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Transboundary Biosphere Reserves
A tool for integrating conservation in a broader landscape

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This paper presents some reflections and experience gained from work on Transboundary biosphere reserves within UNESCO's Man and the Biosphere Programme. This experience is related to the theme of the session, Integrating TBCA into the broader landscape. The three main questions which will be addressed by the working groups are summarized below:

- Key lessons learned to achieve better integration into planning and management. What works and does not, how can conservation objectives be balanced with social and economic objectives?
- Key legal and institutional changes needed to achieve better integration?
- Role of managers of protected areas, what other stakeholders are involved, role of private sector?

The lessons learned by the development of Biosphere reserves will provide elements of response to these questions.

Evolution of concepts and ideas in biodiversity conservation

The recognition that biodiversity conservation depends on an ecosystem management approach that integrate protected areas into a broader landscape did not occur overnight.

In this regard, a major step forward was provided by the emergence of the concept of the bioregional approach, as reflected in such publications, as the World Resources Institute Report: "Balancing the scales – policies for increasing biodiversity's Changes through bioregional management" (Miller, 1996).

Recognition of the need for a broader landscape approach to conservation planning, was strongly reaffirmed at the IUCN Albany Conference of November 1997, on "Protected Areas in the 21st Century: from Islands to Networks", which emphasized the importance of adopting a bioregional approach to protected areas. In his presentation to one of the plenary sessions of this Conference, Dr Peter Bridgewater (at the time Environment Australia) analysed the "changing perspective for resources and land-use". He noted that more importance was being given to partnership models involving cooperation with relevant bodies rather than strict legal frameworks. Protected areas could not survive on their own and thus, protected areas managers needed to develop ways of working with sectors such as forestry, agriculture and fisheries so that the full range of conservation objectives could be achieved. In his opinion, protected areas should be more effectively planned in the matrix of sustainably managed land uses.

Activities undertaken within the aegis of the Convention on Biological Diversity (CBD) in the decade since its adoption at UNCED in Rio de Janeiro, have brought a different focus to nature conservation and the way we view landscapes. The CBD emphasizes the conservation of biological diversity, but also the sustainable use of the components of biological diversity and the equitable sharing of benefits from the use of biological diversity.

In recent years, the CBD ahs given special emphasis to the *ecosystem approach* to biodiversity conservation with 12 principles being proposed to define and describe the approach. The relevance of biosphere reserves in testing and implementing these principles is described in a booklet prepared by UNESCO in 2000 (UNESCO, 2000). In particular principle 1 "*The objectives of management of land, water and living resources are a matter of societal choice" a*nd Principle 12 "t*he ecosystem approach should involve all relevant sectors of society and scientific disciplines"* are of special relevance to biosphere reserves due to the latter's continued focus on people and nature.

The Durban Parks Congress has at its theme "benefits without boundaries". It will be the role of the stream on "linkages in the landscape / seascape" in particular to continue to explore how such principles of the ecosystem approach can be put into practice.

The biosphere reserve concept

The biosphere reserve concept is well known; however, a brief overview might be useful to place it in the context of this presentation.

Biosphere reserves are areas of terrestrial and coastal ecosystems promoting solutions to reconcile the conservation of biodiversity with its sustainable use.

They are organized according to a zonation pattern, with one or several core areas, a buffer zone(s) and a transition area(s) which corresponds to a gradient of conservation and use.

They must combine three complementary functions, i.e. conservation, sustainable use and a logistic function (research, monitoring, education and training), which are considered to be mutually reinforcing.

Although they are internationally designated by UNESCO's Man and the Biosphere Programme, they constitute a management tool and not simply an international label. In this sense, the term "biosphere reserve" is somewhat a misnomer and is still used for reasons of continuity and branding in relation to the MAB programme. The subtitle "Special places for people and nature" is now largely used.

Biosphere reserves form a World Network, which is guided by a Strategy, called the Seville Strategy, and governed by a Statute, called the Statutory Framework of the World Network.

Biosphere reserves respond to the two approaches inherent in the notion of "integration of protected areas in a broader landscape". On the one hand, they can help one or several strictly protected areas – the core areas – to become integrated into a larger geographic area which has less or even no legal protection. Also, they promote a holistic view such that nature conservation and human development can be viewed and planned together, in an integrated fashion.

Biosphere reserves can be mad up of combination of several of the IUCN categories of protected areas. They thus constitute models of integration and working examples that can and should be used elsewhere.

As the biosphere reserve concept is flexible, it can be and is applied in different socio-cultural contexts. The concept also allows variations in scale and time. Some of the so-called "new generation" of biosphere reserves cover extensive territories, such as those in Brazil and Morocco, or even entire islands, such as Minorca and Lanzarote in Spain, or the Commander Islands in the Russian Federation. Also, existing biosphere reserves can be and are often extended in space according to new possibilities or needs. The time scale of concerne will also vary, depending on the objectives: long-term conservation objectives and short-term local development objectives could, for example, be formulated for the same site.

Institutional implications of the biosphere reserve concept

A direct consequence of the establishment of a biosphere reserve - or indeed of any multifunctional landscape entity - is that some sort of a mechanism has to be put in place to manage such multi-objective territories and to involve all the responsible authorities and the local communities. The manager of the core area(s) is only one of the partners and he/she will have to consult and find ways of working with sectors such as forestry, agriculture, fisheries, transport, infrastructures (roads, electric lines, pipelines), tourism, etc. so that the full range of conservation objectives can be achieved.

The biosphere reserve has therefore to invent innovative arrangements that can serve as models in other areas. The biosphere reserve can be described as a platform for cooperation of all concerned parties dealing with a given territory. As mentioned above, more importance is given to partnership models involving cooperation with relevant bodies, rather than strict legal frameworks.

In the case of transboundary biosphere reserves, these mechanisms are the key to the management of the entire area, with the transboundary nature adding one further level of complexity.

Transboundary biosphere reserves [TBRs]

The Seville Strategy recommends, among others, that "the establishment of transboundary biosphere reserves be encouraged, as a means of dealing with the conservation of organisms, ecosystems, and genetic resources that cross national boundaries". However neither the Seville Strategy nor the Statutory Framework contain provisions on how TBRs should be established and managed. It was to fill that gap that the UNESCO Secretariat convened, in 2000, an *ad hoc task force* with the aim of elaborating the *Recommendations for the establishment and functioning of TBR*s.

Officially recognized TBRs are located on the territory of different States, they are international. However, in Federal States a similar category of sites exists which cross internal boundaries. This is the case for example with some Brazilian biosphere reserves such as Mata Atlantica or Cerrado, or with the Rhön Biosphere reserve in Germany which extends over three Länders. They face similar problems and the same recommendations can, *mutatis mutandis*, apply to these sites.

Six international transboundary biosphere reserves have been officially designated to date:

- Tatra, Poland and Slovakia (1992), in mountain ecosystems
- Krkokonose/Karkonosze , Czech Republic and Poland (1992), in mountain ecosystems
- Vosges du Nord/Pfälzerwald, France and Germany (1998), in forest ecosystems
- The Danube Delta, Romania and Ukraine (1998), in wetlands
- The Eastern Carpathians, Poland, Slovakia and Ukraine(1998), in mountain ecosystems
- Region du W, Bénin, Burkina Faso and Niger (2002), in dry savannas.

The opening of boundaries after the fall of the Berlin wall explains why the first TBRs were designated in Europe, and gave a particular symbolism to their establishment and recognition. The first non European TBR was only designated last year, but several are being created in other parts of the world.

None of the existing TBRs is located in the tropical forest biome, although the Mata Atlantica in Brazil can be considered as being managed as a TBR. It is worth underlining that the issues at stake, the processes required for their establishment and the types of coordinating mechanisms are the same for all types of ecosystems. However, the TBR approach is particularly well adapted to tropical forest ecosystems. This is due to the size of area required to conserve the complete array of species and the ecological functions which characterize tropical forests. With increasing pressures for tropical forest exploitation, the options for conserving such large tracts of land as a protected area within countries are rapidly diminishing. Some of the few remaining possibilities are to ensure the linking up of protected areas across international boundaries. A TBR can offer a framework for negotiating such arrangements, together with associated activities designed to take human pressures off the core protected areas.

Two examples of transboudary biosphere reserves in tropical forest regions under preparation are: a) La Amistad, Costa Rica and Panama (which already cooperate but have not yet formally requested to be designated as one single site) and b) Bosawas/Rio Platano in Nicaragua and Honduras, with the addition of two protected areas in Honduras (for which a meeting of all interested parties is being organized with UNESCO's support in late February). Also, the Maya Biosphere reserve in Guatemala is contiguous to the Calakmul Biosphere reserve in Mexico. Discussions are underway to explore creating a TBR, which would also involve areas such as the Rio Bravo Conservation Area in neighbouring Belize.

Political dimension of TBRs

It is important to stress that the formal recognition by a UN institution of a transboundary biosphere reserve has a very significant political dimension. This also true for World Heritage sites.

A TBR must be designated by the International Coordinating Council of the UNESCO's Man and the Biosphere Programme. This designation is formally requested by the national authorities of the two or more countries concerned, which implies that they have a political commitment and will to cooperate. Normally, the nomination follows a high-level agreement between the countries. This was the case of the East Carpathian BR: an agreement was signed in October 1991 between the Ministers of Environment of the three countries (at the time Slovakia was still part of Czechoslovakia) aiming at preserving the shared ecosystems and specifically making a request to UNESCO for designation as a single international BR.

In the case of the Danube Delta, a joint commission on transfrontier cooperation was established, which includes not only Romania and Ukraine but also Moldova. The Ministers of the three countries have signed an agreement geared towards an extension of the existing TBRs in Romania and Ukraine.

For the Region du W, the Ministers of Environment of Benin, Burkina Faso and Niger signed at La Tapoa (located within the part of the W in Niger) in May 2000 a formal declaration stipulating their wish to work together, with the support of the MAB Secretariat, towards the creation of the tri-national biosphere reserve.

In Vosges du nord/Pfälzerwald (France/Germany), the establishment of TBRs has a special symbolic value in an area which has seen several wars. The site includes the former Maginot and Siegfried lines, built by France between 1929 and 1940 as defence systems.

Once the political decision to create a TBR has been taken and expressed publicly , the question remains whether the TBRs should be established jointly by the countries concerned in a single step or whether it should be based on two (or three) already existing BRs. In both cases, however, the same prerequisites should be applied, i.e. the zoning of the area should conform to the general criteria for designation of biosphere reserves, local and national partners should be identified and a working group mechanism should be established to define the basis and identify key issues for cooperation. It is inevitable that building such cooperation is a long-term process, which needs to involve as many partners as possible, thus creating the practice and habit of working together at the local level.

Institutional mechanisms for TBRs

The issue of institutional mechanisms was thoroughly considered during the ad hoc task force on TBRs held in Pamplona (Spain) in October 2000. One general conclusion was that a TBR will not function without a joint structure devoted to its coordination. Although the nature of this structure can vary greatly from one TBR to another, the following recommendations were made by the task force (UNESCO, 2001):

- The co-ordinating structure is representative of the various administrations and the scientific boards, as well as the authorities in charge of the protected areas, the representatives of local communities, interested and affected groups, including youth, and of the private sector.
- The NGO sector in the area is also represented in the structure.
- This structure has a permanent secretariat, and a budget is devoted to its functioning.
- A person is designated on each side to act as a focal point for co-operation.
- General and regular meetings of the co-ordinating structure are complemented by thematic groups, on an *ad hoc* basis, in order to create a platform for discussion among stakeholders from the countries concerned, with a view to promote all opportunities for exchanging views and knowledge.
- Joint staff teams are operational for specific tasks.
- An association is set up with the specific aim of promoting the TBRs.

These recommendations represent what was thought to be desirable by the experts who participated in the task force, all of them having field experience in transboundary cooperation. However the actual situation in existing TBRs does not necessarily meet, for the time being, all the above recommendations.

In the Danube Delta (Romania/Ukraine), there is no joint committee for coordination. This task is carried out by informal working groups and both sides have frequent exchanges (especially, thanks to a GEF/World Bank project). However, a joint commission has been set up with the support of the Council of Europe in order to extend the transboundary site to territories in Moldova. Representatives of both sides of the TBR are members of the Commission, as well as representatives from and Moldova.

In the East Carpathian BR (Poland/Slovakia/Ukraine), a formal coordinating structure has been established but met only three times. In an operational void, the Foundation for Eastern Carpathian Biodiversity Conservation, which is a private entity, supported by a trust Fund (GEF- World Bank and the Mac Arthur Foundation), plays the role of coordinating the various actors and supports to joint activities, such as joint inventories and an annual conference. What is interesting in this case, is that this body plays the role of a forum where management issues are discussed and priorities are jointly identified. According to the authorities concerned, there is still the need of a legal framework to guide the trilateral cooperation and a formal committee to implement it. However, it should also be noted that, thanks to the GEF funding, a great deal of cooperative work has been undertaken, in respect to zonation, conservation objectives, land use projects, research and local development such as tourism. The habit of various partners working together, the search of consensus and the holding of regular consultations should also be mentioned as positive results.
In the two examples just mentioned, the existence of a GEF project and financial support have provided opportunities for the participating partners to shape and initiate transboundary cooperation.

The Karkonosze/Krkonose Biosphere Reserve in the Czech Republic and Poland offers another example of *ad hoc* structures being put in place for TBRs. The TBR was created in 1992, as a follow-up to a UNESCO conference held in 1986, through a rather drawn-out process but one which allowed the concerned authorities to meet regularly and discuss options for innovative mechanisms. On both sides, there was a strong agreement that the TBR would need a body independent from the respective national protected areas authorities in order to allow incorporation of activities other than nature conservation, and to provide a more neutral platform for discussion, in particular with the local communities. An Executive Committee was established in 1996, funded through a European PHARE project, and composed of the national park administrations, representatives of local communities, the private sector and non-governmental groups and associations of the two sides. This body has become the Board of the TBR, and is alternatively chaired by the Czech Republic and Poland. In addition there are nine transboundary working groups on themes of common interest such as forestry, tourism, ecofarms, culture, nature conservation, etc.

In the W Region of Benin, Burkina Faso and Niger, a coordinating structure has been put in place by the national authorities with support from an existing programme funded by the European Union (ECOFAS). It is expected that this structure (composed of an advisory council and a technical committee) will serve as a basis for a future permanent mechanism when the ECOFAS programme ends. It is foreseen that the permanent structure will include the competent administrations, the scientific community, the managers of the protected areas, representatives of local communities, the private sector and NGOs.

Finally, the Rhön BR in Germany offers an interesting case study. Although it is situated in a single country, the BR straddles three Länder, with three different administrations (including three local Ministries for Environment) responsible for its management. In order to define a common policy which would be implemented by the three administrations, thematic groups are now meeting regularly and

general orientations agreed upon. Municipalities also coordinate their policies through civil society associations. An overall coordinating committee and a coordinator of the Biosphere reserve ensures the functioning of the system, even though the responsibility for implementation of common decisions remains with each municipal administration.

Zonation

The preparation and the adoption of a zonation pattern for the whole area - implying strict protection of core areas, delimitation of the buffer zones and co-ordinated objectives for the transition areas - is one of the key elements of a TBR, in that it means that the countries concerned must have a mutual understanding of the characteristics of each of the zones, and that harmonized conservation and management measures are in place or are planned for each zone.

The UNESCO-MAB Secretariat provides assistance when necessary to address this key issue, which has to be dealt with when the joint nomination is elaborated. This was for example the case for the W Region, where two consultants (a lawyer and a geographer) assisted the three countries in this task. This work was completed prior to designation, and is reflected in the commonly-agreed zonation for the W Region TBR.

The publication of a joint map of the overall zonation is recommended, and will be an important information and educational tool. This has been done in most of the TBRs, as for instance in the East Carpathians and the Tatra TBRs.

Management issues in TBRs

In a biosphere reserve, and even more in a transboundary biosphere reserve, it is considered more relevant to speak about a management policy rather than a management plan as such. In other words, in contrast to a traditional protected area, a national park for instance, where a plan is elaborated and implemented under the authority of the manager of the area, a biosphere reserve needs the involvement of various administrations at national and regional level, as well as local municipalities which will have to take part in the definition of the policy for the management of the whole area and to be further responsible for the implementation of these jointly defined orientations. However, some joint activities can be decided upon and jointly funded - such as inventories, research, monitoring and education campaigns -. but most of the day-to-day management will be undertaken on each side, by the competent authorities, in line with jointly defined objectives.

Some concordance between the management structures of the two (or three) sides of the TBRs may facilitate joint planning and cooperation. However, much depends on the administrative and institutional frameworks of each country, and it is not realistic to call-for harmonisation of these structures. More important for facilitating cooperation is that the level of resources on each side should be comparable (number of staff, level of funding, etc.) In the case of the Vosges du Nord/ Pfälzerwald, both sides consider that current imbalance (the German part being less well endowed with personnel and funds) represents an obstacle to cooperation.

Evaluation and prospects for TBRs

To evaluate the achievements of TBRs, one can look at the way they have permitted to progress in fulfilling the three functions of conservation, development and logistic support together.

Without going into details, it can be said that there are certain indications that conservation has been improved through the TBRs mechanism. For instance, in the case of the East Carpathian BR, the size of protected areas has been extended by 144% of its initial size, thanks to joint efforts of the three countries to incorporate new protected areas within the BR (65 000 ha). In the French-German biosphere reserve, a joint core area has recently been put in place, with strictly protected forest.

Concerted approaches to development is another positive feature, for instance in promoting sustainable tourism in the East Carpathians, or sustainable forestry practices in the Vosges du Nord/Pfälzerwald Biosphere reserve. Common policies for quality products have also been developed in almost all of the TBRs in Europe. In the W Region, one of the challenges is to adopt and implement concerted policies for agriculture and cattle raising, in particular for transhumance.

In the field of research, monitoring, education and training, there is no doubt that the TBRs can play and have played a major role. Joint scientific activities in the East Carpathians, for instance, include unification of wildlife inventory methodologies and data-bases, sharing of research results during the annual conference, In the W Region, new projects are being put in place to study the interactions of pastoralism/semi- arid ecosystems.

Generally speaking, education and information goes beyond what is generally in place in protected areas, such as visitors centres, distribution of information material, etc. It becomes a crucial element in transboundary areas, where they can be cultural and linguistic differences. There, the TBR becomes a social link, in acting as a focal point and motor for social events, exchanges, training, and contributing to the breaking down of international barriers. Taking fully into account the human aspect will facilitate commercial and professional exchanges, among farmers, tourism enterprises, timber companies, fishing communities and associations.

Building transborder cooperation on a range of issues which go beyond biodiversity conservation and protected areas is a very challenging endeavour. The human and cultural element has to be taken fully into account, including differences in history, traditions, land management, etc.

The concerned territories are situated under different sovereignty and a strong political will may be needed to overcome national and local barriers if interests are divergent. Cooperation also needs to be built progressively, by creating networks of all interested and convinced stakeholders, and this process can be markedly strengthened if there are tangible results and advantages of the cooperation. In this respect, the importance of cooperation in seeking of funding and other support may be crucial.

The biosphere reserve concept has shown itself appropriate for promoting cooperation in transboundary situations, in fact because of the considerable experience that has already been gained at national and local levels in organizing partnerships and dialogue. As noted in *IUCN Best Practice Protected Area Guidelines Series N° 7,* biosphere reserves are “a framework for cooperative management, development, research, monitoring and education”

However, the integration of TBCAs in what we call here a broader landscape should also be considered from the point of view of the overall political landscape. In Europe, the accession of new

countries into the European Union might well change the conditions prevailing in borders with countries outside the EU, and therefore have implications to certain existing TBRS. For example, it is very probable that with the accession of Poland and Slovakia to the EU, the border with Ukraine in the Carpathians will be strengthened, further dividing the existing TBR. More generally, transboundary conservation areas can not be conceived and established if and when the political environment is not favourable. Political realities have meant that certain projects - already well advanced at the scientific and technical level - cannot at present be implemented. Documented studies and reports are for instance available for proposals for a transboundary biosphere reserve in the demilitarized zone between the North and South Koreas, and the Dead Sea Biosphere Reserve, between Israel, Jordan and Palestine, but these do not seem likely to materialize in the near future. At the same time, there is no doubt that TBCA and TBRs have a role to play in Peace building, as Peace Parks have already served to demonstrate

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