

Zonation in U.S. Biosphere Reserves

From the UNESCO webpage:

Biosphere reserves aim to achieve integrated management of land, fresh and marine waters and living resources by putting in place bioregional planning schemes based on integrating conservation into development through appropriate zoning. While countries maintain flexibility at the national levels with regard to the definition of zones, the zonation needs to ensure that biosphere reserves effectively combine conservation, sustainable use of resources and knowledge generation through integrated zonation and collaborative management:

The zonation of each biosphere reserve should include:

- **Core area(s):** securely protected sites for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses (such as education). In addition to its conservation function, the core area contributes to a range of ecosystem services which, in terms of the development functions, can be calculated in economic terms (e.g. carbon sequestration, soil stabilization, supply of clean water and air, etc.). Employment opportunities can also complement conservation goals (e.g. environmental education, research, environmental rehabilitation and conservation measures, recreation and eco-tourism).
- **Buffer zone(s):** which usually surrounds or adjoins the core areas, and is used for cooperative activities compatible with sound ecological practices, including environmental education, recreation, ecotourism, and applied and basic research. In addition to the buffering function related to the core areas, buffer zones can have their own intrinsic, 'stand alone' functions for maintaining anthropogenic, biological and cultural diversity. They can also have an important connectivity function in a larger spatial context as they connect biodiversity components within core areas with those in transition areas.
- **Transition area:** area with a central function in sustainable development which may contain a variety of agricultural activities, settlements and other uses and in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interests and other stakeholders work together to manage and sustainably develop the area's resources.

See: <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/main-characteristics/zoning-schemes/>

The Statutory Framework for biosphere reserves also recognizes the diversity of national and local situations and encourages States to elaborate and implement national criteria for biosphere reserves which take into account the special conditions of the State concerned.

In the United States, the Constitution provides Congress the authority to make rules and regulations respecting the territory and the property belonging to the United States and regarding relationships among the states. The Constitution grants other authorities to the states and to

individual citizens. The result is a division of governmental responsibilities among local, state, and federal governments and a strong recognition of the rights of private land owners.

The applicability of UNESCO's zonation categories to the U.S. situation has presented challenges. Historically, the United States has achieved the goals of the zonation concept through voluntary cooperation and partnerships developed within an extensive governance of land use through local government planning and zoning provisions, a variety of state laws, and key federal laws regarding federal lands, federal trust resources (e.g., air, water, threatened and endangered species, migratory birds, marine mammals, historic properties to some degree, etc.), and activities that cross state lines.

The U.S. adaptation was developed and implemented in the 1990s. The U.S. situation and experience during the first two decades of participation and leadership in UNESCO's biosphere reserve program are reflected in the 1994 Strategic Plan for the U.S. Biosphere Reserve Program. The U.S. plan was approved by the U.S. National MAB Committee, published by the Department of State (Publication 10186) and released in December 1994, only a few months prior to MAB's adoption of the Strategic Framework for Biosphere Reserves at the Seville Conference in March 1995.

The U.S. strategic plan implements the purposes of biosphere reserves as expressed in the UNESCO Statutory Framework. It applies the spirit of the Statutory Framework provisions but uses different language and concepts to do so, thus explicitly implementing MAB provisions contained in the Introduction and in Article 2.3 of the Statutory Framework. The introduction to the U.S. strategic plan references UNESCO's "conceptual scheme to describe the spatial distribution of the functions of a biosphere reserve," and identifies and defines three types of areas ideally included in each U.S. biosphere reserve, as follows:

1. One or more securely "Protected Areas," such as wilderness areas or nature reserves, for conservation and monitoring of minimally disturbed ecosystems;
2. "Managed Use Areas," usually surrounding or adjoining the protected areas, where experimental research, educational activities, public recreation, and various economic activities occur according to ecological principles; and
3. "Zones of Cooperation," which are open-ended areas of cooperation where managing agencies, local government agencies, scientists, economic interests, nongovernmental organizations, cultural groups, local citizens and other biosphere reserve stakeholders educate one another in the process of linking conservation, economic development, and cultural values.

The above terminology is footnoted in the U.S. strategic plan as U.S. terms, replacing UNESCO's Core Area, Buffer Zone, and Transition Area.

In the case of Rocky Mountain Biosphere Reserve, the periodic review states that, "...Biosphere Reserves within the United States will have at least two key components to zonation: 1. An area (or zone) that has an explicit legal authority provided for in law and 2. Agreements which are the legal instruments that connect authorities in a common cause. Finally, agreements most often are developed around *issues in common* and can be focused on one issue

of collaboration, or many, depending upon interests and capacities of the organizations involved.”

According to these guidelines, for Rocky Mountain, the “Core Protected Areas” (Core Area) and “Managed Use Areas” (Buffer Zones) reside within the boundaries of the Rocky Mountain National Park, and their source of legal authority is the park’s enabling legislation or special designation as provided for by Congress or as directed in National Park Service Management Policies 2006. The “Areas of Partnership and Cooperation” (Transition Areas) represent two of over 200 hundred agreements, one with the U.S Forest Service and one with the State of Colorado Parks and Wildlife. Their source of legal authority is United States Code 54 which has the work outside the park authority for both Partnership and Cooperation.