

Restoring the Colorado River Delta

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The Colorado River Delta presents an ideal opportunity for conservation of biodiversity along the United States-Mexico border. In its current form, the delta encompasses nearly 420,000 acres of riparian corridors and wetlands, just 24 percent of the area it covered in the early 1900s. The ecosystem is nevertheless rich in biodiversity, providing habitat for more than 350 species of birds. But the delta is also rich in community support for conservation, with livelihoods strongly linked to the fate of the delta itself. This support has provided a solid base for a binational endeavor to restore and protect these wetlands.

Interest in protecting this area has resulted in the establishment of multiple partnerships among environmental organizations, scientists, and communities, with the main focus of maintaining the integrity of ecological processes in the delta. Major goals include facilitating the restoration of critical habitat types and the implementation of a management program that balances hydrological engineering with environmental considerations.

The steps toward a restored delta have included involving the public, restoration activities, participatory monitoring, and the integration of stakeholder recommendations in management decisions. These define the program of Pronatura, Mexico's largest nongovernmental environmental organization, for the Colorado River Delta.

Public Involvement

The public involvement program encourages the active and informed participation of local residents in designing the future of the wetlands around them. Even if water and funding were not limiting factors in the restoration process, lack of interest from local communities would undermine the restoration efforts. Thus, community participation is a key factor in overriding historic trends of neglecting wetland habitats in the delta.

To facilitate the process of community participation and promote local stewardship, and as a result of seven years of work with

“Such is the delta, as fascinating, as puzzling, and as changeable as weather. Surrounded by desert and constantly fighting to preserve its identity, it is as unlike its immediate surroundings as adjoining countries well can be. Host to most of the desert birds, which seek out its arid phases as they find them here and there, still it has...its quota of birds which hereabouts do not make their homes elsewhere”

-Bancroft 1926:210

local communities, the Asociación Ecológica de Usuarios del Río Hardy y Colorado (AEURHYC) was formed in August 1999. The association has representatives from the social, economic, and cultural sectors of the region, all of whom depend on the health of the ecosystem. Slowly but steadily, government agencies in Mexico are recognizing AEURHYC as an organized group of local communities and individual stakeholders whose voices deserve to be heard.

AEURHYC's mission is to promote the restoration and conservation of the two rivers, generating alternatives that allow economic and social development without jeopardizing the natural resources for future generations. The centerpiece of AEURHYC is its council, which comprises two members from each of its constituent groups, representing the tourism industry, fishermen, the Cucapá tribe, farmers, and tourists/visitors. The council is in charge of maintaining the link between the association, members of the communities, and the executive staff of the association.

Currently, AEURHYC participates in wetland restoration projects and takes part in several councils for the management of the Colorado River Basin in Mexico. With these activities, the association hopes to attain a vision that includes a healthy ecosystem with sufficient

and good-quality environmental instream flows, one that could maintain natural areas for the conservation of wildlife, support the development of local communities, and help to preserve the cultural richness of the region.

Community-Based Restoration

Delta communities have witnessed environmental degradation and negative impacts to their livelihoods over the past several decades. Nevertheless, community interest and hope for restoring this ecosystem have been sustained by witnessing natural revegetation in response to excess flows and the maintenance of wetland areas with agricultural drainage water.

Community groups have consequently been motivated to initiate projects that optimize the environmental benefits of agricultural drainage and that transform marginal fields into restored areas. One current project focuses on restoring marshes and mesquite forests along the Río Hardy. The project involves eight tourist camps along

the river and the participation of the overall community, coordinated by AEURHYC. The expected result of this project is the restoration of more than 5,000 acres, benefiting fishermen, tourist camps, and the Cucapá community.

Current plans include expanding efforts to the Colorado River to restore cottonwood and willow forest along farmland adjacent to it. The landowners in this area have expressed interest in maintaining native riparian vegetation, allotting water for the environment, protecting the floodplain with a conservation designation, and in participating in restoration projects by leasing land and water.

Participatory Monitoring

An important aspect of restoration is to monitor the success or failure of the efforts. A local monitoring program has been developed and implemented, integrating traditional knowledge and support from members of the community. The program focuses on monitoring birds, vegetation, and fluctuations in water levels. Key communities involved in the program are Ejido Luis Encinas Johnson and the Cucapá community. To date, 12 community members have provided their expertise on the local geography and ecology and received training to participate in monitoring activities.

The program includes marshbird surveys; point counts for riparian birds; banding to monitor productivity, survivorship, and migration of land birds; and surveys for yellow-billed cuckoos and willow flycatchers. Three hundred forty survey stations and two banding stations are operational. Vegetation and habitat surveys are being performed throughout the year at specified sites.

The Pronatura program has generated information vital for understanding the patterns of nature's response to instream flows. Pronatura has documented the regeneration of 7,400 acres of riparian vegetation and the response of birds to these changes. Populations of many bird species have increased locally and some species that were extirpated have now recolonized the floodplain of the Colorado River in Mexico. The group also recorded the total abundance and



Ciénega de Santa Clara. Photo by Osvel Hinojosa-Huerta.

population fluctuations of the endangered Yuma clapper rail in response to wetland dynamics, providing the basis for management decisions of some areas.

Continuing the Walk Toward a Restored Delta

The outstanding results of the ongoing restoration process have demonstrated that support of the community and factual scientific information are solid bases on which to build the path toward restoring the Colorado River delta. But water allocations for the future, environmental considerations for floodplain management, and mechanisms for ecosystem protection

will be essential steps toward ensuring the long-term protection of the wetland and riparian areas.

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Additional Information

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