

The Colorado River Delta

An Invaluable
Resource
for People
and Wildlife



the colorado river delta

The Colorado River Delta and its waters support a rich and diverse treasure of plants and animals in an ecosystem unlike anything else on Earth.

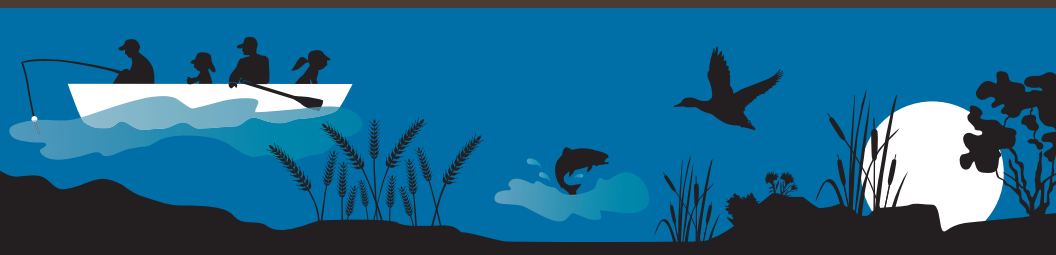
Though the flows in the Colorado River have been drastically reduced by extensive upstream diversions, the trickle of water that still reaches the Delta remains a life source for the region.



The Delta's value extends to people living in communities across the region and in distant locations.



provides ecosystem services



With in-flow of water from the Colorado River, the Delta is able to yield a bounty of **ecosystem services** that benefit, sustain, and fulfill human life. Generally, the Delta provides the following types of ecosystem services:

- **PROVISIONING SERVICES** supply sources of food, fiber, and water for people and support agricultural production and fisheries yields;
- **SUPPORTING SERVICES** sustain migratory animals (such as birds) and conserve biodiversity in the region;
- **CULTURAL AND AMENITY SERVICES** provide a basis for tourism, recreation, sport fishing, and hunting and enhance a way of life and sense of place for the people who live there;
- **REGULATING SERVICES** help purify water, control flooding, and recycle nutrients.

The benefits of these ecosystem services are received and enjoyed not only by the people who live in the Delta region, but also by those in communities across Mexico, the United States, and around the world.

of value to the people

PROVISIONING SERVICES



food, fiber, and water

Residents of the Delta feed themselves by growing crops, hunting small game and waterfowl, and fishing from the waters of the Delta region. Residents also use local plants for food, making baskets and other items, and medicines.



agriculture and grazing

Irrigation from within the Delta region supports the production of key crops—including wheat, vegetables, cotton, and alfalfa—for local consumption as well as for global export.



fisheries

As the most important freshwater input into the Upper Gulf of California, the Colorado River is vital to the health of marine nurseries—including shrimp, shellfish, and finfish—as well as for totoaba, an endangered marine fish endemic to the Upper Gulf.

SUPPORTING SERVICES



wildlife conservation

The Delta provides important habitat for many local species of mammals, reptiles, and birds, such as the Yuma Clapper Rail, as well as for migrating birds that spend part of the year there. The waters that pass through the Delta also help sustain aquatic animals in the Upper Gulf of California.

in local communities

CULTURAL AND AMENITY SERVICES

cultural connections

The Delta is crucial to the cultural survival of indigenous and other communities on both sides of the border, particularly the Kwapa people (the Cucapá tribe in Mexico and the Cocopah tribe in the United States).



tourism and recreation

The Delta is an important area for bird watching, canoeing, and other activities that attract visitors from the United States, Mexico, and elsewhere. The area also provides recreational opportunities for local families and groups.



sport fishing and hunting

The Delta and areas of the Gulf of California provide significant opportunities for sport fishing and hunting, attracting visitors from all over the world and playing a significant role in supporting the local economy.



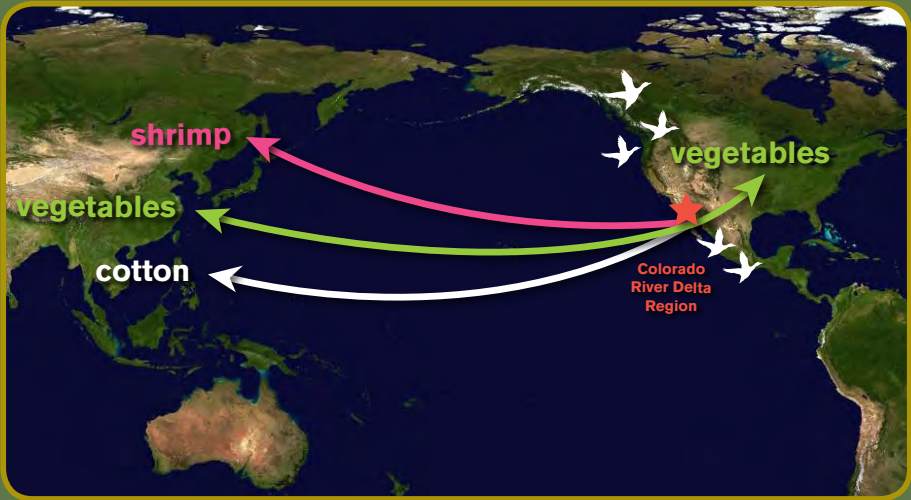
REGULATING SERVICES

water quality, flood control, and more

Wetlands in the Colorado River Delta trap sediments, contaminants, and excess nutrients that might affect water quality. They also help minimize the impacts of floods.



and around the world.



The Colorado River and Delta are important globally as a source of fish, shrimp, vegetables, cotton, and other crops to consumers in Asia, Africa, Europe, and the Americas. The River and Delta also support migratory wildlife, such as birds that rely on the Delta as a stopover point or for wintering grounds, and marine fishes, shrimp, mammals, and other creatures that live in the Gulf of California.

help us keep the delta's value.



Colorado Rivers, Pronatura Noroeste, the Upper Gulf of California and Colorado River Delta Biosphere Reserve, the Commission on Ecology and Sustainable Development of Sonora, and the Sonoran Institute have developed the Adopt-the-River Program, a volunteer stewardship program intended to restore the Delta.

Many people and organizations—residents, teachers, farmers and fishermen, ecotourism businesses, scientists, government agencies, nonprofit groups, and others—are working to maintain and restore the Delta and preserve its value for the future.

As a bi-national partnership, the Ecological Association of Users of the Hardy and



By working to increase water flows, manage invasive species, plant native vegetation, and involve local residents and landowners, we are beginning to improve habitat for wildlife, enhance the quality of life for people, and create recreational and economic opportunities through ecotourism, hunting, and fishing.



Also, we work to promote positive collaboration between agencies and other stakeholders in Mexico and the United States to support necessary water policy and to secure needed funds for the Delta's restoration and protection.

The overall long-term goal of the Colorado River Delta Economic Valuation Project, in conjunction with other initiatives, is to enhance, restore, and maintain the Colorado River Delta ecosystem. A critical requirement for achieving this goal is securing water for people and the environment in the Delta.

The large scope of this project requires the bi-national collaboration of seven different organizations in the United States and Mexico. Project partners include: Sonoran Institute, Pronatura Noroeste, Ecosystem Economics, University of Arizona, Universidad Autónoma de Baja California, Instituto Nacional de Ecología, and the Centro de Investigación Científica y de Educación Superior de Ensenada.

For more information, or to find out how you can help, contact:
Francisco Zamora, Ph.D.
Delta Program Director, Sonoran Institute
fzamora@sonoraninstitute.org



Sonoran Institute
44 E. Broadway Blvd., Suite 350
Tucson, Arizona 85701
tel 520-290-0828 | fax 520-290-0969

Shaping the Future of the West
www.sonoraninstitute.org

Text by Laura López-Hoffman, Carrie K. Presnall, and Robert Merideth, Udall Center for Studies in Public Policy, University of Arizona; and by Sonoran Institute staff. Graphic design by Renee La Roi. Maps and diagrams by Chrysanthia Gakopoulos. Ecosystem services drawing adapted from FAO. Images for global maps courtesy NASA. All other photos courtesy Sonoran Institute.