

A recent assessment of U.S. biosphere reserve regional programs by Sarah Bishop of Partners for Parks gives a good picture of how the biosphere reserve concept is faring. In general, most of the programs are showing results and appear to be growing, as participants gradually learn how to work together for mutual benefit and the regional good. As might be expected, however, the degrees of success vary widely.

The oldest regional program, that of the **Southern Appalachian Man and the Biosphere Cooperative (SAMAB)**, which includes Great Smoky Mountains NP, probably has advanced the farthest. With about 10 federal, state, and private partners, and the SAMAB Foundation for fund-raising, the Cooperative has published a strategic planning process for tourist-based communities, acts as a regional clearinghouse for information on environmental education programs, and conducts many other research and education activities.

SAMAB enjoys the growing confidence of the public and increasing cooperation among members. "Tensions and suspicions have faded as SAMAB members learn more about one another's agencies and their missions and goals," according to Bishop. She finds the major problem to be a reluctance of regional and national agency administrators to support SAMAB efforts—support that is needed to supplement the thus-far modest fund-raising by the SAMAB Foundation.

The **Mammoth Cave Area Biosphere Reserve** in Kentucky consists of Mammoth Cave NP (core) and the groundwater recharge area that surrounds it (zone of cooperation). The Mammoth Cave Area BR Cooperative coordinates the BR program. It was established as an adjunct to the Natural Resources Planning Council of the Barren River Area Development District (BRADD). BRADD serves as the biosphere reserve secretariat. The basic issue is achieving sustainable development within the zone of cooperation that improves the economic and cultural well-being of local people while protecting core area values—especially the quality of groundwater, which is critical for cave biota.

Measures to achieve these goals are progressing, thanks to the nurturing of local trust. "Public acceptance was due in part to the early efforts of the park and BRADD to focus the BR program on meeting the needs of the surrounding community...and then assess the benefits to the park... In a region where the federal presence is viewed with suspicion [the park superintendent] has as-

sumed the role of one who is willing to help solve the problems of others as the route to protecting park values."

The **Sonoran Desert Biosphere Reserve** in Arizona presently consists only of Organ Pipe Cactus National Monument, but the possibilities for a regional MAB program, including adjacent parts of Mexico, are growing. Concerns about the drawdown of groundwater for agricultural development in Mexico, the effects of changing U.S.-Mexico trade relationships, maintaining the traditional dry-land farming and ranching practices of indigenous people, and other issues are drawing people on both sides of the border together.

Two developments in 1993 have boosted the process. The Sonoran Desert Alliance, with a board of directors consisting of four residents each from Mexico, the Tohono O'odham tribe, and the U.S., was formed to promote cooperation in improving the economic, cultural, and environmental health of the region. Mexico has established a large biosphere reserve with three core areas in northwest Sonora. Carlos Nagel, President of Friends of ProNatura, and Superintendent Harold Smith and the staff of Organ Pipe Cactus NM have played large roles in the ongoing development of the Sonoran Desert BR.

Many U.S. BRs were established as parts of clusters of areas that had differing missions. A need now with many of these BR clusters is to develop more coordination and cooperation among the member units. The **Glacier Area biosphere reserves**—Glacier NP, Coram Experimental Forest, and Waterton Lakes NP in Alberta—have separately developed BR programs that strengthen their relationship with adjoining land owners, but a regional BR program linking all three is not presently on the horizon.

Glacier NP has become involved in the Flathead Basin Commission to address regional water quality issues, and Waterton Lakes NP continues its modestly-funded BR program with its Alberta neighbors. Similarly, the **Chihuahuan Desert biosphere reserves** mostly go their own ways. Big Bend NP emphasizes research on sustainable conservation; the Jornado Experimental Range in southern New Mexico conducts range research; the Mapimi BR in northern Mexico focuses on studies of ecologically sustainable ways local people can use their desert environment more productively.

The Chihuahuan Desert Biosphere Technical Group, an informal consortium of scientists, educators, public lands managers, and interested private land owners, hopes to

gain international support for the formation of a regional BR in the Chihuahuan Desert that will include the three existing BRs as well as other federal, state, and private entities. The **Central California Coast BR**, with its 13 member units, makes a greater effort at cooperative action, but not surprisingly encounters caution when an agency is asked to view its role more broadly than its basic mission. The CCCBR has been most successful with its research and education projects. Shared management concerns have been more difficult to identify and address.

The **Virgin Islands Biosphere Reserve** presently consists only of Virgin Islands NP. It "has conducted a remarkable research, monitoring, and resource management training program that will contribute most significantly to a broader based BR program when it is put in place." The challenge here is to bring other entities besides the park into the program and focus it more on ecologically sound economic development.

Perhaps the most unwieldy BR assessed by Bishop is the **Champlain-Adirondack Biosphere Reserve**. Development of this 3,990,000-ha BR is currently stalled, largely because of political and cultural differences between Vermont and New York, and concern of many Adirondack residents about infringement on property rights. Meanwhile, some BR goals are being addressed through the federally supported Lake Champlain Basin Program, which deals mainly with water quality issues.

The greatest need among U.S. biosphere reserve programs, as Bishop (and her informants) see it, is for workable administrative structures and increased funding for administration and projects. Her reports were to be used as background for developing a BR action plan at the U.S. Biosphere Reserve Action Plan Workshop in December 1993.

Napier Shelton  
NPS Washington Office