

Regional approaches to biodiversity management

National policies and planning for biodiversity management take place at the country level, but biodiversity and ecological processes, such as migration and species dispersal, do not conform to national boundaries. Nor is the impact of human activity on biodiversity limited by political frontiers. Trans-frontier and regional initiatives are needed to address cross-boundary issues, although they involve range of management and institutional complexities.¹

Ecoregional approach to biodiversity management

An ecoregion is defined as a relatively large unit of land or water containing a geographically distinct assemblage of species, natural communities and environmental conditions. Ecoregions typically cross several international boundaries, such as the Pantanal Flooded Savannas (Bolivia, Brazil, Paraguay) and the Western Congo Basin Forests, (Cameroon, Equatorial Guinea, Congo, DRC, Gabon).

The main elements of ecoregion-based management include:

- defining the critical areas of land and/or water to be managed, ensuring that they are representative of the ecoregion, and sufficiently extensive to maintain ecological processes and viable populations over the long-term;
- analysing the causes of biodiversity loss and understanding how local, national, and international activities contribute to this process;

- working with local communities, governments and other stakeholders (including the private sector) to help define and implement a management vision for the ecoregion that includes development of regional institutions.

Many species migrate across international frontiers. Migratory mammals, such as wildebeest (East Africa) and saiga antelope (Central Asia) move hundreds of kilometres between two or three countries on a seasonal basis. Some species, including pests such as locusts and quelea birds in arid regions of Africa, move across many countries or even continents. Most marine species have much larger ranges than terrestrial species (whales travel between oceans for example). The distributions of non-migratory species tend to be restricted to a particular region – including the ancestral populations of crops and stock that are widespread today, but the regions may cross national boundaries.

The ecoregional approach may focus on biological issues. However, not only plants and animals span national boundaries, but also the threats to species and their habitats. For instance, high demand for natural resources may encourage unsustainable harvesting in several countries and necessitate a regional

Mesoamerica Barrier Reef System

At the western edge of the Caribbean Sea, the MBRS is the largest barrier reef system in the northern hemisphere, with offshore atolls, sand cays, mangrove forests, beds of seagrasses, coastal lagoons and estuaries. It has spectacular underwater scenery with "blue holes" and is an important habitat for threatened turtle species.

There is a long history of reef use by local people, dating back to the Maya Indians. Today the barrier reefs are extremely important to the well-being of the local fishing and tourist industries. But the full economic potential of reef resources has yet to be realised, and the environmental protection they provide to the shoreline is under-valued. Potential threats arising from human activities include siltation from soil erosion, pollution from herbicides and pesticides, coastal construction and developments, oil production, collection of coral and shells, and dynamite fishing.

The governments of Belize, Guatemala, Honduras and Mexico have agreed to manage the entire reef cooperatively. Institutional development to achieve effective management of regional fisheries and a network of protected areas will be an essential part of this agreement.

approach to management, as illustrated by the conservation and sustainable use of some coral reefs (see text box).

Regional projects and programmes covering several different countries enable the promotion of biodiversity management on a larger ecological scale than is usually possible. This means that areas large enough to maintain viable plant and animal populations, or even ecoregions, can be managed coherently.

Many animals, such as these Burchell's zebra, need to make large scale migrations in order to survive, and may cross international frontiers as a result.



The EC and regional cooperation

A regional perspective has become increasingly important in the political dialogue, trade relationships and development cooperation of the European Community. It is widely recognised that no other international donor has as many means, or as much expertise, to support and foster regional initiatives. Regional integration and cooperation are now key elements of sustainable development, including tackling of transboundary, social and environmental problems. The European Commission supports regional economic initiatives in three inter-related areas:

- building the capacity of regional institutions and national governments to assist regional economic integration;
- assistance to the private sector to facilitate restructuring in the larger regional and world market, including improvements to the financial sector;
- support to governments committed to implementing regional integration to help with transitional effects (complementary to national economic adjustment support).

Opportunities and benefits

Regional programmes provide an opportunity to coordinate the management of shared ecosystems, in response to common threats, or the regulation of harvesting of shared resources. The EC-supported South Pacific Regional Tuna Resource Assessment and Monitoring Project is one example. Starting in 1994, SPR TRAMP aimed to provide a scientific basis for managing tuna fishing in 10 countries, through biological research, scientific observer programmes, sampling and monitoring of tuna landings, and development of population dynamic models. During the course of the project, the need to manage the regional problem of by-catches of sharks, turtles, dolphins and other species arose as an additional focus.

Other benefits of regional programmes include standardisation and coordination of survey, training and research programmes. The ASEAN Regional Centre for Biodiversity Conservation, for example, provides an information and networking service to countries of the same ecoregion or geographic zone. It serves as the central focus for networking and institutional linkage among ASEAN Members Countries and between ASEAN and European Union partner organisations to enhance institutional capacity, and conserve biodiversity. The EC provides the means to support networking, applied research, training and technical assistance

while ASEAN provides the institutions and support personnel. Similarly, regional training programmes can be very effective – the Southern African Botanical Gardens Network (SABONET) being a good example.

Regional biodiversity projects can also advance the cause of intergovernmental cooperation on other issues. One of the most successful instruments for promoting regional cooperation and biodiversity conservation is transfrontier conservation areas (TFCAs), sometimes known as Peace Parks. TFCAs usually extend far beyond designated protected areas, and can incorporate such innovative approaches as biosphere reserves, bioregional planning, establishment of dispersal, buffer or support zones and migration corridors, together with a wide range of community-based natural resource management programmes.

Other advantages of regional cooperation include shared culture and language, shared management problems, and proximity to shared facilities in neighbouring countries.

Lessons learned

A particular issue for biodiversity is that, at an early stage in the development of regional programmes, all Authorising Officers (or equivalent) of member countries have to agree on a project which is in their mutual interest and for which they wish to secure EC funds. This in itself may tend to favour non-controversial projects that are likely to be popular, such as



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Constraints and risks of a regional approach – the Mekong River Delta example

The Mekong's watershed includes six of Southeast Asia's richest and poorest nations. In 1995, Cambodia, Lao PDR, Thailand and Vietnam (the other two watershed countries being China and Myanmar) signed the Agreement on Cooperation for the Sustainable Development of the Mekong River Basin. Potential benefits of regional action include the establishment of a regional electricity grid, and a regional growth plan. The Agreement could also have environmental advantages, by encouraging countries to consider the downstream affects of their activities.

Disparities in the power and wealth of the countries involved pose problems in reaching solutions that are acceptable to all, especially how to balance obvious economic development opportunities (such as dam construction) with the river's livelihood benefits to the 55 million people who live in the river basin. Around 30% of these people live below the poverty line, and rely, for example, on the fish they catch from the river. Similarly, the silt load that the river produces is crucial for intensive farming systems in Vietnam and Cambodia, but less so elsewhere.

The Agreement on Cooperation specifies that the countries involved have neither the right to use nor to veto the use of the water of the Mekong, implying that consensus is necessary to move forward. The solution for the Mekong seems to be a balance: the careful selection and construction of environmentally 'good' dams over 'bad' ones, for example. But the financial and political clout of some countries may pose a threat even to this approach.

A red mangrove and shallow water coral reef in Belize, part of the Mesoamerican Barrier Reef System.

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ECOFAC – addressing common problems

Anticipating increasing pressure for conversion of African rainforests for timber and agriculture, the EC-funded Programme for Conservation and Rational Utilisation of Forest Ecosystems in Central Africa was started in 1992. It has received some 40 million Euro to fulfil the request by the region's governments that a substantial part of EC European Development Fund funds be allocated to forest conservation.

A key to the success of ECOFAC has been a strong coordination unit based in Libreville that provides a forum for interested stakeholders from all six countries, brings together international and central African experts on a regular basis, and ensures that ECOFAC maintains a regional outlook.

the construction of a highway between capitals, rather than natural resource management projects.

In the case of projects involving natural resources, therefore, mechanisms that facilitate lengthy negotiations may be needed, especially if one country stands to gain more than others from some programme components. The result of negotiations must be a clear commitment from all concerned on the aims and objectives of the cooperation, which must also involve all stakeholders including local communities, other ministries, interested agencies, and the private sector. This means a clear definition of goals, and coordination of actions, with strong political support.

Another challenge is to ensure donor complementarity so as to increase the efficiency, synergy and scope of regional programmes. These will benefit from close attention during inter-governmental policy dialogues, such as the EU-ASEAN Senior Officials Meetings. Monitoring of programme performance will require greater than usual organisation and coordination, and evaluators will need to ensure that regional biodiversity concerns are adequately taken into account at later stages in the project cycle.

Effective implementation of regional programmes may require development of new legislative and regulatory mechanisms. However, lack of capacity for regional cooperation in existing institutions is frequently encountered, especially for environmental matters. Regional initiatives should nevertheless be based as far as possible on existing structures, since there is a danger that new institutions will not be sufficiently embedded in existing processes.



¹ In this BB, unless otherwise stated, 'regional' refers to actions involving more than one country.

Further information

- Convention on Biological Diversity <http://www.biodiv.org>
- ECOFAC <http://www.ecofac.org>
- Olson, D.M. & Dinerstein, E. 1997. *The Global 200: A Representation Approach to Conserving the Earth's Distinctive Ecoregions*. WWF, Washington, DC, USA.
- South Pacific Regional Environment Programme <http://www.sprep.org.ws/>
- WRI 2000. *World Resources 2000-2001*. <http://www.igc.org/wri/wr2000/>
- reference to other Biodiversity Briefs is denoted as (see BB#).

Website

All Biodiversity Development Project (BDP) documents can be found on the website: <http://europa.eu.int/comm/development/sector/environment>