

Round table on forestry and agriculture

As countries pursue sustainable development goals, they will need to address complex relationships of competing land uses, including agriculture and forestry.

Contribution of different change processes to total area change at regional and pan-tropical level, 1990–2000

With the adoption of the Millennium Development Goals, the importance of integrated planning and management of land resources has become increasingly apparent: in the quest for food security, poverty reduction and sustainable management of natural resources, competition among land uses is inevitable. Expansion of arable land to support growing populations will always come at the expense of other land uses – including forestry.

Systematic information is needed on many issues that govern local land use, including ownership and poverty–land-use relationships, which must be considered from a multisectoral perspective. National and international policy processes must address the complexity of these issues rather than reverting to easily expressed objectives such as stopping deforestation.

At COFO 2005, a side event was organized to shed more light on the interdependencies between forests and agriculture and local land-use considerations, from a cross-sectoral perspective. Presentations were made by representatives of FAO's Forest Resources Division, Land and Water Development Division, and Animal Production and Health Division.

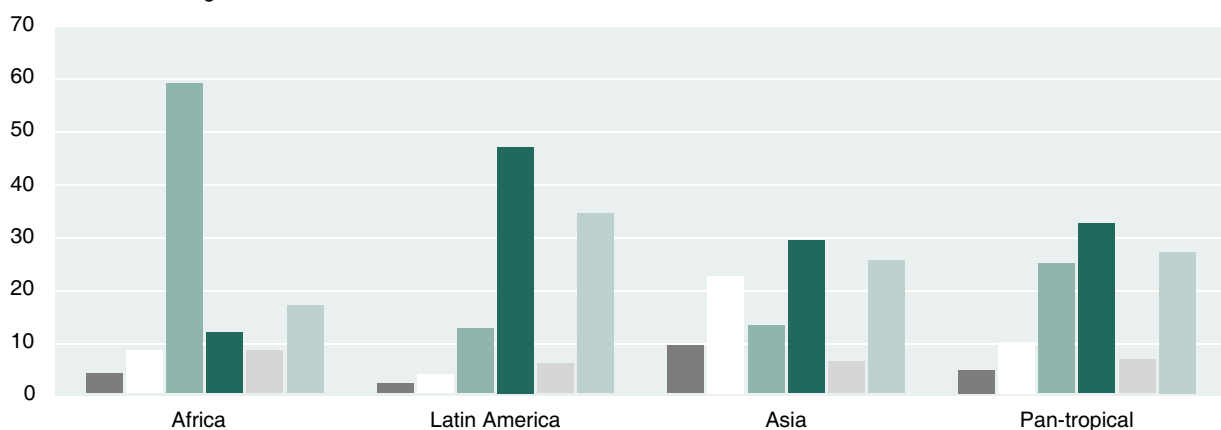
Forestry perspective

Data from the Global Forest Resources Assessment 2000 (FRA 2000) indicate a considerable loss of forests in tropical regions in the 1990s, but also an increase in many temperate areas. Most forest loss has been due to large-scale conversion of forests to agriculture, including livestock, and less to shifting cultivation (see Figure). Less is known about forest expansion, although there are some indications of marginal agricultural land returning to forests even in the tropics.

Current trends such as growing economies, urbanization and increased trade are also important for how the land is used. In some developed regions, agriculture has become highly mechanized and intensified, which has led to return of forests on marginal land. It is only possible to speculate about to what extent this will happen in developing countries, but FAO's study of agriculture towards 2015/2030 predicts that expansion of agriculture (about 7 million hectares per year in recent decades) could decrease by more than 50 percent in the next few decades.

The boundary between forest and agricultural land is not always sharp; trees outside forests often make up a considerable part of forest

% of total area change



- Expansion of shifting cultivation into undisturbed forests
- Intensification of agriculture in shifting cultivation areas
- Direct conversion of forest area to small-scale permanent agriculture
- Direct conversion of forest area to large-scale permanent agriculture
- Gains in forest area and canopy cover
- Other

Source: FRA 2000

resources, and food, medicines and other agricultural products are harvested from forests. The simplified view of a retracting forest boundary may therefore not be valid at the local level – and it is the sum of local realities that make up the global situation.

Land-use planning perspective

Integrated land-use planning facilitates allocation of land to the uses that provide the greatest sustainable benefits while recognizing the importance of protected areas and private and community property rights. To create enabling conditions for rural people to use land resources productively and sustainably, it must be participatory and must address conflicting stakeholder objectives.

Land-use planning involves analysis of the spatial distribution of lands with different potentials and constraints; identification of adverse impacts associated with each land use; and evaluation of which other lands might be appropriate for other uses. Planners must identify which inputs or management changes are necessary to reach production targets while minimizing adverse impacts.

Animal production perspective

In Latin America, poverty, unemployment and inequitable land distribution force many landless peasants to clear the forest for subsistence farming and livestock raising. It has been predicted that from 2000 to 2010, around two-thirds of deforestation in Central and South America will be due to pasture expansion into forests, with the remaining one-third due to expansion of cropland.

An integrated silvopastoral approach to ecosystem management being implemented by the Global Environment Facility (GEF), FAO, the Livestock, Environment and Development (LEAD) initiative and the World Bank is seeking to reduce pressure on Latin American forests by compensating livestock producers for adopting sustainable management practices that generate global environmental benefits (e.g. carbon sequestration, biodiversity conservation) on degraded pastures.

Farms are monitored annually, and rural producers receive payments for environmental services provided relative to the baseline situation, calculated for each land use (for example, in order of increasing value, degraded pasture, natural pasture without trees, improved pasture without trees,

improved pasture with recently planted trees, diversified timber plantation, riparian forest, intensive silvopastoral system).

Since the project was launched in 2002, more than 1 700 ha of degraded pasture have been converted to more sustainable land use. Local environmental benefits include reduced erosion and improved soil and water quality, while socio-economic benefits include increased production, income and employment in rural areas.

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