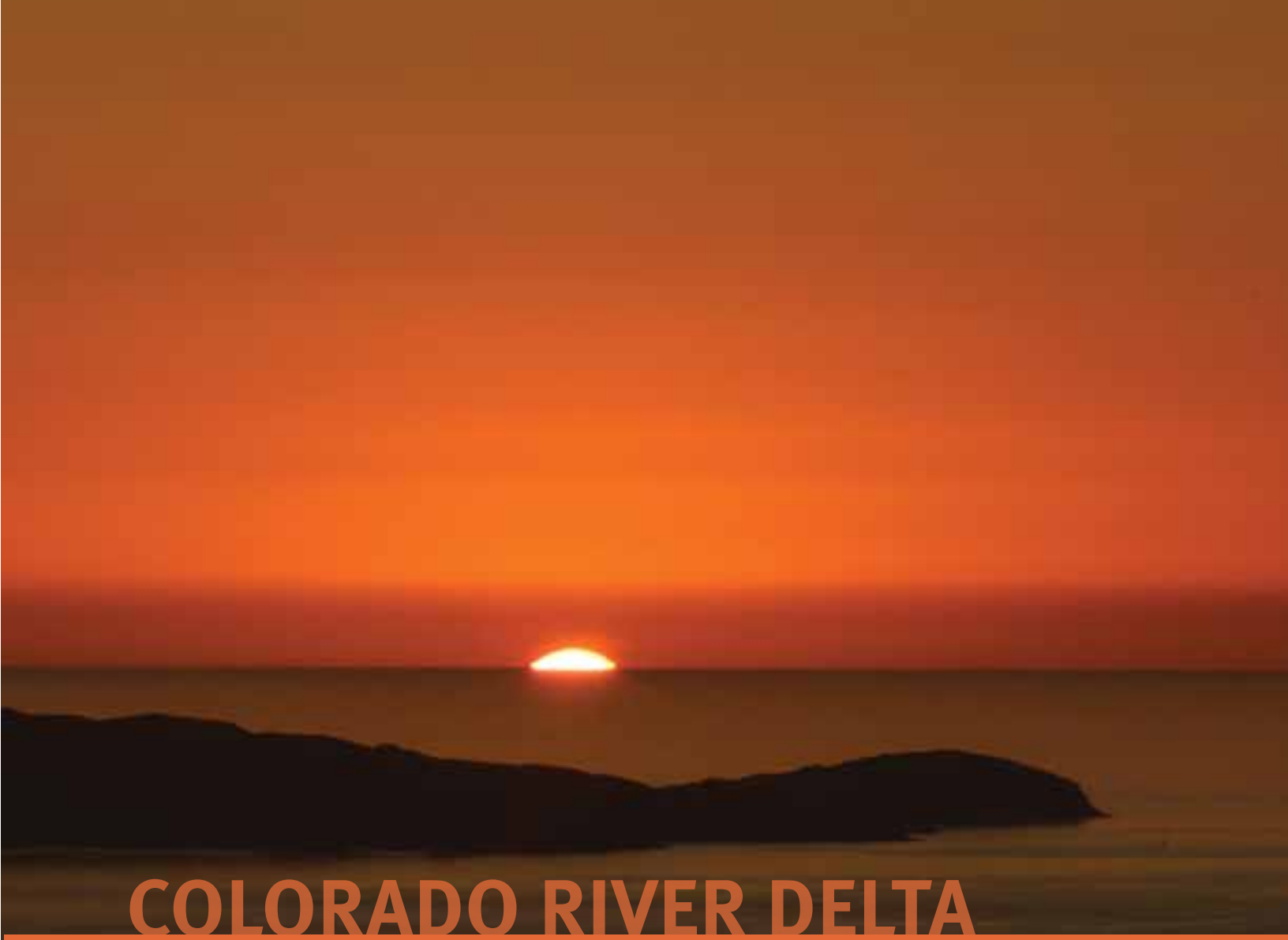


COLORADO RIVER DELTA WATER TRUST

RESTORING A GLOBAL ECONOMIC AND ENVIRONMENTAL RESOURCE

pro natura noroeste

SONORAN INSTITUTE

Shaping the Future of the West

A FUNDING PROSPECTUS PREPARED BY PRONATURA NOROESTE AND THE SONORAN INSTITUTE

Pronatura Noroeste, the Sonoran Institute, and Environmental Defense Fund are proud partners in the creation and management of the Colorado River Delta Water Trust.

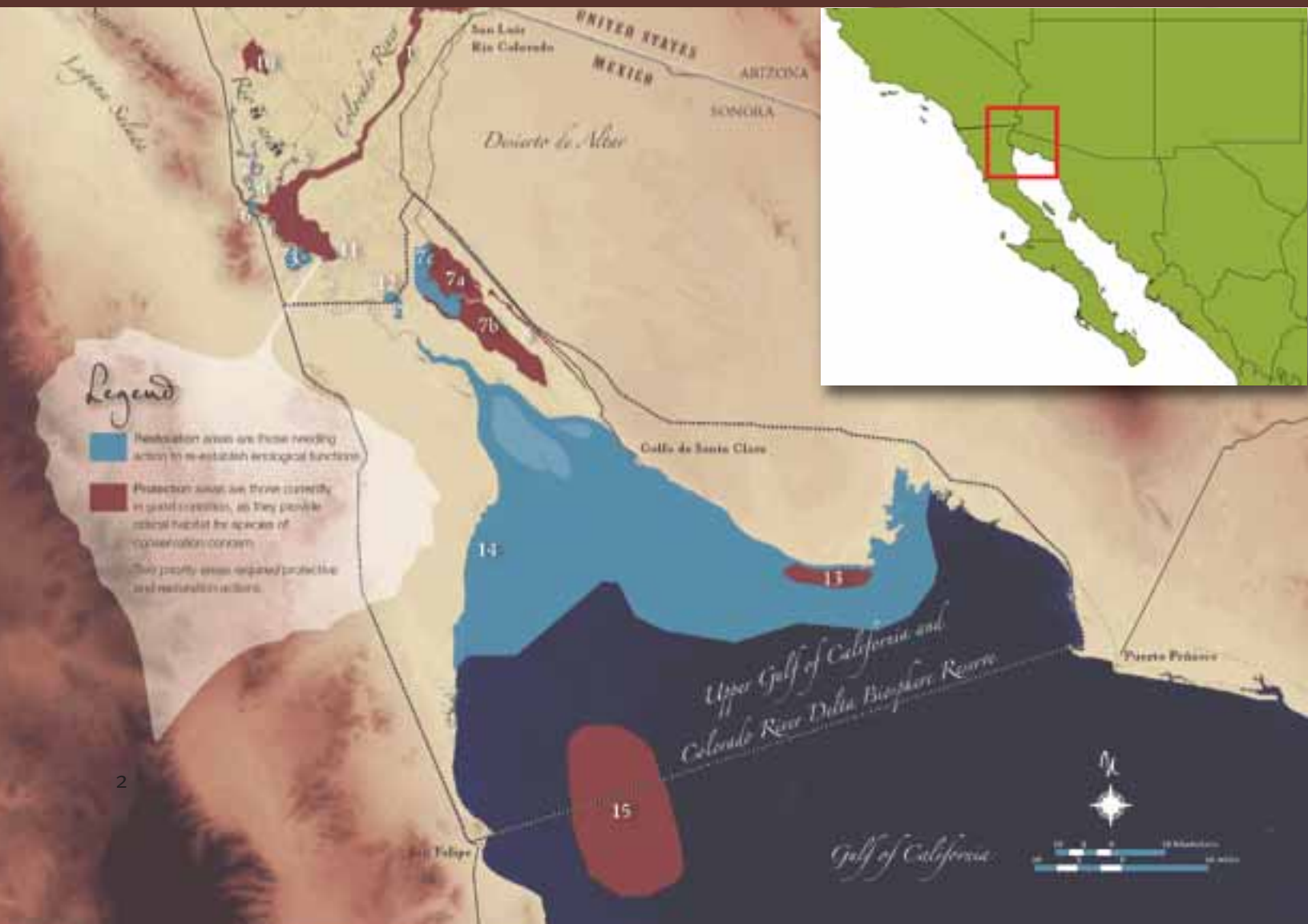
The conservation vision that the Water Trust is helping to support was developed five years ago, when concerned individuals and organizations from both sides of the border came together to define conservation priorities in the Colorado River Delta. Using research, their efforts proved that small amounts of fresh water could accomplish great things in the Delta, underscoring the resilience of this endangered ecosystem and the multiple benefits that would accrue to both wildlife and neighboring communities. In addition, a series of on-the-ground demonstration projects have illustrated that restoration is feasible and can be replicated on a broad scale throughout key portions of the Delta.

Many people and organizations have helped define a new conservation vision for the Colorado River Delta. We are grateful for their tireless work and dedication in developing the Water Trust concept and making it a reality in Mexico.

Gaston Luken
Honorary President
Pronatura Noroeste

Luther Propst
Executive Director
Sonoran Institute

Photography by Mark Lellouch, unless otherwise noted.



Looking south from the mouth of the Colorado River into the Gulf of California. Freshwater secured by the Trust will help to reconnect the river with the ocean, facilitating the resurgence of the Delta's estuary. (Photo by Karl Flessa)

INTRODUCTION

The Colorado River Delta Water Trust is Mexico's first water trust dedicated to acquiring and leasing water for conservation purposes. This Water Trust will play a key role in helping restore the Colorado River Delta, a globally significant environmental resource that is in the process of being rescued from the brink of extinction by a dynamic partnership involving conservationists, scientists, community leaders, and government officials from the United States and Mexico.

The ultimate restoration goal of this partnership — to enhance tens of thousands of acres of productive riparian, wetland, and estuarine habitat — is now within reach. In this process, we are working to scale-up restoration actions and water acquisition, and looking to increase funds available for improvement of the Colorado River Delta.

The current drought in the Colorado River Basin is among the worst observed in the past 500 years of reconstructed climate records. The resulting decline in river flows has brought into sharp relief the differences between legal entitlements and the reality of what the River can reliably provide to its municipal, agricultural, and environmental users. Although this situation has created new diplomatic tensions between the U.S. and Mexico, it also represents a significant opportunity to identify cooperative water management projects between water users in the two countries that will produce benefits for both nations.

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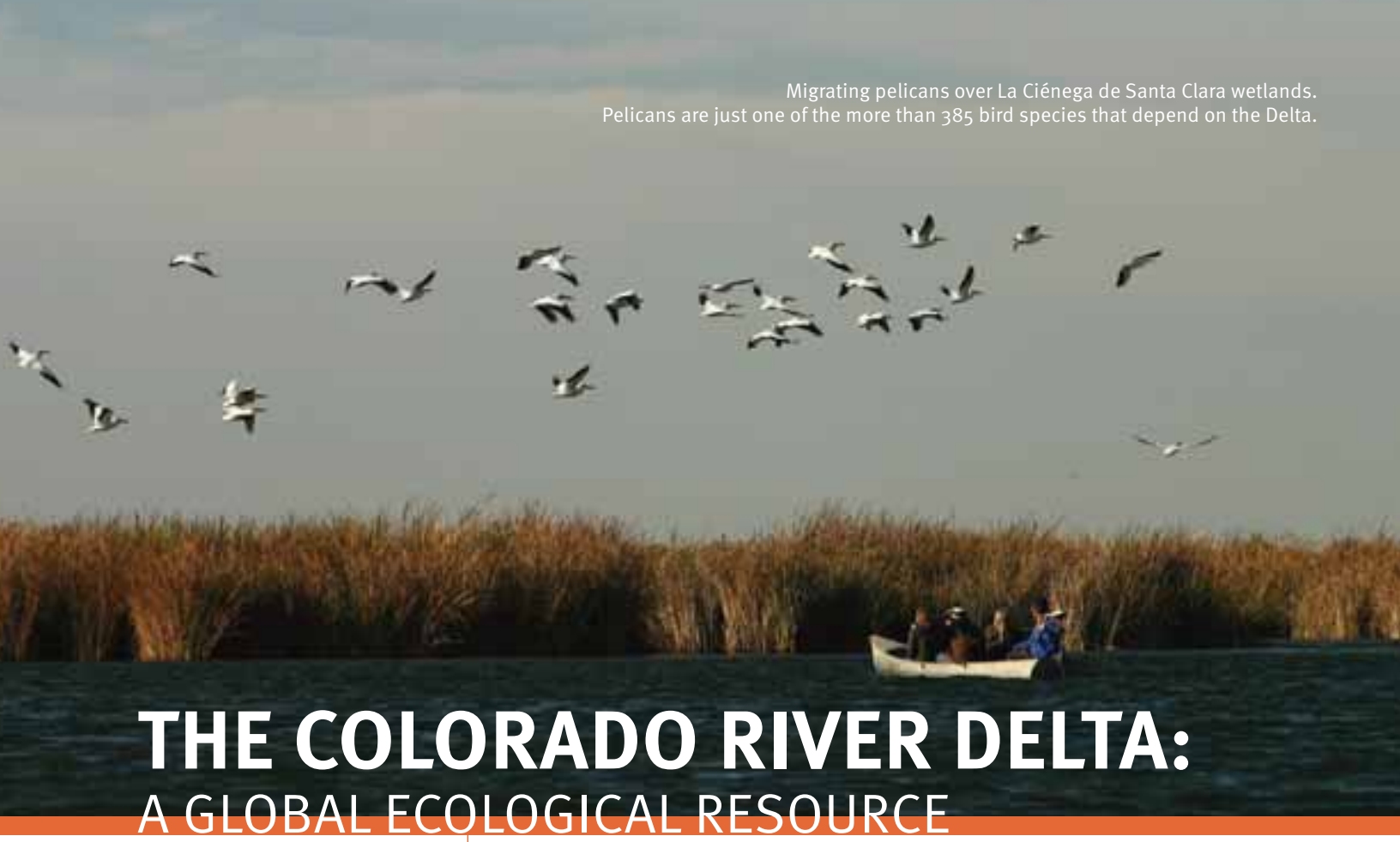


Migrating pelicans over La Ciénega de Santa Clara wetlands.
Pelicans are just one of the more than 385 bird species that depend on the Delta.

THE COLORADO RIVER DELTA:
A GLOBAL ECOLOGICAL RESOURCE

Due to its ecological value, the Delta has received several national and international recognitions; it is a Federal Biosphere Reserve in Mexico, a wetland of international importance, a priority site in the North American Wetland Conservation Plan, and an Important Bird Area.

The Colorado River Delta, extending into the Upper Gulf of California, has long been recognized as one of North America's most unique and valuable ecosystems. More than 385 bird species have been documented breeding, wintering, and migrating through the Delta, underscoring its importance as a refuge for species that are threatened or endangered and whose migratory routes are diminished elsewhere in the U.S. and Mexico.

The Delta also sustains breeding and nursery grounds for diverse and economically important marine fisheries, including shrimp, finfish, and shellfish, as well as the endangered totoaba, a marine fish endemic to the Upper Gulf of California and in critical condition.

These critical environmental assets continue to persist in the Delta in spite of the development of massive upstream water diversions from the Colorado River. These diversions culminated with the filling of Lake Powell from 1964 to 1981, when the Colorado River provided no water to the Delta, all but eliminating the River's historic freshwater flows that sustained nearly two million acres of wetlands and incredibly productive fisheries. Today, the Delta has been reduced to less than 20 percent of its original size.

Experience has shown, however, that the Delta is surprisingly resilient. After 1981, the area experienced a series of floods as a result of wetter-than-normal conditions in the Colorado River Basin. These flows helped to revive key portions of the Delta, including high quality wetlands and a riparian habitat corridor along the lower Colorado River, and convincingly demonstrated that relatively modest flows of freshwater could allow the Delta to recover a portion of what has been lost.

Relatively modest flows of freshwater could significantly stimulate the Delta's recovery.

Ecotourism opportunities exist where there is water in the Delta. Here, Juan Butrón educates visitors on the importance of La Ciénega de Santa Clara wetlands.

THE CHALLENGES
FACING THE COLORADO RIVER BASIN

Population growth in the state of Baja California may result in critical water supply shortages for Mexicali, Tijuana, Ensenada, and other communities, and in some cases has already outstripped existing supplies.

The combination of current drought conditions in the Colorado River Basin and rapidly growing populations throughout the Basin are dramatically increasing the pressure on Colorado River water resources. In the past few years, agricultural and municipal water users throughout the U.S. portion of the Basin have experienced shortfalls as a result of the physical unavailability of expected streamflows in key watersheds. System storage has declined precipitously, dropping to less than half of normal storage.

Mexican water users face a similar set of concerns. Although the U.S.-Mexico Treaty does not identify the precise conditions that qualify as an extraordinary drought (under which shortages to Mexico would occur), Mexico lacks storage that could be used to mitigate the impacts of Colorado River shortages and is therefore dependent on U.S. deliveries to meet water supply needs for municipal, agricultural, and environmental uses. These potential shortfalls conflict directly with growing water management challenges related to urban growth. Population growth in the state of Baja California may result in critical water supply shortages for Mexicali, Tijuana, Ensenada, and other communities, and in some cases has already outstripped existing supplies.

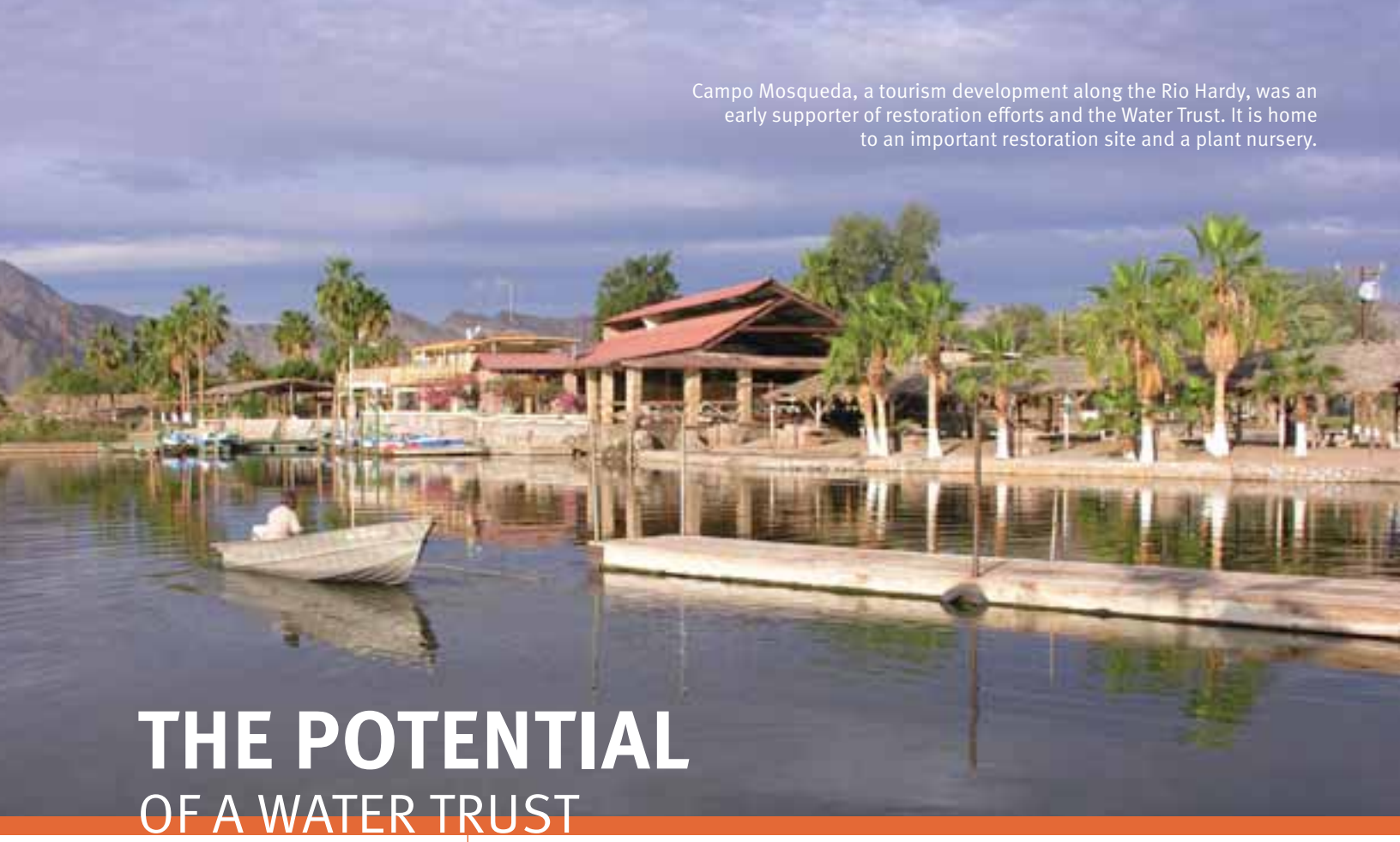
State and municipal governments, water providers, agricultural interests, environmental groups, and other water users in the U.S. and Mexico share many of the same problems and concerns. These realities are already leading Basin stakeholders to initiate new kinds of conversations between the two countries in an effort to identify cooperative,

Lake Mead currently stores water that would otherwise make its way to the Delta.

mutually beneficial solutions for binational water management and avoid outcomes that create conflict and perpetuate strained relationships.

In this context, a mechanism like the Water Trust that can acquire and dedicate water for environmental purposes through voluntary, cooperative means can play an important role in ensuring that environmental goals are met in the face of both local and international water management challenges. For example, the Water Trust recently entered into a three-way agreement with federal agencies in the U.S. and Mexico in which each party is contributing a portion of a temporary replacement water supply for the Ciénega de Santa Clara, a critically important Delta wetland. This international agreement represents an historic step towards a larger binational commitment to restoration of the Delta, and the Water Trust's participation was critical in helping this agreement take shape.

Colorado River in between agricultural fields in the Mexicali Valley. The Trust will acquire water from valley farmers and deliver it through existing irrigation canals to restoration sites.



Campo Mosqueda, a tourism development along the Rio Hardy, was an early supporter of restoration efforts and the Water Trust. It is home to an important restoration site and a plant nursery.

THE POTENTIAL
OF A WATER TRUST

Because of its early origins in European law and its basic importance to international business relationships, the legal trust relationship is recognized in both the U.S. and Mexico.

The legal concept of a trust dates back to the earliest history of European legal theory. Because of its early origins in European law and its basic importance to international business relationships, the legal trust relationship is recognized in both the United States and Mexico.

In its simplest form, a trust is a legal relationship in which one party holds property for the benefit of another — in legal terms, a relationship in which the owner of the legal title does not hold the equitable title. There are three participants in every trust relationship: a "settlor" or "trustor" who establishes the trust and provides the property to be held in trust; a "trustee" who is charged by the settlor with the responsibility of managing the trust in keeping with the settlor's instructions; and an identified "beneficiary" or public purpose that is the recipient or target of the benefits from the property held in trust.

Under U.S. law, trustees are charged with a series of fiduciary duties to the beneficiary of the trust. The most important of these are: 1) to manage the trust in accordance with the instructions of the settlor (normally contained in a trust agreement); 2) to require the trustee to put the best interests of the trust ahead of his own; 3) to require the trustee to manage the trust property with the same degree of skill that a prudent person would exercise in his or her own affairs; and 4) to preserve and protect the trust assets to satisfy both present and future claims against the trust.

The trust mechanism under Mexican law (known as a *fideicomiso*) is similar, involving a settlor (*fideicomitente*) that places property in trust; a trustee (*fiduciario*) who is responsible for the management of the trust assets in accordance with a trust agreement, and a beneficiary (*fideicomisarios*) who receives the benefit of the trust assets. One significant difference between U.S. and Mexican law is that in Mexico, only financial institutions (typically, Mexican banks or insurance companies) are authorized to function as trustees. Like a U.S. trustee, the *fiduciario* is subject to a strict set of fiduciary duties that follow the same model as under U.S. law. However, Mexican law also contains unusually strict confidentiality requirements related to trusts, which protect the identity of the trust creator, technical committee, and beneficiaries from public disclosure, and will even prevent disclosure to Mexican courts in some circumstances.

One other significant difference between U.S. and Mexican law is that Mexican law routinely provides for (but does not require) the involvement of a fourth party to the trust relationship, a "technical committee" (*comité técnico*). The technical committee is organized in accordance with the trust agreement, and can be charged with virtually any powers and duties provided for in the trust document. This mechanism allows the trust creator to maintain a significant level of decision-making authority over the management of trust assets despite the fact that a financial institution is functioning as the trustee.

Mexican law specifically allows for a trust mechanism to be employed for the ownership and management of land and water resources in Mexico.

The water trust will help support local ecotourism, environmental education, commercial fisheries, and outdoor recreation opportunities.

Mexican law specifically allows for a trust mechanism to be employed for the ownership and management of land and water resources in Mexico. The significant commonalities between U.S. and Mexican law, combined with the unique fiduciary requirements associated with the trust relationship, make the trust mechanism a nearly ideal method for structuring the investment in and acquisition of water resources on a binational, cooperative basis, while ensuring that the resources invested in the trust are used for the purposes intended, benefit the investors, and remain under the effective control of the trust's creators.

THE DELTA WATER TRUST

Pronatura Noroeste, the Sonoran Institute, and Environmental Defense Fund have established a trust in Mexico for the purpose of acquiring water and land for the restoration of the Colorado River Delta.

Pronatura Noroeste, the Sonoran Institute, and Environmental Defense Fund are managing the Colorado River Delta Water Trust in Mexico for the purpose of acquiring water and land for the restoration of the Colorado River Delta. The Trust will take advantage of unique provisions of Mexican water law that allows water to be severed from the lands on which it is used, so it can be used elsewhere within the Mexicali Valley. Unlike the provisions that govern the severing and transfer of water rights in the U.S., Mexican water law allows this activity to occur with minimal formalities.

The Trust, which is controlled by a technical committee composed of representatives of the founding institutions and the Environmental Defense Fund and the Sonoran Institute, has been established initially with the dual purpose of engaging in agricultural activities and environmental restoration activities. This flexibility is critical in light of the low priority afforded to environmental uses under Mexican law. In the event of a shortage of water deliveries or complications associated with the establishment of a protected area, it may be desirable to withhold or withdraw water dedicated for environmental uses and temporarily or permanently return this water to productive on-farm applications, exchange, or sell it to other entities to free up monetary or water resources for investment elsewhere. The technical committee is charged with directing the appropriate application of water held by the Trust to environmental restoration activities elsewhere.

Specific priority areas for environmental protection and restoration in the Colorado River Delta have already been identified through a

Enhanced conditions at the Laguna Grande restoration site are already attracting a large number of birds, including the Yellow-billed Cuckoo.

rigorous evaluation process involving respected scientists with extensive experience and research interests in the Colorado River Delta region.

This process culminated in the production of a report entitled "Conservation Priorities in the Colorado River Delta," which was co-published by the Sonoran Institute, the Environmental Defense Fund, Pronatura, World Wildlife Fund, CIAD, the University of Arizona, the National Institute of Ecology of Mexico (INE) and the National Commission on Natural Protected Areas of Mexico (CONANP). This report identifies 14 high-priority conservation sites throughout the Colorado River Delta, together with the water and restoration needs associated with each of these sites.

These conservation sites and objectives include, most critically, the restoration of base flows in the mainstem of the Colorado River throughout the Delta region. In the short term, this will require the purchase of at least 50,000 acre-feet of water to restore annual (base) flows in the Colorado River Delta; at current prices, it appears that $12-15 million will ultimately be needed to secure this amount of water. Ultimately, these acquisitions will allow the Trust to help restore and maintain more than 80,000 acres of wetland and riparian areas in the Delta.

The good news is that much of the groundwork for restoration has been done. Field projects within conservation priority sites have demonstrated the feasibility of restoration. Mexico has conceded federal land for restoration purposes that will ensure that water purchased for conservation is used for that purpose. The most immediate challenge, therefore, is funding for water acquisition.

Project partners and community leaders study a satellite map of the Delta on the river bank to guide the Trust's restoration efforts.

PROJECT DESCRIPTION

With the trust mechanism established and operational, and priority sites identified, the Trust is initially seeking approximately $2 million to acquire up to 8,000 acre-feet of water.

With the Trust mechanism established and operational, and priority sites identified, the Trust is now acquiring water to be delivered to specific conservation priority sites, demonstrating the Trust's effectiveness as a water management and conservation tool.

Mexican water law provides a process by which titles of concession or designation for the exploitation or use of national waters can be transferred between entities. The Trust generally acquires the water rights to be held by the Trust on the free market, seeking willing sellers in the traditional venues for water rights transactions in the Mexicali Valley. Water rights identified for purchase are verified through investigation of title, water rights fee payment history, and accreditation by the seller's legal representative. This investigation includes an evaluation of the property status of each right to ensure that the character of the right is compatible with the objectives of the Trust (for example, some water rights are subject to time limits or conditions on priority that may conflict with our objectives). Acquisition is accomplished pursuant to a contract for the transfer of water rights, which is regulated under the Civil Codes of the state of Sonora or Baja California, depending on where the rights are acquired.

To complete the acquisition, official notification and registration in the Public Registry of Water Rights is carried out through the Baja California Regional Office of the National Water Commission in Mexicali, which formalizes the transfer for purposes of the National Water

The Trust will deliver water to restoration sites by constructing small canals to connect agricultural irrigation channels with the Colorado River.

Commission. Once the water rights are acquired and vested in the water trust, the Trust then requests a change in the use of the water rights from agricultural use to conservation use, as appropriate, pursuant to the requirements of Article 43 of the National Water Law regulations.

The Trust has already acquired 3,000 acre-feet of water rights from farmers in the Colorado River irrigation district in Mexico. These acquisitions have been accomplished in a highly cost-effective manner, at prices far below those prevailing in the U.S. This water, acquired in perpetuity, is being pledged to the Water Trust and allocated for environmental restoration use. The water is being used to enhance over 500 acres of riparian and marsh wetlands in several existing restoration areas along the riparian corridor along the Colorado River mainstem in Mexico.

Use of the water includes irrigation of native trees until their roots reach the water table. Water is also used to inundate areas to promote natural re-vegetation and will eventually maintain a small base flow in some areas. When needed, delivery structures (ditches and small channels) are built to deliver water to targeted areas. With the proposed water acquisition and current active restoration actions, we expect to significantly enhance the ecological functionality of critical terrestrial and aquatic habitat.

The restoration efforts include a rigorous ecological monitoring and evaluation, so that we can report on the progress of restoration activities in a timely fashion and adjust activities accordingly to maximize the benefit from water and restoration investments in Delta resources. These protocols focus primarily on evaluating the impact of restoration actions on bird populations, with an emphasis on detecting changes in vegetation (land cover) and its relationship with abundance and diversity of riparian bird species.

The monitoring program also evaluates the use of the Trust as the mechanism to support restoration of natural habitat and its effectiveness as a means of acquiring and managing water resources. The Trust also monitors and reviews water transactions to develop guidelines that can be used in the future to expand the program. We also plan to monitor the actual delivery of water to support restoration actions, streamlining the process within the irrigation district and with federal authorities.

Current restoration efforts include the removal of exotic species, primarily salt cedar, and re-vegetation with native species on a 500+ acre portion of the larger riparian corridor.

The Trust will benefit from the contributions of local residents, students, and volunteers from both the U.S. and Mexico to ongoing restoration efforts.

The Ciénega de Santa Clara is currently dependent on agricultural runoff from the U.S. that could be redirected for other uses. The Trust is playing an important role in a binational process to dedicate water to maintain the environmental quality of the Ciénega.

FUNDING FOR THE TRUST

In addition to securing funds for water acquisition, partner organizations continue to raise funds for on-the-ground restoration, monitoring, and project management, which average about $500,000 a year.

The Trust needs both immediate and long-term funding support to complete water acquisitions needed to meet our Delta restoration goals. Helping to purchase water for conservation and restoration through the Trust is a long-term, meaningful investment that delivers lasting conservation results. Monetary investments that would barely be adequate to lease water for one-time use in the U.S. are frequently adequate to acquire permanent water rights in the Mexicali Valley that will deliver water for the benefit of the Delta on an ongoing basis — a resource that can be used, re-used, and even moved for use elsewhere once initial, intensive restoration activities are complete.

In addition to securing funds for water acquisition, the partner organizations continues to raise funds for on-the-ground restoration, monitoring, and project management. These activities put the Trust's water to work, accomplishing restoration objectives and ensuring that the delivery of Trust water will achieve lasting environmental results for the Delta and Delta communities.

In addition to securing grants and contributions to fund the acquisition of water, the partner organizations are exploring a range of alternative funding scenarios. These could include a low-interest loan from an investor, much like a program-related investment from a foundation, as well as other innovative funding mechanisms.

CONCLUSION

The Colorado River Delta has demonstrated resiliency. Its ecosystem retains global significance despite a dramatic reduction of freshwater flows. However, what little freshwater there is will disappear without determined efforts to secure it for the environment and the communities that depend on it for their livelihoods.

The Colorado River Delta Water Trust is a promising tool that can help accomplish this important goal. Timely and innovative, it reflects a creative and entrepreneurial approach that conservationists must adopt to sustain the Delta for future generations.

Cucapá elder Inocencia Gonzales Saiz (right) with her two daughters, Juana (left) and Antonia Torres Gonzales (center). The Cucapá, who retain a strong spiritual connection to the Colorado River, will be a beneficiary of the Water Trust's conservation efforts.

We are monitoring water levels and water salinity in the lower portion of the Colorado River. Water deliveries by the Trust will increase the number of days the river is connected with the Gulf, thus enhancing spawning and nursery grounds for marine species.

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