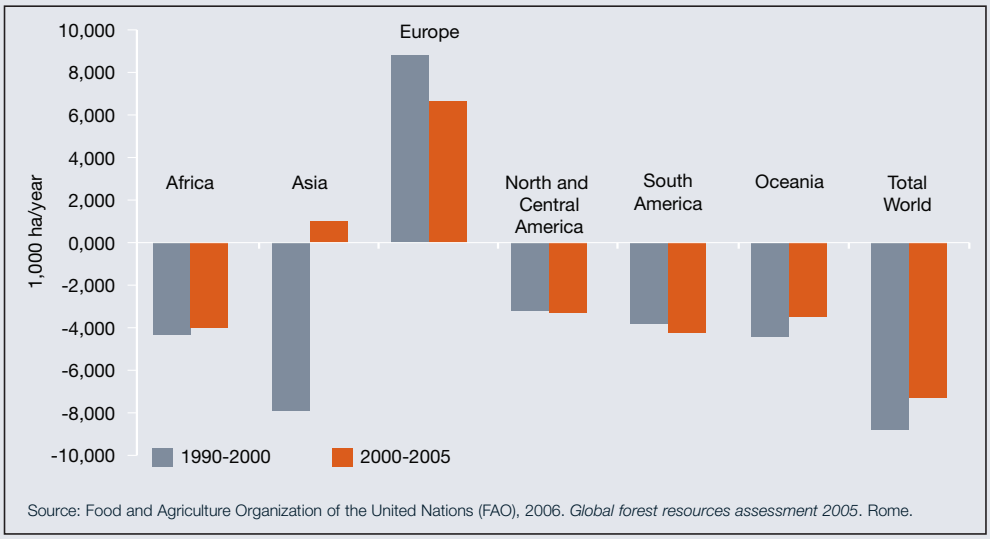
Countries with large net changes in forest area, 2000-2005



Source: Food and Agriculture Organization of the United Nations (FAO), 2006. *Global forest resources assessment 2005*. Rome

FIGURE 2

Change in extent of forest 1990-2005



Source: Food and Agriculture Organization of the United Nations (FAO), 2006. *Global forest resources assessment 2005*. Rome.

Deforestation is both a main driver and a consequence of land degradation. Forest degradation and forest land conversion are different aspects of the same problem, caused by multiple and interacting factors, such as economic growth, macroeconomic policies, population movements and the legislative framework, intertwined with climatic variation, economic activities and urbanization, among others. Reviews of case studies of deforestation and desertification reveal that the most common type of interaction is a synergetic combination of factors.

Deforestation continues at an alarming rate in several regions and countries – overall, nearly 13 million hectares (ha) per year – and shows no sign of slowing down at the global level (see map). Forest planting, landscape restoration and natural expansion of temperate forests have significantly reduced the net loss of forest area. Nevertheless, **native forests are decreasing by about 6 million ha annually** (mostly tropical forests), partly due to conversion of forests to agricultural land, and partly due to selective logging and other human activities (figure 2). Forests in dryland areas are especially vulnerable to human intervention. Degradation of tree and shrub formations and overexploitation of forests are among the major causes of soil degradation in the dry tropics.

Deforestation and changes in land and land use also play significant roles in **global climate change**, because carbon dioxide is released into the atmosphere when forests or forest products are burned. When forests are converted to other uses, such as agriculture, future carbon sequestration is lost as well. Extreme events caused by climate variability, such as droughts, floods and storms, in turn affect forests, making them more vulnerable to fire, pests and disease. In addition, the present food price crisis, which is creating more pressure to increase food production, will likely bring about further expansion of the agricultural frontier, resulting in more deforestation and land use change – and reinforcing a vicious circle (box 1).

BOX 1
Potential impacts of the food crisis on forest conservation

Agriculture accounts for the major share of human use of land. Pasture and crops alone took up 37 per cent of the earth's land area in 1999. Over two thirds of human water use is for agriculture. In Asia the share is four fifths. Crop and livestock production have a profound effect on the wider environment. They are the main source of water pollution by nitrates, phosphates and pesticides. Agriculture also affects the basis of its own future through land degradation, salinization, overextraction of water and reduction of genetic diversity in crops and livestock.

The current food crisis, together with the biofuels rush, will exacerbate these impacts, posing an additional threat to forest conservation, as more land will be cultivated to address both the demand for food and energy needs. At present, some 1.5 billion ha of land is used for arable and permanent crops, about 11 per cent of the world's surface area. According to an assessment by FAO and the International Institute for Applied Systems Analysis, a further 2.8 billion ha are to some degree suitable for agricultural production, almost twice as much as is currently farmed. However, much of this potential land is in practice locked up in other valuable uses. Some 45 per cent is covered by forests and an additional 12 per cent is in protected areas. The demand to increase production and productivity will put pressure on these fragile areas, especially in those countries where land rights are not properly protected or environmental law enforcement is weak.

Forest degradation and the international response

Concerns about deforestation, and its interrelationship with land degradation and desertification, can be traced to the United Nations Conference on Desertification held in Nairobi in 1977. Despite calls for action, the problem has intensified since then. It was debated again at the United Nations Conference on Environment and Development (UNCED) – the 'Earth Summit' – in Rio de Janeiro in 1992, reaching great consensus. The three main conventions adopted in Rio emphasize **the importance of conservation, sustainable use and management of forests** in achieving their respective objectives.

The UNCED also endorsed a statement of 'Forest Principles',[1] which was the **first global consensus on forests**. These principles propose the management, conservation and sustainable development of forests and provision for their multiple and complementary functions and uses, in order to avoid forest and land degradation. The Forest Principles also introduced the concept of **sustainable forest management** (SFM).

The SFM approach has influenced many initiatives at various levels, leading to the revision of forest policies and legislation. It has been mainstreamed by local, national, regional and international forestry organizations. When translated into action, SFM adopts various forms, adjusting to diverse situations and priorities (box 2).

In 2007, after 15 years of negotiations, the international community concluded a landmark agreement known as the **Non-Legally Binding Instrument on All Types of Forests** (NBLI). For the first time since the Earth Summit, a legal instrument for forests is in place, providing a globally recognized framework for national action and international cooperation to achieve SFM. It includes four global objectives on forests (box 3). The **United Nations Forum on Forests** (UNFF) adopted the NLBI in April 2007, and the United Nations General Assembly adopted it in December 2007.

1 Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests.

BOX 2
Sustainable forest management: An evolving concept

SFM approach

Sustainable forest management is an evolving concept that encompasses the protection, conservation and sustainable use of forest resources, services and products, as well as forest lands, so they can be maintained or improved for present and future generations. According to the Declaration of Helsinki on sustainable use of forests (1993), SFM is "the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national and global levels, and that does not cause damage to other ecosystems".

SFM may include: conservation and management of forest biodiversity; management of forests to reduce risks and disturbances such as wildfire, pollution, invasive alien species, pests and disease; production of wood and non-wood forest products from forests and trees outside forests; safeguarding of the role that forests and trees outside forests play in moderating soil, hydrological and aquatic systems; and the legal, policy and institutional framework required to support sustainable forest management.

Translating SFM into practice

SFM adopts diverse forms, from community-based forest management to approaches based on economic valuation (certification, payments for environmental services, etc.). The initiatives undertaken include:

- national forest programmes
- integrated watershed management
- landscape restoration
- participatory forestry
- adaptive collaborative forest management
- protected area management
- forest certification

BOX 3

Global Objectives on Forests – from the Non-Legally Binding Instrument on All Types of Forests

1. Reverse the loss of forest cover worldwide through sustainable forest management, including protection, restoration, afforestation and reforestation, and increase efforts to prevent forest degradation.
2. Enhance forest-based economic, social and environmental benefits, including by improving the livelihoods of forest-dependent people.
3. Increase significantly the area of protected forests worldwide and other areas of sustainably managed forests, as well as the proportion of forest products from sustainably managed forests.
4. Reverse the decline in official development assistance for sustainable forest management and mobilize significantly increased new and additional financial resources from all sources for the implementation of sustainable forest management.

IFAD: A strong commitment for forest conservation and use

Forest conservation and sustainable use, with a strong pro-poor approach, play a primary role in IFAD strategy owing to their importance and interlinkages for poor communities and indigenous peoples. The *IFAD strategic framework 2007-2010* recognizes **the importance of managing forests sustainably to reduce land degradation** and at the same time improve food security and provide alternative income sources for communities and small farmers. In collaboration with Member States and partners from the Consultative Group on International Agricultural Research – such as the Center for International Forestry Research, the World Agroforestry Centre, among others – IFAD has been developing and applying **innovative approaches to improve forest use**. For example, 'leasehold' forestry for poor people to restore degraded forest land in Nepal (box 4); use of non-wood forest products by poor communities for income generation and the promotion of community-based forest enterprises in Mexico and Zambia; valuation of the environmental services that forests provide to poor communities in Viet Nam; and access to traditional forest land for tribal communities in India.

IFAD is also an active player in implementation of both the **Land Degradation Focal Area** and the **Sustainable Forest Management Framework Strategy** launched by the Global Environment Facility (GEF) in 2007. The SFM strategy aims to support the Global Objectives on Forests adopted by the UNFF. It provides additional funding needed to mainstream and apply SFM techniques effectively, while addressing global objectives in the areas of biodiversity, climate change and land degradation.

IFAD, through its Global Environment and Climate Change (GECC) Unit, is currently developing three proposals on SFM with financing from the GEF. In **South-east Asia**, IFAD is supporting community efforts by the Association of Southeast Asian Nations to rehabilitate and sustainably use **peatland forests**. The project seeks to reverse the loss and

degradation of peatlands in four South-east Asian countries, avoiding negative impacts on society, the economy, health and the environment through capacity-building and sustainable peatland management practices.

In **Ecuador**, IFAD will support the Government's efforts to preserve valuable forests, including **mangroves**, and to reduce land degradation in the Ibarra-San Lorenzo Corridor, enhancing key environmental services that benefit indigenous peoples, local communities and smallholder farmers. This project will promote the **sustainable management of forests** in the northern region, avoiding forest fragmentation and reducing pressure on valuable forests of the project area. It will also establish a Payment/Reward for Environmental Services mechanism **for soil and water conservation and use** in the Chota Valley.

IFAD will also complement national endeavours in **Viet Nam** with a proposal to **preserve forest resources and reduce land degradation** in the northern uplands. The IFAD intervention will focus on stimulating and supporting actions by rural communities in upland regions of Viet Nam **to reduce the rate of deforestation and land degradation** and enhance the role of communities in stewardship of forest and upland areas. The objectives are to apply **sustainable forest and land management** techniques in allocated or rented forest lands and to promote diversification strategies and institutional strengthening.

The way forward: priorities and next steps

There are many positive signs and trends for SFM worldwide, but some negative indications remain as well. While intensive forest plantation and conservation efforts are on the rise, the most valuable or fragile forests in some regions continue to be degraded or converted to agriculture of doubtful sustainability at alarming rates.

BOX 4

IFAD's Leasehold Forestry Program: Tackling land degradation and deforestation in Nepal through innovative approaches

Between the end of the 1970s and the mid-1990s, **deforestation**, **land degradation and soil erosion** spelled disaster for rural households in the Middle Hills district of Nepal, where a large percentage of the population is poor. As forests disappeared, people – especially women – were forced to spend more time collecting fodder and fuelwood, which in turn led to a drop in agricultural labour supply and production and decreased food security. However, leasehold forestry, an innovative approach introduced by IFAD and the Government of Nepal in the early 1990s, has significantly reversed this trend.

The goal of the Hills Leasehold Forestry and Forage Development Project, launched in 1993, was to reduce poverty and restore environments in the Middle Hills by offering 40-year **leases on small plots of degraded, public forest land exclusively to groups of the poorest rural households**. Leasehold forestry user groups usually consist of 10 or fewer households. The stronger the group, the better chance it has to maintain and improve the site.

Participants rehabilitate the land by banning grazing and stall-feeding their livestock. They also use and sell forest products such as timber, fuelwood and fodder. The leases provide poor rural people with long-term land tenure and **give them an incentive to regenerate, protect and manage degraded forest areas under their use**, while offering them benefits in terms of improved livelihoods.

When the project ended in 2003, 7,457 hectares of degraded forest land had been handed over to 12,028 poor rural households, and 1,773 leasehold forestry groups had been formed. Once the leasehold forestry approach was successfully piloted and its impact was proven, the Government scaled up the approach from the initial 10 districts to 26 priority districts in the hills of Nepal.

Further progress will depend on improving international cooperation on forest issues, with all stakeholders moving forward with a proactive agenda of dialogue and action to finance sustainable forest management.

UNFF – a subsidiary body of the Economic and Social Council of the United Nations, formed to promote the management, conservation and sustainable development of all types of forests – and the Collaborative Partnership on Forests (CPF) – an innovative partnership among 14 major forest-related international organizations, institutions and Convention secretariats[2] – are trying to strengthen the long-term political commitment needed to promote the conservation and sustainable development and management of all types of forests.

IFAD will support the priorities proposed by UNFF and CPF – especially those closely related to poverty reduction and land degradation – through facilitating policy dialogue, promoting applied research and implementing activities at the country level. Among other initiatives, IFAD's work on rural poverty reduction will include work on:

- promoting community–based forestry activities that can generate environmental and social benefits at the time
- financing SFM and seeking means of implementation
- conserving forests and their biodiversity, including protected forest areas
- reversing the loss of forest cover, preventing forest degradation in all types of forests and combating desertification
- evaluating the potential impacts of climate change on forests

2 The CPF includes the following organizations: CIFOR, FAO, GEF, ICRAF, ITTO, IUCN, IUFRO, UNCBD, UNCCD, UNDP, UNEP, UNFCCC, UNFF and WB

IFAD
Enabling poor rural people to overcome poverty

GEF

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