



Deutscher Tropentag, October 8-10, 2003, Göttingen

“Technological and Institutional Innovations
for Sustainable Rural Development”

Integrated Land Use Assessment and Monitoring

PETER HOLMGREN

Food and Agriculture Organization of the United Nations (FAO), Italy

Abstract

It is impossible to achieve sustainable development without a secure and lasting supply of food, nutrients, medicines and fibre from the land. Furthermore, sustainable development implies that environmental services — such as biodiversity, soil and water conservation, and climate regulation — are maintained or improved. From a national policy perspective, it is also necessary to include ownership, governance, equity, trade, and contributions to the overall economy in the equation. It is therefore logical to approach sustainable land management as a multiple-goal planning problem, where a large number of objectives are to be addressed. A key factor for policy development and monitoring is then access to reliable, relevant and cost-effective land use information. For this purpose, FAO develops an approach to support national assessments and monitoring of land use, based on nation-wide field sampling. The information produced is reliable thanks to a representative statistical design. It is relevant because parameters cover biophysical resources, management regimes, uses/benefits, as well as user categories in the local scale, and thus provide a broad and holistic view of land use for the country as a whole. It is cost-effective because a small but representative sample can generate sufficiently detailed knowledge at the national level. Permanent sample locations and commitments by national institutions are expected to secure long-term monitoring. By integrating the assessment and monitoring across forest and agriculture sectors, possibilities are created for analysing land management as a whole. For example, conflicting objectives between sectors — such as subsidies to agriculture vs. efforts to reduce deforestation, may be analytically weighted against each other. Examples and experiences of field implementation are presented in the paper.

Keywords: Land use assessment, modelling, national forest assessment