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INDICATORS FOR ASSESSING PROGRESS TOWARDS THE 2010 TARGET: AREA OF FOREST, AGRICULTURAL AND AQUACULTURE ECOSYSTEMS UNDER SUSTAINABLE MANAGEMENT

Note by the Executive Secretary

I. SUMMARY

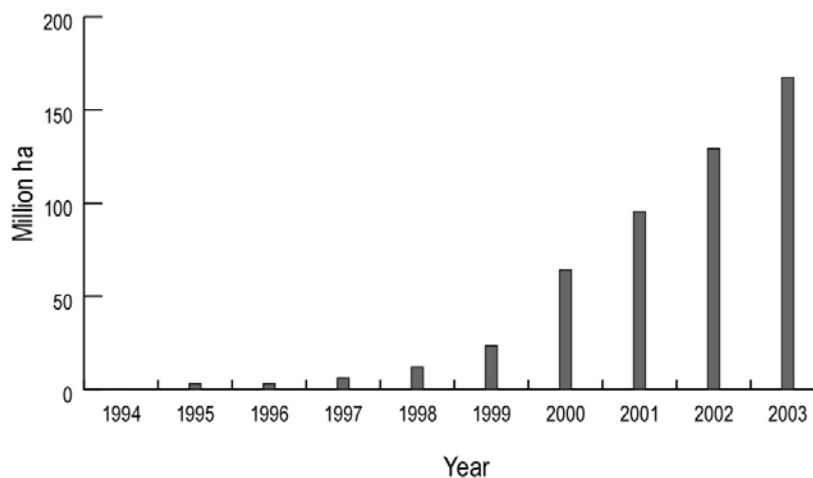
1. The indicator focuses on production systems, i.e. lands where the primary purpose is the production of forest resources, agriculture (including horticulture), grazing, or fisheries (including aquaculture and mariculture). The Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (decision VII/12, annex II) provide the framework for the development of indicators of sustainable use.

2. With reference to the application of the indicator to certified area, no comprehensive data evaluating and classifying production systems on a global level and assessing the degree to which they apply the Addis Ababa Principles and Guidelines are available. Approaches to collect such information need to be developed. Meanwhile, the area under certified production provides information about market demand and a measure of the degree of awareness about the sustainable production. Using the area under certified production does not imply that areas that are not certified are not sustainably managed. It is also recognized that some certification systems focus on sustainable production rather than a combination of ecological, economic and social factors. The use of this indicator and the data presented do not imply endorsement any certification system.

3. The indicator includes a broad range of certification systems in selected sectors (forests, agriculture, aquaculture) in production certification systems. Figure 1 shows trends in area of certified forest.

* UNEP/CBD/SBSTTA/10/1.

Figure 1. Global area of forest certified under the Forest Stewardship Council, the Pan European Forest Certification, the Sustainable Forest Initiative, the Canadian Standard Association, the American Tree Farm System and the Malaysian Timber Certification Scheme (based on figures provided by the respective certification schemes)



II. RELATION OF INDICATOR TO FOCAL AREA

4. Sustainable use of components of biodiversity, one of the three objectives of the Convention, is a key to achieving the broader goal of sustainable development and is a cross-cutting issue relevant to all thematic issues and areas addressed by the Convention and to all biological resources. It entails the application of methods and processes in the utilization of biodiversity to maintain its potential to meet current and future human needs and aspirations and to prevent its long-term decline. Sustainable use of the components of biological diversity is defined in Article 2 of the Convention as the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.

5. Two complementary indicators have been identified under the focal area on sustainable use, (i) area under sustainable management, and (ii) products derived from sustainable sources. The current application of indicator to certified production systems provides information on both area under sustainable management and products derived from sustainable sources. While certified forests are delineated as an area the criteria and indicators relate primarily to the products extracted from within this area. Most labelling systems intend to facilitate the tracing back of market products to the area and production system of origin (chain-of-custody).

6. While the sustainable use indicators are applied to production systems they complement indicators in other focal areas. The sustainability of our land use is assessed through the indicator on trends in extent of selected biomes, ecosystems, and habitats. Sustainable use is also reflected in the species-based indicators on trends in abundance and distribution of selected species and the status of threatened species, as well as trends in genetic diversity. Sustainable use is the flipside of threats to biodiversity. Without a reduction of threats, notable nitrogen deposition and invasive alien species, it is impossible to achieve sustainable use. All the indicators in ecosystem integrity and ecosystem goods and services are also indicators of sustainable use: the marine trophic index and water quality assess the sustainability of marine fisheries and freshwater pollution respectively. Fragmentation of ecosystems and human-induced ecosystem failure measure the consequence of unsustainable land management. The

indicators on health and well-being of people in biodiversity-based-resource dependent communities and on biodiversity used in food and medicine assess the degree to which a diversity of key resources necessary for human survival and well-being continue to be available and accessible.

7. The sustainable use indicators must therefore be complemented and seen in the context of information derived from a multitude of other indicators adopted by the Conference of the Parties in decision VII/30.

III. GENERAL DESCRIPTION OF INDICATOR

8. The indicator on area under certified production assesses trends in the various systems of criteria and indicators, which have been developed and are in use in agriculture, aquaculture, fisheries, forest management and horticulture. While these can be area- or product-based the current indicator focuses on area. Increasingly, they are complemented by more stringent certification and labelling schemes. Ecolabels, including for organic foods and fibres, non-wood forest products, ecoforestry and ecotourism, provide market-based incentives that reward producers for environmentally sound practices. Driven by consumer demand and trade regulations, the share of certified management systems and products has significantly increased over the past years. However, third-party certification is usually difficult to obtain, particularly for small-scale producers, and can be of limited interest to producers relying on domestic markets. Nevertheless, many of these may take considerations of sustainable management into account.

9. The following systems of criteria and indicators are particularly noteworthy:

(a) Under the Organisation for Economic Cooperation and Development (OECD), substantial progress has been made in developing agri-environmental indicators. ^{1/} These cover, *inter alia*, the use of pesticides and fertilizers, and impacts on soil, water and biodiversity at genetic, species and habitat levels. ^{2/}, ^{3/} The global area of certified croplands has been estimated at 2% in 2000. ^{4/} In the same year, between 1 and 3% of the managed pasture lands, which are estimated to be about 50% of total pasture lands, have been certified; ^{5/}

(b) Criteria and indicators for sustainable forest management have been developed on a regional or biome-specific basis. ^{6/} The Food and Agriculture Organization of the United Nations (FAO) has prepared a compilation of the nine systems of criteria and indicators for sustainable forest management. ^{7/} More recently, an International Conference on the Contribution of Criteria and Indicators for Sustainable Forest Management ^{8/} has analysed and compared the status of implementation of

^{1/} http://www.oecd.org/topic/0,2686,en_2649_33795_1_1_1_1_37401,00.html

^{2/} OECD. 2001. Environmental Indicators for Agriculture, Volume 3: Methods and Results. OECD, Paris.

^{3/} OECD. 2002. Report of the OECD expert meeting on Agri-Biodiversity Indicators, Zürich 5-8 November, 2001. OECD, Paris.

^{4/} Willer, Hella and Minou Youssefi (2001) Organic Agriculture Worldwide 2001: Statistics and Future Prospects. BIOFACH/IFOAM/Stiftung Ökologie & Landbau, Germany (<http://www.soel.de/>)

^{5/} Batello, pers. comm.. Cited in UNEP/CBD/COP/6/INF/21/Add.1

^{6/} More than 150 countries are participating in nine eco-regional processes to develop and implement criteria and indicators for sustainable forest management, all of which include conservation of biodiversity. As most of these processes have begun only in the last few years, it is anticipated that much more information will be available on sustainable forest management in future. Currently there are no globally agreed criteria and indicators, but FAO is facilitating a process to harmonize the various sets.

^{7/} Castañeda, F., C. Palmberg-Lerche, & P. Vuorinen. 2001. Criteria and Indicators for Sustainable Forest Management: A Compendium. Forest Management Working Paper 5. FAO Forestry Department.

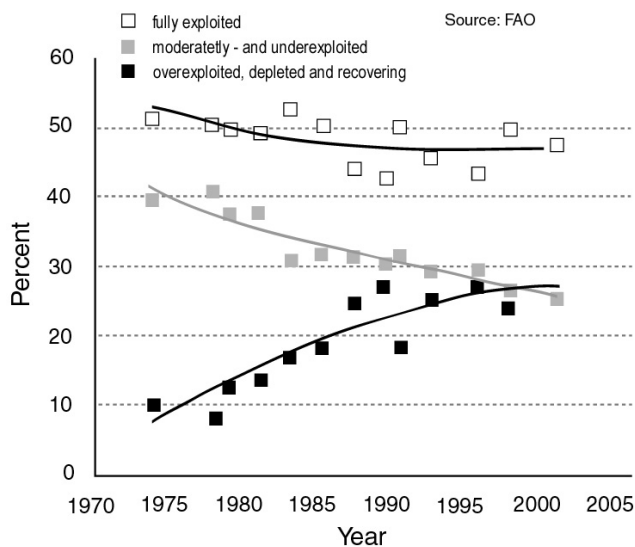
^{8/} International Conference on the Contribution of Criteria and Indicators for Sustainable Forest Management: The Way Forward (CICI-2003) Volume 2, CICI - 2003, 3 - 7 February 2003, Guatemala City, Guatemala (<http://www.fao.org/DOCREP/005/J0077E/J0077E00.htm#TopOfPage>)

international criteria and indicator processes. The area of certified forest has risen from about 2% in 2000 to almost 4% in 2003 (see figure 1 above);

(c) In recent years, a number of certification and labelling systems have been introduced for fisheries. For example, about 160 products certified under the Marine Stewardship Council are now on sale.^{9/} The Aquaculture Certification Council (ACC) certifies aquaculture facilities that apply best management practices to ensure social and environmental responsibility, food safety and traceability throughout the production chain.^{10/} ACC was launched in 2002. At the end of 2003 less than 10 shrimp farms (all located in Central America) and one US-based buyer had been certified. The demand for certified aquaculture products, however, is increasing and other labels are being launched;

(d) FAO^{11/} has analysed the global trends in fisheries stocks since the early 1970s. Figure 2 shows the results of increasingly intense exploitation and continuing depletion of marine fisheries stocks with the number of overexploited, depleted or recovering stocks having nearly tripled over the past 30 years. The number of stocks for which information was available has also increased (from 120 to 454). Maps depicting trends in the marine trophic index of marine fisheries areas can provide large-scale information about the sustainability of commercial fisheries (see UNEP/CBD/SBSTTA/10/INF/18);

Figure 2. Global trends in marine fisheries stocks (after FAO, *State of World Fisheries and Aquaculture 2000*)



(e) WWF currently develops a system to certify the capacity of protected areas to accommodate tourism.

10. There is also increasing awareness about the risk that the growing herbal market might pose a threat to biodiversity through the over harvesting of the raw material for herbal medicines and other natural health care products including culinary herbs, food supplement applications, essential oils and pharmaceuticals. These practices may lead to the extinction of endangered species and the destruction of natural habitats and resources. For example, of 880 medicinal plants traded in India, 104 are Red

^{9/} http://www.msc.org/assets/docs/news_and_reports/Annual_report03_English.pdf

^{10/} <http://www.aquaculturecertification.org/accprocp.html>

^{11/} FAO. 2001. *The State of World Fisheries and Aquaculture 2000*. Rome.

Listed. ^{12/} Similar work has also been carried on aquarium fish trade. This information is provided through other indicators including those on the change in status of threatened species and on biodiversity used in food and medicine.

11. While the limitations of relying exclusively on the area under certified production to inform this indicator must be recognized (see also discussion under section V below), the Ad Hoc Technical Expert Group on Indicators for Assessing Progress Towards the 2010 Target recommended that it should be used while more comprehensive measures are being developed and assigned the UNEP-World Conservation Monitoring Centre the task of coordinating work on this indicator.

IV. POLICY RELEVANCE

12. Sustainable use of components of biodiversity, one of the three objectives of the Convention. In accordance with Article 8, “*In situ* conservation”, Parties are required to “regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use” and to “endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components”. Article 10 provides that Parties undertake specified actions to achieve the sustainable use of components of biological diversity.

13. With regard to forest management, an expanded programme of work for the conservation and sustainable use of forest biological diversity was adopted by the Conference of the Parties at its sixth meeting, in its decision VI/22. More than 150 countries are participating in nine regional or biome-specific processes to develop and implement criteria and indicators for sustainable forest management. ^{13/} While there are currently no globally agreed criteria and indicators, FAO is facilitating a process to harmonize the various approaches.

14. In considering agricultural biodiversity at its third meeting, in 1996, the Conference of the Parties, in paragraphs 17 (a) and (b) of its decision III/11, encouraged Parties to promote “[t]he transformation of unsustainable agricultural practices into sustainable production practices adapted to local biotic and abiotic conditions, in conformity with the ecosystem or integrated land use approach” and “[t]he use of farming practices that not only increase productivity, but also arrest degradation as well as reclaim, rehabilitate, restore and enhance biological diversity”. The International Treaty on Plant Genetic Resources for Food and Agriculture, developed in harmony with the Convention, includes, in its articles 5.1 (c), 5.2, and 6.2 (a) and (b), provisions for the conservation and sustainable use of plant diversity.

15. The Code of Conduct for Responsible Fisheries, which was unanimously adopted in 1995 by the FAO Conference, provides a framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment.

16. The Millennium Development process and the Plan of Implementation of the World Summit on Sustainable Development (WSSD) are key instruments towards achieving the broader goal of sustainable

^{12/} Database at <http://envis.frlht.org.in/>

^{13/} Castañeda, F., C. Palmberg-Lerche, & P. Vuorinen. 2001. Criteria and Indicators for Sustainable Forest Management: A Compendium. Forest Management Working Paper 5. FAO Forestry Department.

development, including environmental sustainability. In accordance with paragraph 44 (b) of the Plan of Implementation, it is critical to promote the ongoing work under the Convention on the sustainable use on biological diversity, including on sustainable tourism, as a cross-cutting issue relevant to different ecosystems, sectors and thematic areas.

17. The Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (annex II to decision VII/12 of the Conference of the Parties) provide the framework and guidance for the sustainable biodiversity use across all sectors and products.

V. TECHNICAL INFORMATION

18. Information on area under certified production is obtained from reports prepared by certification bodies. It combines certification schemes, which pursue different objectives and may include schemes where environmental sustainability is not a primary objective. Some certification schemes emphasize sustained production rather than ecological sustainability. More importantly, the area under certified production excludes a large percentage of production systems that embrace economic, social and ecological sustainability. Certification is costly and focuses on the marketing of products: a large percentage of the area under certified production is therefore found among private large-scale producers in developed countries.

19. Estimated baselines for the area under certified production in 2000 are about 2 per cent of cropland, ^{14/} 2 per cent of managed forest production lands, ^{15/} and 1-3 per cent of managed pasturelands. ^{16/}

VI. APPLICATION OF THE INDICATOR AT NATIONAL/REGIONAL LEVEL

20. The indicator can be applied at any scale. Strategies and approaches and for the sustainable use of biodiversity at the national level are contained in national biodiversity strategies and action plans and relevant sectoral plans. Licensing requirements in many sectors increasingly take into account the need for environmental, economic and social sustainability.

VII. SUGGESTIONS FOR THE IMPROVEMENT OF THE INDICATOR

21. The application of the indicator to the area under certified production can only provide a preliminary approximation for the area under sustainable use. More comprehensive information on the area under sustainable production globally needs to be obtained to provide a clearer picture of the sustainability of our production systems. Concepts similar to the ecological footprint could provide information on the unsustainable consumption of biological resources. The number of collapsed fisheries could also provide a powerful measure contributing to an indicator of sustainable use.

^{14/} About 15 to 18 million hectares were estimated to be under certified organic production in 1998, SW Pacific, Europe and the Americas. There is very little certified organic production in Africa or Asia (Willer, Hella and Minou Youssefi (2001) Organic Agriculture Worldwide 2001: Statistics and Future Prospects. BIOFACH/IFOAM/Stiftung Ökologie & Landbau, Germany (<http://www.soel.de/>)).

^{15/} This ranges from near 100% (Finland), to zero for most countries. Areas certified in developing countries reach 9% in Africa (South Africa), 0.7% in Asia (Sri Lanka) and 7% in Latin America (Belize). Except for the US (12%), rates in countries with the largest forest areas are low (FAO 2001. Global Forest Resources Assessment 2000. Main Report. FAO Forestry Paper 140, 479 pp. Rome).

^{16/} Global Strategy for Plant Conservation - Technical review of the targets and analysis of opportunities for their implementation: report of the meeting of technical experts on the Global Plant Conservation Strategy, Gran Canaria, 11-13 February 2002 (UNEP/CBD/COP/6/INF/21/Add.1)