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BIOSPHERE RESERVES AND MULTILATERAL ENVIRONMENTAL AGREEMENTS: SOME LEGAL ISSUES

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Summary: The application of the Biosphere Reserves (BRs) concept, under UNESCO's Man and the Biosphere (MAB) programme, to the areas of terrestrial and coastal ecosystems is innovative, especially in terms of the conservation of biodiversity with its sustainable use. MAB Programme, long before the 1972 Stockholm Conference, laid down the basis for the sustainable use and conservation of biological diversity, as well as for the improvement of the relationship between people and their environment the world over.

Conservation of biological diversity remains a central feature of BRs. As such it has implications which cut across several multilateral environmental agreements (MEAs) which deal with issues falling within the ambit of biological diversity. Some of the conventions such as the 1971 Ramsar Convention on Wetlands of International Importance, came into being long before the 1992 Convention on Biological Diversity (CBD). Other MEAs where BRs may find application include the 1994 UN Convention to Combat Desertification, with reference to the conservation, rehabilitation and management of dryland biosphere reserves. Similarly, BRs have applicability to the 1972 World Heritage Convention for the conservation of unique natural sites covered under the 'world heritage' list. Biosphere reserves are also a potential operational tool of value in addressing many of the objectives of Agenda 21.

This paper will seek to examine BRs as one of the important conservation techniques in achieving goals of the respective MEAs. Efficacy of this regulatory technique can be seen within the context of each MEA's specific context. One can also examine the normative basis of BRs in terms of practices of states and the corpus of principles of international environmental law already in vogue. UNESCO's role as one of the 'catalyst' institutions in prescribing the threshold for conservation activities of states will also be looked into.

Introduction

The development of law keeps pace with the needs of a society. As a societal tool, law seeks to regulate human conduct at various levels. Similarly, various international regulatory tools and techniques have been put into place to prescribe the threshold for environmental and conservational activities of states. Such a regulatory exercise prescribes restrictions on the activities being carried out within the jurisdiction of the states. Their objective, however, is generally to protect the environment and conserve natural resources. Long before the advent of the environmental agenda at

the global level, conservation issues did attract the attention of states. As such, they became a subject of regulatory measures.

During the initial stages, some of the conservation concerns arose from utilitarian consideration i.e. economic value of a species or natural resource. Despite this, the sheer effort to lay down a threshold for the states, as well as to strike a balance between conservation of natural resources and their exploitation for human benefit, has been remarkable. In this process, not only has the law and institutions advanced, but regulatory tools and techniques have also witnessed innovations. The concept of 'biosphere reserves' appears to be an important innovation in the sphere of multilateral regulatory techniques.

Biosphere Reserves as a Conservation Tool

After the establishment of the United Nations (UN), a host of functional international organizations came into being, to cater to the need of social and economic development. In the course of time, these 'specialized agencies' have become an indispensable part of the UN system. Prior to the 1972 Stockholm Conference on the Human Environment, the United Nations Economic, Social and Cultural Organization (UNESCO) ventured into the area of conservation that led to the launch of the Man and the Biosphere Programme (MAB)[1]. In the early 1970s, introduction of the conservation of biodiversity, along with the promotion of economic and social development, was a novel idea. This gave birth to the notion of 'a coordinated worldwide network of national parks, biological reserves and other protected areas'[2], which were to serve the needs of conservation as well as research and education. The concept of 'reserves', within the fold of the MAB, has come to be designated 'biosphere reserves'[3] and comprises the three-fold functions of conservation, development and logistical support.

Seville Vision

The institutional development of BRs has been remarkable. This has engaged various organizations (such as FAO and IUCN) with UNESCO as well as United Nations Environment Programme (UNEP)[4]. In fact an Action Plan for Biosphere Reserves (1984)[5] was adopted by the UNESCO General Conference as well as the Governing Council of UNEP. The context in which this Action Plan was adopted came to be dramatically altered with the adoption of the full-fledged Convention on Biological Diversity (CBD)[6] at the 1992 Rio Earth Summit. One of the major goals of the CBD i.e. conservation of biological diversity and sustainable use of its components, falls directly within the ambit of the core of the concept of BRs. The idea of BRs was further strengthened at an evaluation conference (1995)[7] convened by UNESCO at Seville which, put forward a Seville Strategy for developing effective BRs as well as for laying down appropriate conditions for the World Network of Biosphere Reserves (WNBR). The Statutory Framework of the WNBRs emphatically recognizes that:

> "The Network constitutes a tool for the conservation of biological diversity as well as sustainable use of its components, thus contributing to the objectives of the Convention on Biological Diversity and other pertinent conventions and instruments[8]."

This cuts across not only CBD but also several other MEAs. The underlying logic for the strategy and vision unveiled at Seville shows that BRs need to be much more than just protected areas (PAs) and that the issues addressed have ramifications for other sectoral issues as well. The vision behind BRs becomes especially important as many of the BRs also encompass areas sought to be protected under systems such as national parks, apart from specific areas or sites designated as such under other conventions such as world heritage or wetlands or biological diversity or desertification. BRs are *sui generis* in view of the emphasis placed upon them for ensuring that harmony exists between people and nature. The basic rationale appears to be that people are an intrinsic part of the web of nature. As such, without the involvement and participation of the concerned local communities, any system of management of natural resources will lack legitimacy and, in turn, be ineffective.

It is significant that the Seville Vision has sought to strengthen the contribution that "biosphere reserves make to the implementation of international agreements promoting conservation and sustainable development"[9]. In order to give effect to this vision, the strategy adopted is multifaceted and includes targets such as ensuring natural and cultural diversity, using BRs as a model for land management and as one of the approaches to sustainable development. The nomenclature and 'certification' concerning BRs is provided under UNESCO's MAB programme at the specific request of the concerned states[10]. Moreover, control and supervision of each BR remains under the sovereign jurisdiction of the states. This aspect is duly manifested in the voluntary nature of participation in the BRs as well as in the recognition of the role of the states in the elaboration and implementation of national criteria for the BRs.

The Linkage of Biosphere Reserves with Relevant MEAs

The idea of 'reserves' has gained currency in the course of intergovernmental efforts to prescribe different tools and techniques to address conservation goals. In the 1970s, when some of the earliest intergovernmental conservation agreements took shape, they concentrated on the conservation of specific areas or sites (habitats) or species having distinct characteristics, as defined by the respective multilateral environmental agreements. There has also been a shift in species-based conservation from the "management of geographically defined wildlife population to the global allocation of access to genetic wildlife resources"[11]. Two of the UNESCO initiatives concerning wetlands[12] as well as cultural and natural heritage[13] fall under this category. Since BRs comprise any area of terrestrial and coastal/marine ecosystems or a combination thereof, they have the potential to cover a very wide range of

sectoral environmental issues regulated under different MEAs. Therefore, an opportunity exists for the formation of a coordinated approach among at least some of the existing MEAs in order to put in place appropriate arrangements under the umbrella of BRs (Figure I). The common binding factor for this purpose will either be that these MEAs are related to biological diversity across terrestrial and marine ecosystems, or that they seek to enlarge the role of the local communities.

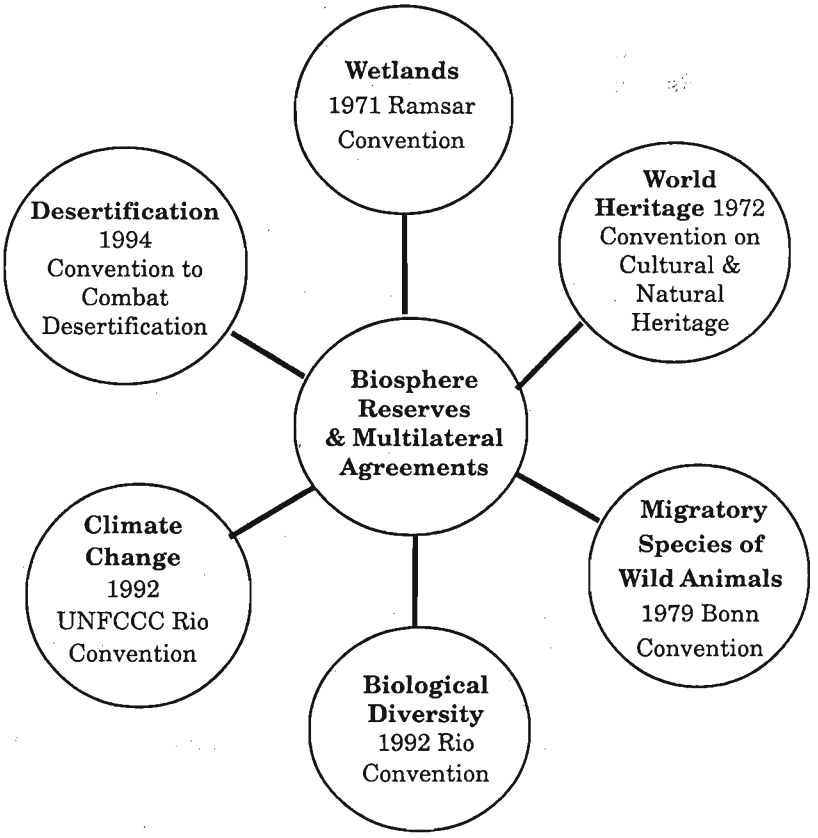

Figure 1: Linkages of Biosphere Reserves with Select Multilateral Environmental Agreements

Growth of Biosphere Reserves

The proliferation of BRs shows that it is gaining momentum in many countries. In April 2002, a total of 411 BRs were in existence in 94 countries[14]. In many cases, BRs also coincide with other systems of management of natural resources which also require the participation of local population. Thus the non-conflictual nature of BRs with other management tools under conventions such as Ramsar, WHC or CBD, underscores the common ground for synergies and linkages among such conventions.

The application of the BR tool to conservation techniques under these MEAs can only augment the regulatory framework. With different objectives in mind, they can work on the same area or site cohesively and effectively. This, however, necessitates well-defined roles for these systems of conservation as well as proper coordination between respective institutional mechanisms concerning BRs and relevant MEAs.

Technique of 'Listing'

Sectoral issues remain the common thread which provides a link between MEAs that have been regarded as an "international resource"[15] or "common concern of humankind"[16] or "world heritage of mankind as a whole"[17] or "urgent concern of the international community"[18]. One of the conservation techniques being used under the MEAs (such as WHC and Ramsar) is that the states are called upon to nominate specific sites or areas having unique ecological significance. The inclusion of a site under the list of Wetlands of International Importance or World Heritage Sites confers a special status on those sites. The protective umbrella emanating therefrom basically works at the national level where those sites are located. This could also be done by the states themselves. However, the very process of listing, naming the criteria applied and gaining certification by the intergovernmental institutional mechanism brings international recognition. The fact that each year states send several proposals for the listing of various sites considered to have unique cultural or natural significance, shows the efficacy and legitimacy of the technique of such a 'listing'. Monetary and technical help, if any, associated with the certification, remains of secondary importance in most of the cases. It is prestigious to have a heritage site listed in the list of world heritage sites, and the fact displayed by a brass plaque at the site.

As required under the BRs, the designation of sites of special significance also involves delimitation of the relevant area and a general proclamation as a 'nature reserve' or 'protected area' under relevant national policy and legislation. In these cases, the focus is on selected sites and areas which are unique from a global standpoint. Similar to the process of establishing the requisite threshold under most of the MEAs, the process of 'listing' also facilitates priority attention and the optimal use of resources for conservation purposes.

The general global convention for the conservation of biological diversity (CBD) arrived much later on the global scene. The primary thrust of the CBD is on maintaining life sustaining systems of the biosphere. It has a very broad scope covering variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems as well as the ecological complexes. The CBD has required each of the states to establish a "system of protected areas or areas where special measures need to be taken to conserve biological diversity"[19]. The mechanism enshrined into CBD for *in-situ* conservation includes the protection of

ecosystems and natural habitats within as well as adjacent to the 'protected areas'. In this process too, a specially selected mechanism which incorporates special measures which need to be taken to conserve biological diversity is laid down. The CBD has now resolved to follow an 'ecosystem approach'[20] as the primary framework for action under the convention. It has been said that the "biosphere reserves have the potential to offer the Convention concrete cases of the ecosystem approach in actual practice"[21]. Similarly, the issue of the role of 'dry land biosphere reserves' as site-based (*in-situ*) tools for the rehabilitation of degraded areas is one of the important concerns of the Convention to Combat Desertification (CCD).

The application of BRs to the whole range of terrestrial and coastal/marine ecosystems, or a combination thereof, is so vast that it can even include the objective of the UN Framework Convention on Climate Change on "stabilization of greenhouse gas concentrations in the atmosphere"[22]. In any case, biosphere reserves will play a very vital role in augmenting the sinks' capacity for absorbing the GHGs. As such, the FCCC process needs to have stakes in the conservation goals to be achieved through the World Network of Biosphere Reserves.

Participatory Approach

One of the main pillars of BRs is the participatory approach. In fact, the Seville Vision has sought to promote the management of each biosphere reserve as a 'pact' between the local community and society as a whole. It is expected that all interested groups and areas will join in a 'partnership approach' to BRs. This approach is reflected in the CBD, with regard to reserving and maintaining knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity[23]. A similar approach is also found in one of the principles of CCD where the parties are expected to ensure that "design and implementation of programmes to combat desertification and/or mitigate the effects of drought are taken with the participation of populations and local communities"[24].

In view of the growing numbers in the human population, the concept of exclusive areas or protected areas is misplaced. Without taking into account the 'human factor', any such strategy will only lead to situations of conflict and endanger the goals of such conservation techniques. Therefore, BRs' emphasis upon reconciling people and nature holds the key to the perennial dilemma of striking a judicious balance between conservation goals and developmental needs (the human dimension). BRs role is more than just that of being protected areas. This provides a measure to assess conservation strategies under relevant MEAs. The application of several layers of protective circles (such as biosphere reserve, protected area, heritage site, wetland site) around a site of unique ecological significance can work effectively if the goals of the regulatory techniques are well defined and the concerned agencies at the national level work with coordination and in harmony. Similarly, for

transboundary sites of biosphere reserves, conservation and management plans will necessitate institutionalized cooperation of the concerned states (range states in the case of migratory species of wild animals).

Transboundary Biosphere Reserves

Another relevant aspect of BRs that merits attention is the sites and areas with a transboundary character. In this case, nature reserves or protected areas such as wetlands or heritage sites are spread over more than one state. In the Seville Strategy, the states have been encouraged to establish 'transboundary biosphere reserves' as a "means of dealing with the conservation of organisms, ecosystems, and genetic resources that cross national boundaries"[25]. The transboundary character of some of the migratory species of wild animals has also been brought within the ambit of conservation efforts under the migratory species of wild animals convention (CMS)[26], as either the entire population or any geographically separate part of the population of any species or lower taxon of wild animals cyclically and predictably cross one or more national jurisdictional boundary.

In such cases, the concerned sites or areas traditionally form part of a single habitat and animals routinely migrate to specific locations in it, in search of food or for purely biological needs (for instance the marine turtles) ignoring the man-made boundaries. This necessitates the joint efforts of the 'range states' to work out suitable tools and techniques for the conservation of those migratory species that are under risk (for instance Siberian cranes, rhino or elephants). The action plan in this connection can comprise promotion and cooperation and support research relating to the migratory species, as well as extend immediate protection to the migratory species which are endangered[27]. For this purpose, concerned range states can enter into 'agreements' (as defined under the 1979 Migratory Species of Wild Animals Convention) concerning the conservation and management of migratory species. In any such arrangement, the parties can work out common conservation arrangements such as the establishment of nature reserves or parks which can be supervised across borders jointly by the states. The specifics of the arrangements are generally laid down in an 'agreement' or 'memorandum of understanding' among the concerned states. In a unique arrangement, a series of such 'agreements' for various species[28] is already in place under the umbrella of the CMS.

Conclusion

It appears that considerable scope exists for coordination between biosphere reserves and other systems of conservation of terrestrial and coastal/marine ecosystems under the various MEAs. The regulatory frameworks for the BRs and respective MEAs need to work out 'operational linkages' in order to attain maximum synergy for common conservation goals. The extent to which local communities are involved, keeping in mind local conditions as well as national environmental and

developmental goals, in the management of BRs will be the basis for judging the success of the implementation of this unique conservation tool. Such a participatory approach will avoid conflicts over scarce resources as well as serve as a guarantor for the implementation of the Seville Vision and Strategy. In fact the Statutory Framework for the World Network of Biosphere Reserves cannot remain static. It will need to 'evolve', taking into account changing circumstances, priorities of the states, as well as the fragility of our biosphere. In the actual operationalization of BRs, the technique of providing stakes to the local people through the appropriate institutional mechanism at the national level will ensure that the biosphere reserves will be treated as 'trusts' by these very people, whose longterm well-being depends upon them, for generations to come.

Notes:

1 The programme on Man and the Biosphere (MAB) took shape at the Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere, Paris, 4-13 September 1968; UNESCO, *Use and Conservation of the Resources of the Biosphere* (Paris: UNESCO, 1970).

2 UNESCO, *Biosphere Reserves: Special Places for People and Nature* (Paris: UNESCO, 2002), pp.18-20. Also by Michel Batisse, "Biosphere Reserves: A Personal Appraisal" in UNESCO, Seville+5: *Proceedings of the International Meeting of Experts*, Pamplona (Spain), 23-27 October 2000 (Paris: UNESCO, 2001), pp.11-17.

3 Biosphere reserves (BRs) have been defined as those "areas of terrestrial and coastal/marine ecosystems or a combination thereof, which are internationally recognized within the framework of UNESCO's programme on Man and the Biosphere (MAB)"; Article 1, *The Statutory Framework of the World Network of Biosphere Reserves* in UNESCO, *Biosphere Reserves: The Seville Strategy and the Statutory Framework of the World Network* (Paris: UNESCO, 1996), pp.1-18 at 16. The BRs cover a very wide variety of natural areas of the biosphere that include high mountains, human-impacted plains, coastal regions, islands, inland forests, deserts and tundra (in the polar region). In general, BRs have (i) a core area to give longterm protection to the landscapes, ecosystems and species (ii) a buffer zone that is clearly delineated and surrounds or is contiguous to the core area and (iii) an outer transition area, which contains a variety of agricultural activities, human settlements and other uses.

4 UNESCO and UNEP, jointly convened the first International Congress on Biosphere Reserves at Minsk (Belarus) in October 1983; UNESCO (2002), n.2, p.19.

5 Action Plan for Biosphere Reserves was formally adopted by the International Co-ordinating Council of the Programme on Man and the Biosphere in December 1984; UNESCO (2002), n.2, pp.24-27.

6 Convention on Biological Diversity (Rio de Janeiro), 5 June 1992. It came into force on 29 December 1993; *International Legal Materials* (ILM), vol.31, 1992, p.822.

7 In pursuance of resolution 27/C/2.3 of the UNESCO General Conference, an International Conference on Biosphere Reserves was convened at Seville (Spain) during 20-25 March 1995.

8 The Statutory Framework of the World Network of Biosphere Reserves in UNESCO (1996), n.3, p.16, Article 2 (2).

9 *Ibid*, n.3, p.5, para .

10 *Ibid*, p.16, Article 2 (3).

11 Peter H. Sand, "Environment: Nature Conservation" in J.Simmons & Chantal de Jonge Oudraat (Eds.), *Managing Global Issues: Lessons Learned* (Washington D.C.: Carnegie Endowment for International Peace, 2001), pp.281-309.

12 Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar), 2 February 1971. It came into force on 21 December 1975; *ILM*, vol.22, 1982, p.698.

13 Convention for the Protection of the World Cultural and Natural Heritage, adopted by the Seventeenth Session of the UNESCO General Conference, Paris, 16 November 1972; *ILM*, vol.11, 1972, p.1358.Also available at www.unesco.org/whc.

14 UNESCO, *Final Report* of the Seventeenth Session of the International Coordinating Council of the Man and the Biosphere Programme, Paris, 18-22 April 2002; Doc. SC-02/CONF.201/11 of 12 April 2002, p.2, para 6.

15 n.12, Preamble.

16 n.6, Preamble. Also Preamble to United Nations Framework Convention on Climate Change (Rio de Janeiro); *ILM*, vol.31, 1992, p.849.

17 n.13, Preamble.

18 Preamble to United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (Geneva: Interim CCD Secretariat, 1995).

19 CBD, n.6, Article 8.

20 The second meeting (Jakarta, November 1995) of the Conference of the Parties of the Convention on Biological Diversity adopted the 'ecosystem approach'. In fact 'ecosystem approach' has been referred to in the elaboration and implementation of the various thematic and cross-cutting issues in work programmes under the Convention (Decision II/8). The need for a workable description and further elaboration of the ecosystem approach was acknowledged at the fourth meeting of the COP (Bratislava, May 1998). The Executive Secretary was requested by the COP 6 to prepare a report drawn from case studies, to convene a meeting of experts to compare the ecosystem approach with other approaches such as 'sustainable forest development' as well as to develop proposals for the refinement of the principles and operational guidance of the ecosystem approach (Decision VI/12, para 2 and Decision VI/22, para 19). For further details, UNESCO, *Solving the Puzzle: The Ecosystem Approach and Biosphere Reserves* (Paris: UNESCO, 2000), pp.1-31.

21 Statement by the Executive Secretary of the Secretariat of the Convention on Biological Diversity in UNESCO (2001), n.2, p.17.

22 Preamble and Article 2 of the United Nations Framework Convention on Climate Change; ILM, vol.31, 1992, p.849

23 CBD, n.6, Article 8 (j).

24 CCD, n.18, Article 3 (a).

25 UNESCO (1996), n.3, Objective 1.2.1, p.7.

26 Convention on the Conservation of Migratory Species of Wild Animals (Bonn), 23 June 1979; *ILM*, vol.19, 1980, p.15.

27 *Ibid*, n.24, Article II (3).

28 The 'agreements' under CMS include: Agreement on the Conservation of Seals in the Wadden Sea (1990); Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (1991); Agreement on the Conservation of Bats in Europe (1991); Agreement on the Conservation of African Eurasian Migratory Waterbird (1995); Agreement on the Conservation of Cetaceans of the Mediterranean and Black Seas (1996); Memorandum of Understanding

concerning conservation for the Siberian Crane (1993); Memorandum of Understanding Concerning Measures for the Slender-billed Curlew (1994); Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia (under preparation). Also available as www.wcmc.org.uk/cms.