

## **Implementing agenda 21: nature conservation and sustainable development in the humid tropics**

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Sustainable development is concerned both with biodiversity and cultural diversity, insofar as it seeks ecosystem-specific and culture-specific responses to peoples' needs based on environmentally sound resource-use patterns. Populations living in similar ecosystems produce an amazing variety of livelihoods and adaptations to natural conditions. These experiences need to be compared and shared for the mutual benefit of participants. Ecosystems constitute a suitable geographical setting for such exchanges. The South-South Programme on "Environmentally Sound Socio-Economic Development in the Humid Tropics" has been predicated on these premises.

Since 1992, the Programme has been implemented jointly by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) in Paris, the United Nations University (UNU) in Tokyo and the Third World Academy of Sciences (TWAS) in Trieste. UNESCO is the Executing Agency through its Programme on Man and the Biosphere (MAB) in the Division of Ecological Sciences. The central goal of the programme is to test instruments for South-South Co-operation in humid tropical areas, with special emphasis on network building, technology transfer and improvement of management know-how for biosphere reserves.

The programme is engaged in the implementation of the recommendations of the conference on

Environmentally Sound Socio-Economic Development in the Humid Tropics, which was held from 13 to 19 June 1992 in Manaus, Brazil. This conference constituted the first follow-up to the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992 and it aimed to implement recommendations of the so-called Agenda 21 resulting from the Rio Conference, especially the Convention on Biological Diversity. The most important output of the 1992 Manaus Conference was a clear statement of the need to establish comprehensive inventories of research institutions working in humid tropical areas and of the past and ongoing research carried out, in order to avoid duplication of effort, identify gaps and gain a more complete picture of the various opportunities for mutual learning through exchanges of experience and of young and senior scholars and through parallel and joint projects.

The need to foster South-South Co-operation, and the perspectives opened up by UNCED through the Conventions on Biological Diversity and on the Protection of the Atmosphere, provided an opportunity to see how in concrete terms the conservation of ecosystems in the tropics could be harmonized with the need to ensure a sustainable and decent livelihood for the inhabitants as a basic requirement for development.

With this in mind, throughout its nine years of existence this Programme of South-South co-

operation has tried to pursue these objectives by, on the one hand, helping to identify ways of strengthening local institutions undertaking research, training and the management in relation to the sustainable use of renewable resources and on the other, by recommending possible actions. Furthermore, the programme has taken steps to improve the exchange of information and research results, particularly with respect to the preservation and sustainable use of biodiversity. It has also worked to disseminate knowledge of comparative research through publications and network databases. In addition it has tried to increase the exchange of scientists and experts.

*Programmes and projects:* In the context of humid tropical regions, special attention is given to the strengthening of biosphere reserves and rational use of biodiversity for the benefit of local and indigenous populations and the countries concerned. This involves (i) rehabilitation of degraded areas; (ii) agroforestry; (iii) forest ecology and (iv) sustainable land use.

In order to achieve this, South-South cooperation initiative has aimed to strengthen the network of biosphere reserves in Latin America, Africa and Asia which aim to undertake conservation of ecosystems in the tropics while making efforts to achieve sustainable development. The collaboration between these reserves focuses on testing hypotheses in the field of sustainable use of biodiversity and on identifying the relevant technologies and know-how which are potentially useful for the conservation and sustainable use of biodiversity both with respect to existing biosphere reserves and to those planned for the future. Another basic objective of the Programme is to strengthen the economic aspects within environmentally sound sustainable development and to improve the use of economic instruments for achieving sustainable development by improving the management structures of biosphere reserves, so that they become financially autonomous.

In relation to the exchange of experience regarding the development of buffer zone areas of biosphere reserves, training is provided for biosphere reserve managers and the participation of local and indigenous people is organized. In order to increase local capacity for carrying out management, research and training in the humid tropics the programme has strengthened already exist-

ing capacities and worked to achieve full utilization, rather than build new institutions.

In 1998-1999, support was given to the Institute of Environmental Education and Research, Pune University in India, for the implementation of an environmental awareness-raising course entitled "Diploma in Environment Education for School Teachers"

*Meetings and workshops:* The South-South Cooperation Programme is organized on the basis of a series of interregional meetings. (To date these have been held in Thailand (1994), Madagascar (1995), Mexico (1999) and Brazil (2000).) In addition a number of other meetings and workshops have been held. Among the events held, the following are some of the most important. Regional workshops took place in 1995 and in 1996 in Belém, Brazil. An international workshop on "Bio-villages and Eco-Development" took place in Madras, India, in 1996 and in December 1996, the programme gave considerable support to the first international congress on "Research and Management in the Beni Biological Station (Bolivia): 10 years of Contribution to National Environmental Management". In 1997, a regional workshop on "Community-based Protected Area Management: People Participation to Enhance Protected Area Management" was held in the UNESCO Office for Science and Technology, Jakarta, Indonesia. The international seminar on "Science and Technology for a Modern Biomass Civilisation", which took place at the Centro de Estudos em Energia (ENERGE) of the Federal University of Rio de Janeiro, Brazil, in September 1997, was part of the preparations for the General Meeting of the Academy of Science of the Third World and was jointly organised by UNESCO, UNU, TWAS and the Brazilian Ministry for Science and Technology. The seminar discussed the scientific priorities and technologies necessary for the advance of a modern biomass civilisation, with an emphasis on the place and role of tropical countries. In 1997 in Kunming, the capital of the Yunnan Province in China, an international workshop was organized on "Multiple Resource and Land Use Planning in Biosphere Reserves and Similar Managed Areas as Subject for Ecodevelopment". Also a visit to the Xishuangbanna Biosphere Reserve was arranged. The international meeting for the "Promotion of Sustainable Development through International Cooperation in Portuguese-Speaking African coun-

tries (PALOP)" was held in May 1998 at Sesimbra, Portugal.

*Applied research:* The applied research projects supported by the programme have covered the following themes and areas, among others: the rehabilitation of degraded tropical forest land in the Dimonika Biosphere Reserve in Congo; the rehabilitation of degraded mangroves in Cuba; the Mananara-Nord Biosphere Reserve, in Madagascar; "Esukawkaw Forest Reserve and its Anweam Sacred Grove (Ghana)" which studied the biological diversity and ethnobiological aspects of a protected area; "Evaluation of Faunistic Biodiversity Losses in the Coast-line of Rio Grande do Sul, Brazil"; "A Community-based Plan for the Prevention of Fires in the Municipalities of Santa Iracema do Alto Alegre and Mucajaí, State of Roraima, Brazil".

*Scientific exchanges, information sharing:* Under the Programme, activities have been promoted to encourage the sharing of information, data and approaches between scientists from different countries, through a series of joint studies and the exchange of experts and scientists. The first exchange started in 1996 with the participation of two scientists, one from Mozambique and the second from Brazil, to undertake the study "Biodiversity Conservation in Mozambique and Brazil". Several study grants were made available for participants from Ghana, Brazil, India and Colombia. Further exchanges have been organized between Madagascar, Indonesia, India, China, Bolivia and Brazil.

The expansion of training activities has called for a systematic effort to produce "state-of-the-knowledge" reports and teaching materials, with extensive use of comparative case studies, a catalogue of sustainable development experiences and an inventory of training opportunities around the world.

*Publications:* The Programme has generated a significant number of publications, and has also produced a CV and CD-Roms. Among the main publications, the following deserve particular mention.

UNESCO and UNAMAZ have published a state-of-the-knowledge report on Latin America and a similar report focuses on perspectives from Asia and Africa. UNESCO also published Volume 18 of the MAB-Digest Series on extractivism in the Brazilian Amazon as well as Volume 15 of the

same series entitled *Brazilian Perspectives on Sustainable Development of the Amazon Region*.

The first volume of the *Phyto-ecological Glossary of the Americas* was completed in 1997 by the Foundation of the Botanical Institute of Venezuela and UNESCO. UNESCO and the French research institution ORSTOM published the first volume of the new series *Sous Couvert Forestier*, which provided an overview of research on extractivism in the Amazon. This volume has been translated into Portuguese and was published in Brazil in 1999. In 2000, work began on a substantive report, in English, entitled *Assessing Effective Strategies for Decentralised and Participatory Management of Biodiversity Resources*.

Since the beginning of the Programme, UNESCO has published a newsletter entitled *South-South Perspectives* which appears in four languages – Chinese, English, French and Spanish.

To date, 33 papers have been published in the *Working Documents Series*. The authors work in or around existing or potential biosphere reserves, in nationally recognized reserves, or in conservation and development areas in 31 countries in Africa, Asia and Latin America. The papers give a brief description of the current status of the site, including a status report on the prevailing conservation and resource use patterns. They also indicate ways of improving traditional practices and provide orientation for applied research aimed at a more intensive, sustainable use of the biodiversity to provide a better livelihood for the local population in the buffer and transition zones. The papers also include information about ongoing research and monitoring, particularly with a view to the sustainable use of biodiversity, by finding means of developing and increasing the value of renewable resources while improving social equity.

*Seeking new partners:* This Programme focusing on an important ecological, environmental and economic area of concern provides a clear example of the usefulness of South-South Co-operation. Its funding too has been an exercise in international co-operation. In addition to financial support provided by the implementing agencies -- UNESCO, UNU and TWAS -- the German Federal Ministry for Economic Co-operation (BMZ) sponsored the programme and further finance was received from Japan and the European Union, but also, impor-

tantly, from countries in which the activities were undertaken.

It should be noted that the World Science Conference, held in Budapest in June 1999, included this South-South Co-operation Programme in the list of priority follow-up activities that should be undertaken. Nevertheless, the extent to which these activities can continue is dependent on finding the requisite finance, as the extrabudgetary funding for the programme ceased at the end of 2001. UNESCO remains willing to provide from

its core funds and staff what is necessary for the basic co-ordination of the programme and also a small amount of funding for publications, such as the *Working Documents Series*. But there is a need to find new partnerships and other agencies and institutions are encouraged to participate.

For a detailed list of the activities and outputs of the programme, consult the programme's website: <http://www.unesco.org/mab/south-south/index.htm>.