

CRITERIA AND INDICATORS FOR SUSTAINABLE FOREST MANAGEMENT: NEW FINDINGS FROM CIFOR'S FOREST MANAGEMENT UNIT LEVEL RESEARCH

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SUMMARY

This paper traces the growing interest in the development of Criteria and Indicators for sustainable forest management since the declaration of the 'Forest Principles' at the Rio Conference in 1992. Several processes are underway in different regions of the world to define sets of criteria and indicators that can be used to assess the social, economic and ecological sustainability of forest management. Some have focused more at national level, while others have emphasised information needs at the forest management unit level. In an attempt to produce a generic 'master set', the Center for International Forestry Research (CIFOR) has carried out several tests to compare the different sets of criteria and indicators currently in existence. At the forest level, ecological criteria have been found much easier to apply than social ones, as the latter often require an in-depth understanding of areas beyond the immediate boundaries of the forest management unit. In addition to social issues, other areas that still need further work include biodiversity, the development of criteria and indicators for plantations, and a means of linking information from the local to the national level. In an attempt to help people in different areas adapt the generic hierarchy of criteria and indicators to their own conditions, CIFOR is developing a computer programme, CIMAT, which allows for the addition of local knowledge and an iterative development of locally-specific criteria and indicators. In spite of the work still needed, the importance of defining a comprehensive but practical set of criteria and indicators lies in the fact that such a measurable and comparable methodology would build public confidence on the issue of forest sustainability.

INTRODUCTION

The United Nations Conference on Environment and Development held in Rio in 1992 - and subsequently known as the Earth Summit - was set up to review progress made since The Brundtland Report, *Our Common Future*, had been published in 1987. While the earlier event had stressed sustainable development, the Earth Summit went further to assert that sustainable development and sustainable management of the environment went hand in hand.

Among the outcomes from the Conference were the 'Forest Principles' - a non-legally binding alternative to the forest convention which could not be agreed upon at the time.

The 'Forest Principles' moved goals forward where it was possible to do so, and were the first global attempt to arrive at criteria for consensus on the management, conservation and sustainable development of forests.

Thus, attempts to define what sustainable forest management ought to consist of developed out of the Forest Principles, and led directly to the most interesting attempt of all, the definition of Criteria and Indicators (C&I). C&I are tools for assessing trends in forest condition and forest management. They go well beyond an assessment of sustained yield for timber, to an assessment of forests as ecosystems with environmental and social as well as economic functions. C&I provide a common framework for describing, monitoring and evaluating progress towards sustainable forest management, and implicitly define it.

The International Tropical Timber Organisation (ITTO) introduced the Criteria and Indicators concept and terminology in 1992. Since then several regional groupings of countries have worked together upon the process of generating and testing appropriate C&I to suit their own conditions. In 1994 thirty-eight European countries signed on to the temperate forest 'Helsinki process' and twelve non-European countries, also with temperate forests, followed suit through the 'Montreal process'. In 1995, eight Amazonian countries began work on the 'Tarapoto process' and more recently twenty-seven sub-Saharan African countries have been working on C&I for dry zones. Processes are under way in the near East and Central America, and most recently of all the African Timber Organisation has been testing C&I for the rainforest zones of Central and West Africa. The countries most actively reaching for ways of defining and assessing progress towards sustainable forest management have driven these processes, and the result has been that, six years later, over a hundred countries are taking part in one or another regional process.

In all these regions, the focus has been mainly on the generation of C&I at the national level. Useful feedback has been provided to ITTO itself, and the process over recent years has seen the development of much more all encompassing C&I, taking into account a fuller range of forest goods and services including environmental services and biological diversity. ITTO has recently (Wijewardena, 1998) issued a new broader set of C&I as a result, which are summarised in Table 1.

Table 1: ITTO's new criteria for sustainable forest management (revised 1998)

CRITERION 1 Enabling Conditions for Sustainable Forest Management
CRITERION 2 Forest Resource Security
CRITERION 3 Forest Ecosystem, Health and Condition
CRITERION 4 Flow of forest produce
CRITERION 5 Biological Diversity
CRITERION 6 Soil and Water
CRITERION 7 Economic, Social and Cultural Aspects

Source: Wijewardena (19998)