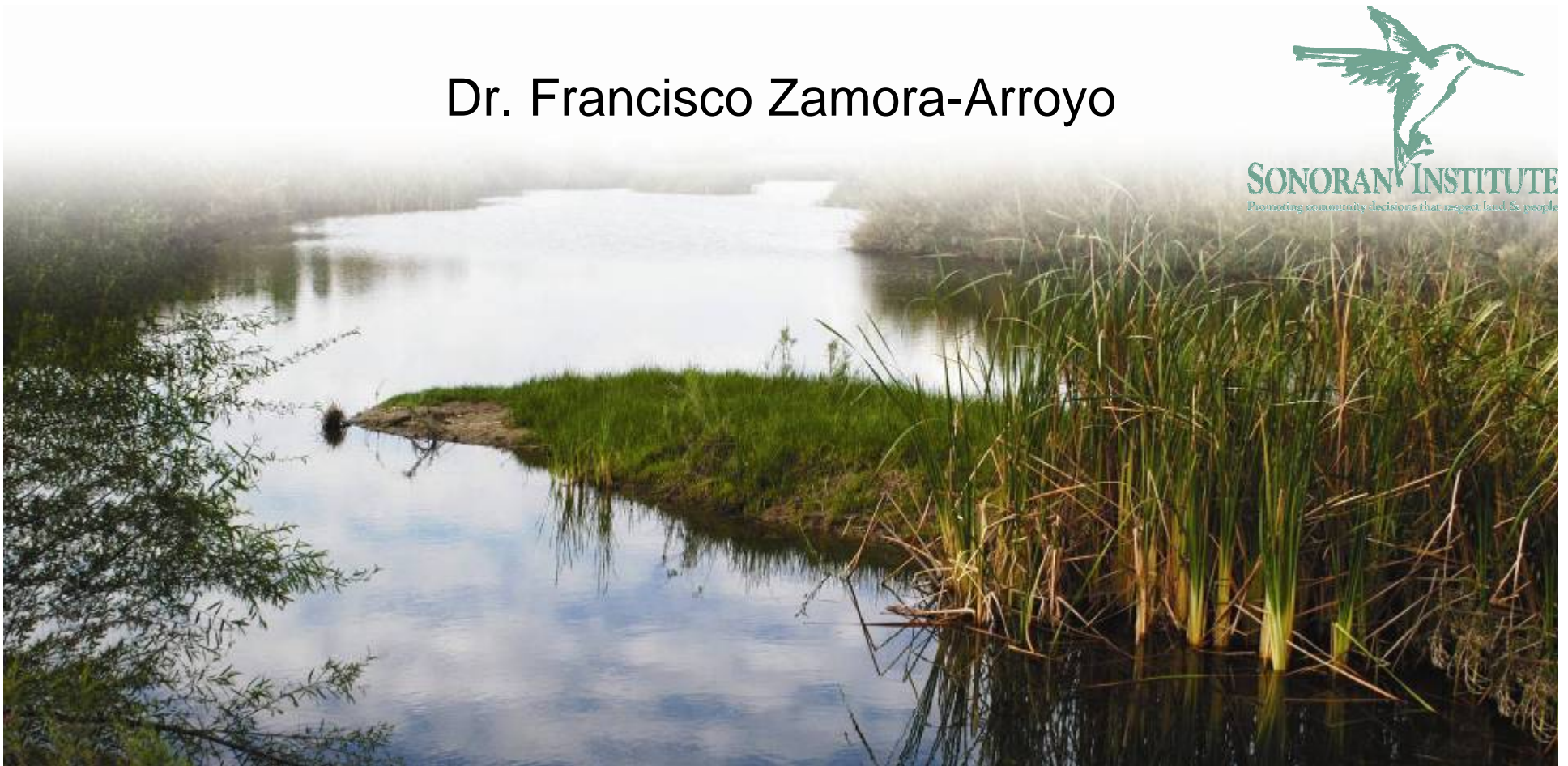


Ongoing Restoration Efforts in the **Colorado River Delta in Mexico**

Dr. Francisco Zamora-Arroyo



Outline

➤ Conservation Priorities Areas

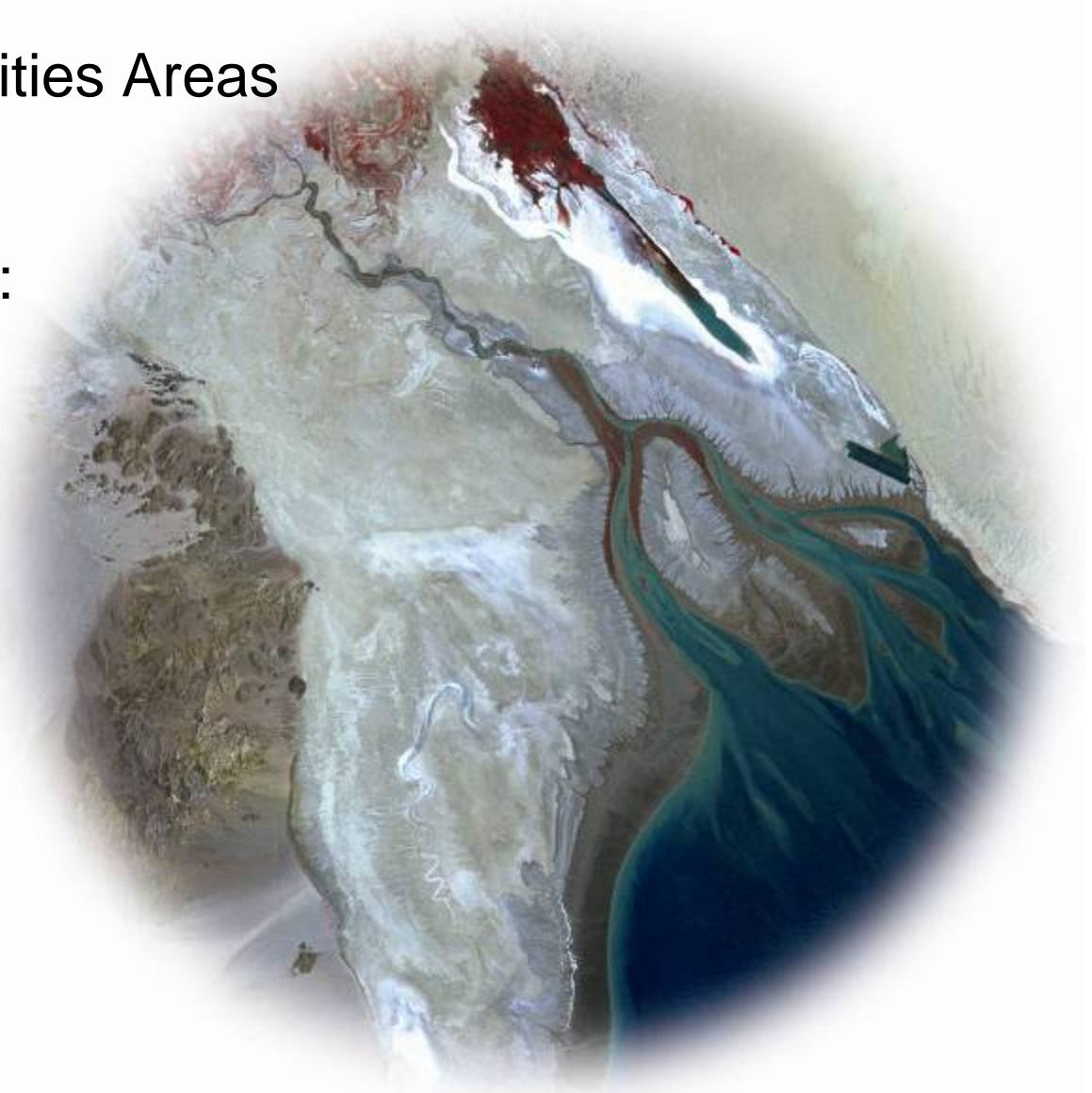
➤ Restoration Efforts:

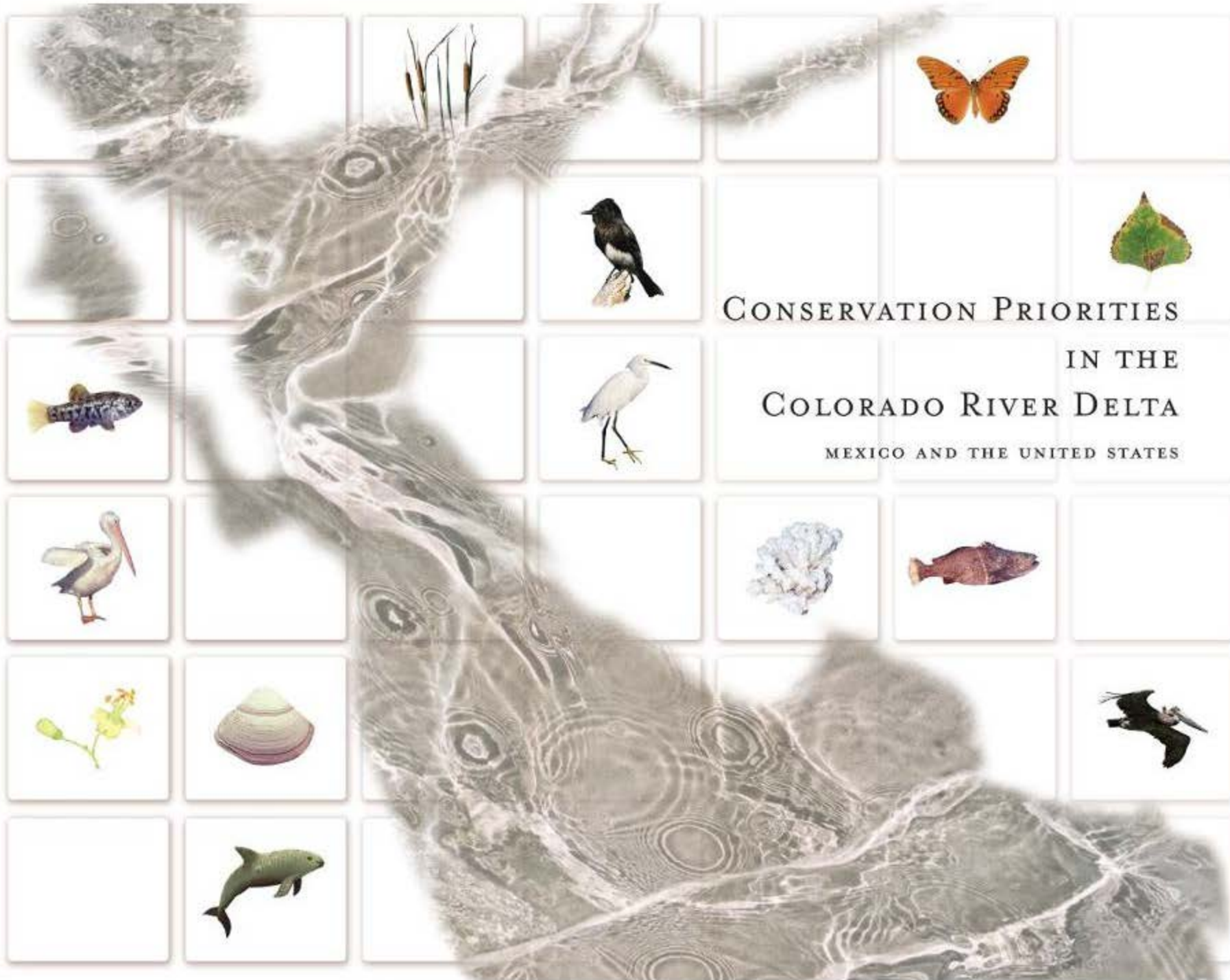
✓ Colorado River

✓ Hardy River

✓ Other wetlands

➤ Conclusions





CONSERVATION PRIORITIES
IN THE
COLORADO RIVER DELTA
MEXICO AND THE UNITED STATES

these and many more organizations and funders are working in several ongoing efforts and initiatives to restore the Delta



CONAGUA



Un Mexicali para todos.



Secretaria de Turismo



David and Lucile Packard Foundation



TCF



CIAD, A.C.



SAGARPA



UABC



NWF



Water Education Foundation



Instituto Nacional de Ecología



Club de Leones Cucapa

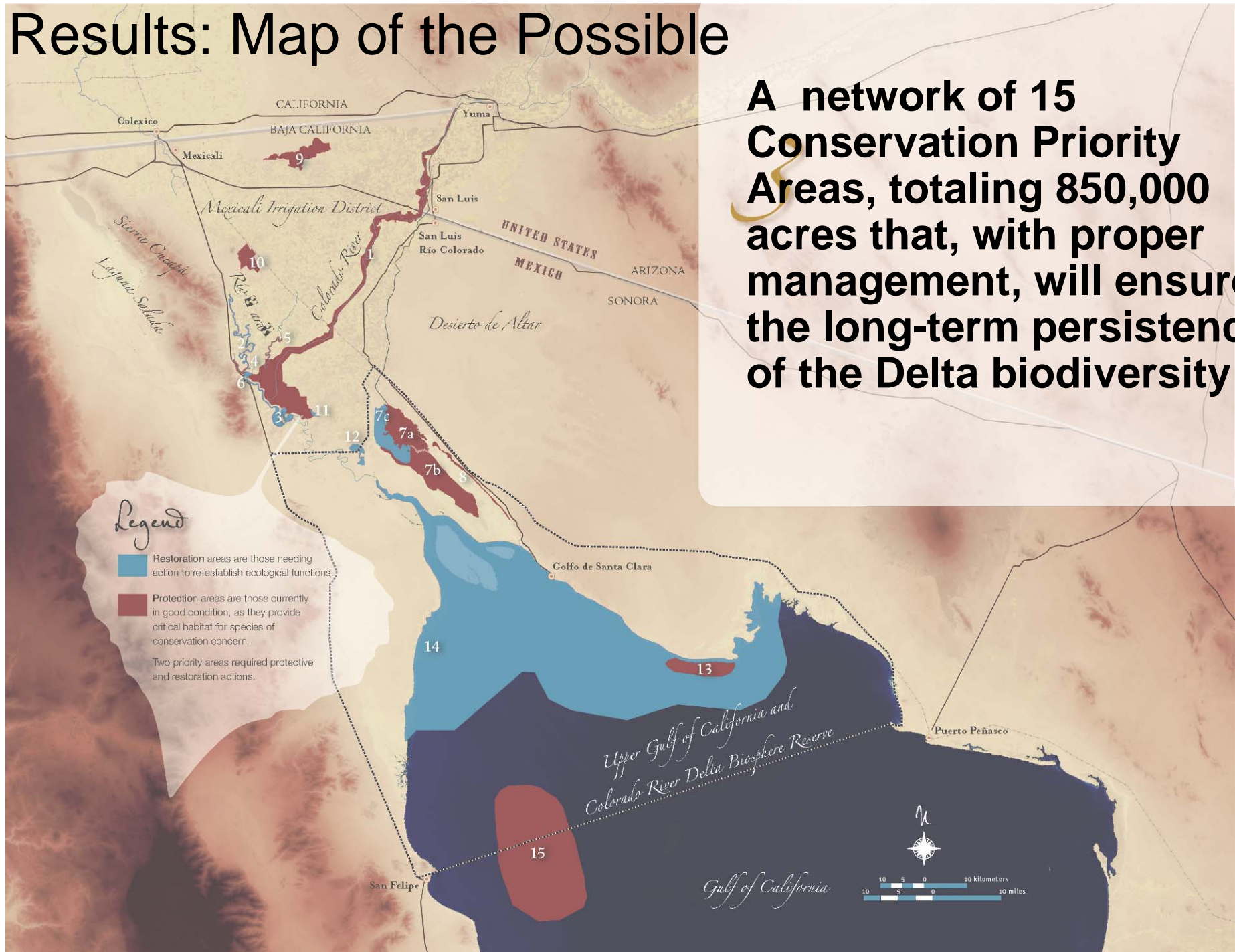


DHS Rotary Club



Results: Map of the Possible

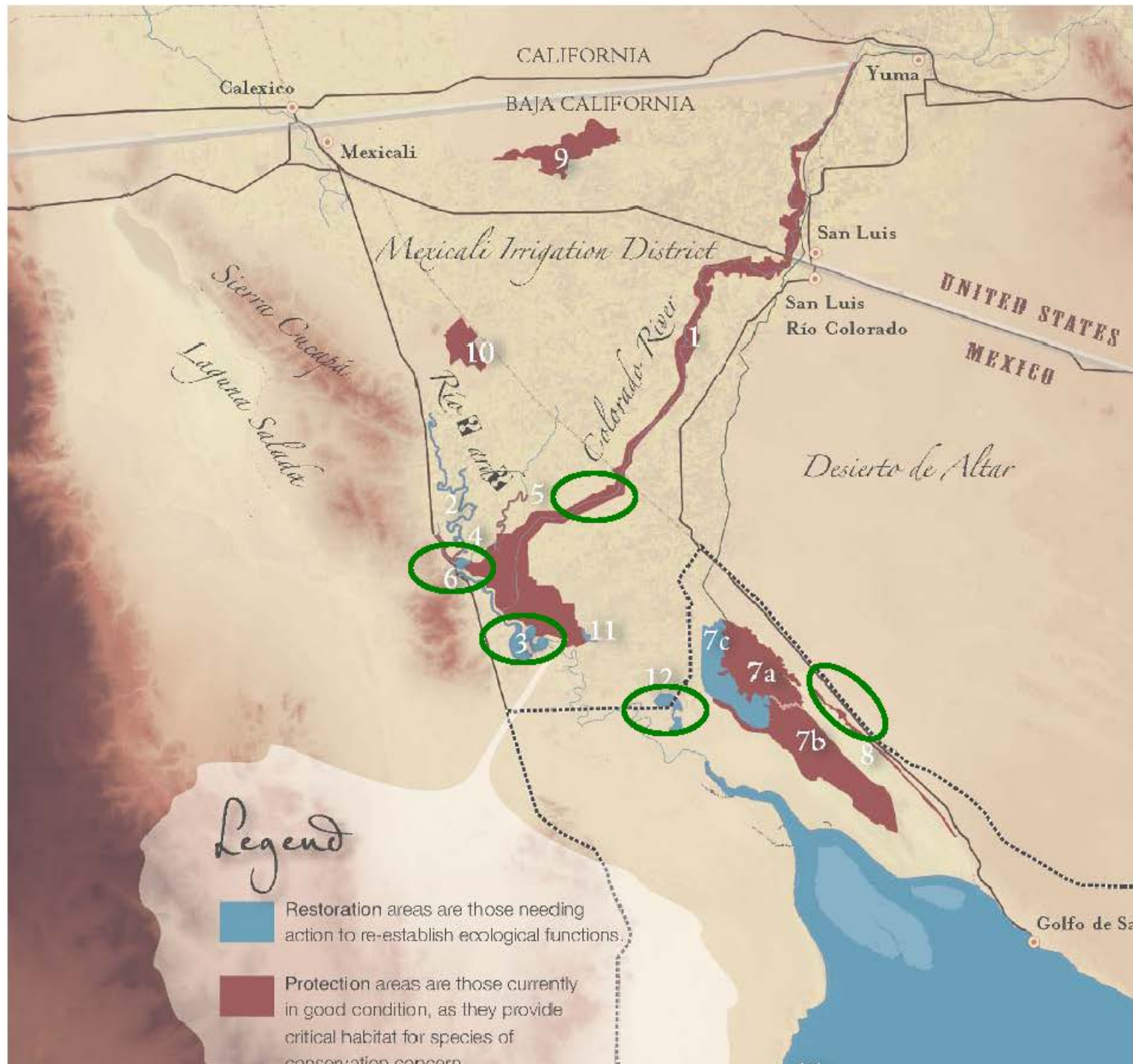
A network of 15 Conservation Priority Areas, totaling 850,000 acres that, with proper management, will ensure the long-term persistence of the Delta biodiversity



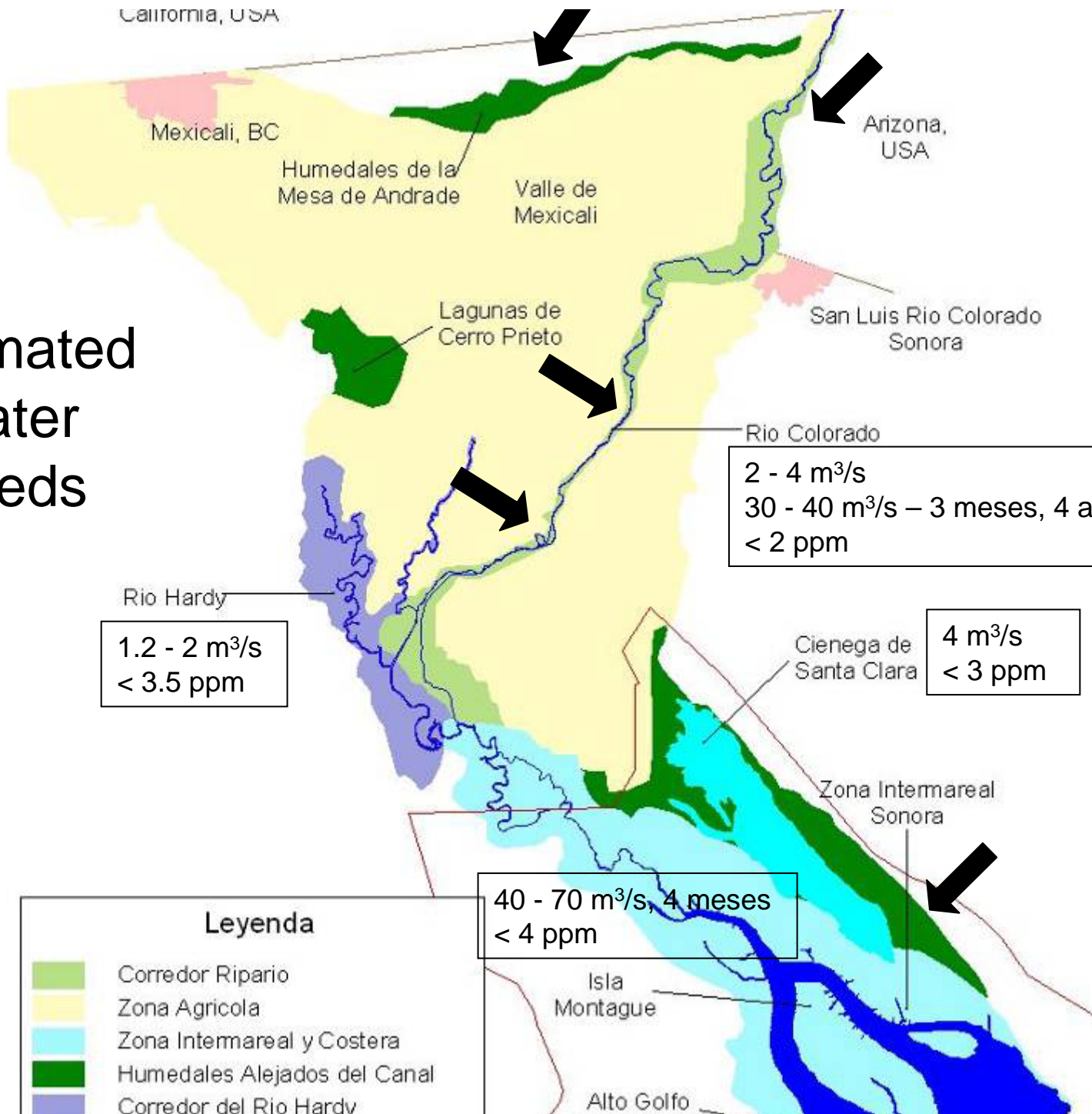
Ongoing restoration efforts in Mexico



Restoration = Riparian + Off-channel + Estuarine



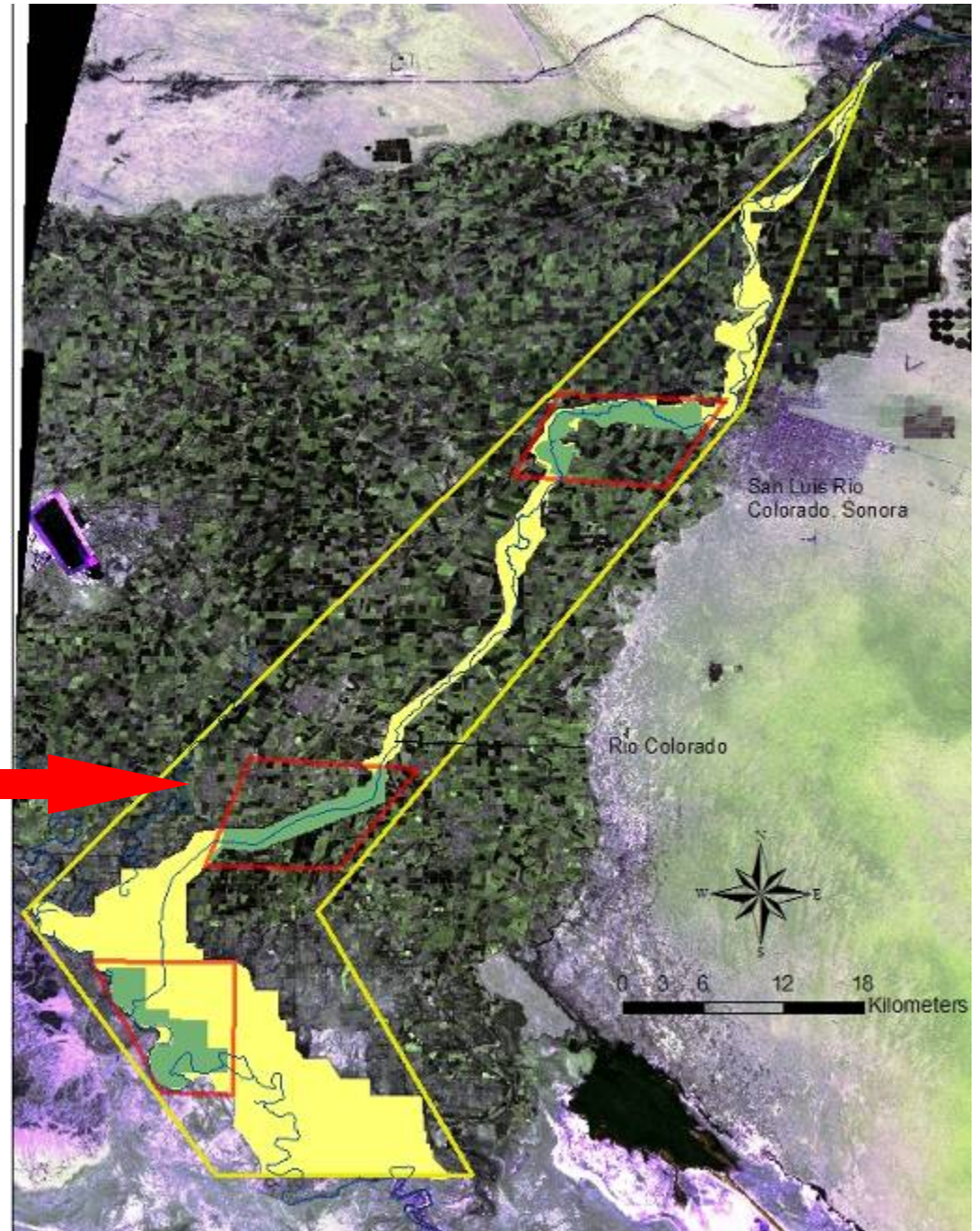
Estimated water needs

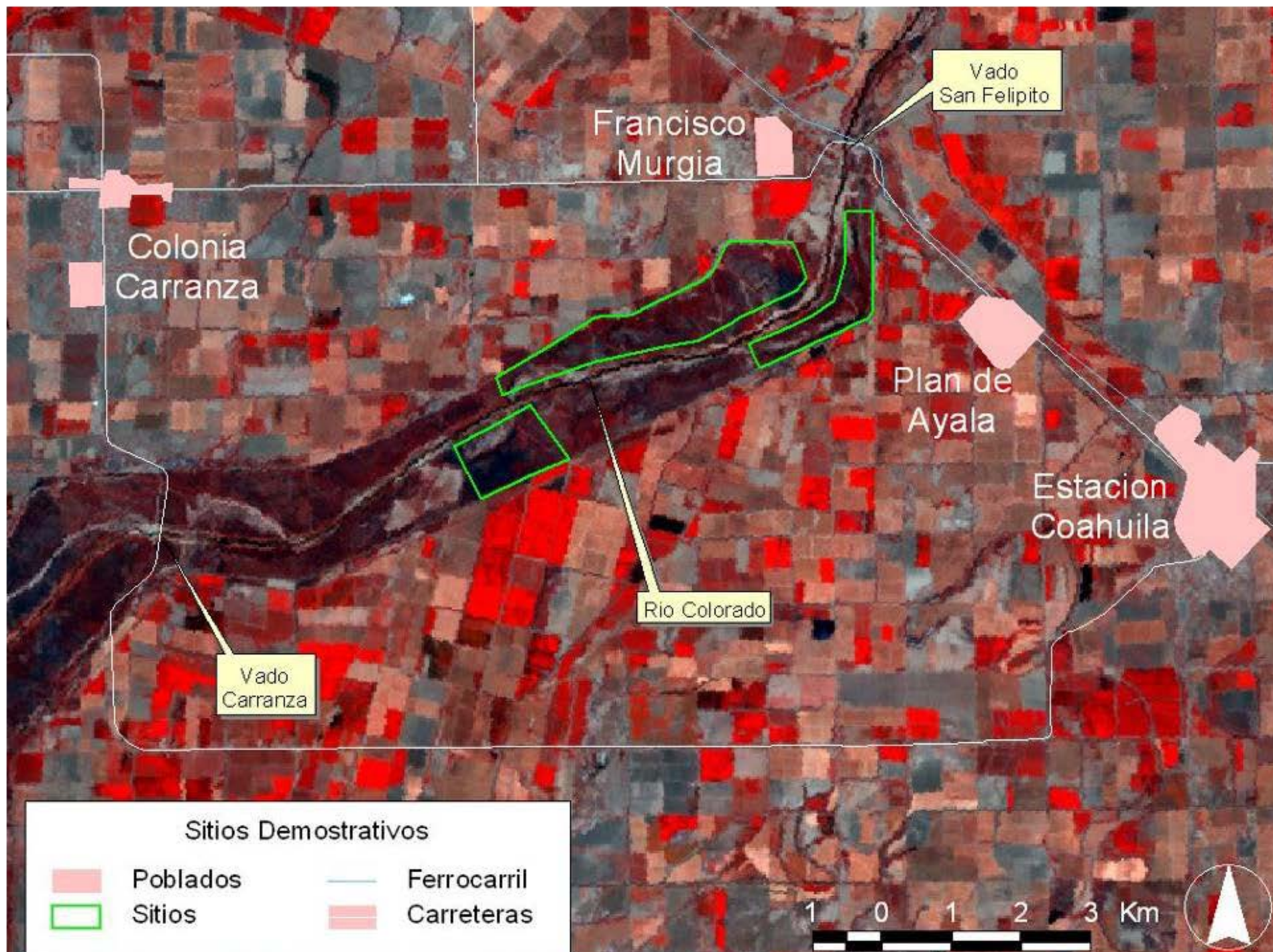


Colorado River Corridor

Overall goal: Develop
a 80,000-acre
functional ecological
area

Restoration
Demonstration
Project





Laguna Grande

- Planted 2,400 native trees in 23 acres in 2006-07:
 - 1,300 mesquite
 - 1,100 CW and willow trees

















ZONA DE RESTAURACIÓN ECOLÓGICA

ALTO



ESTA ZONA ES PARA QUE LA DISFRUTES
CUÍDALA NO INGRESES EN VEHICULOS MOTORIZADOS
NO TIRES BASURA
EVITA LA TALA DE ÁRBOLES
NO PROVOQUES INCENDIOS





Developed a community vision for restoration



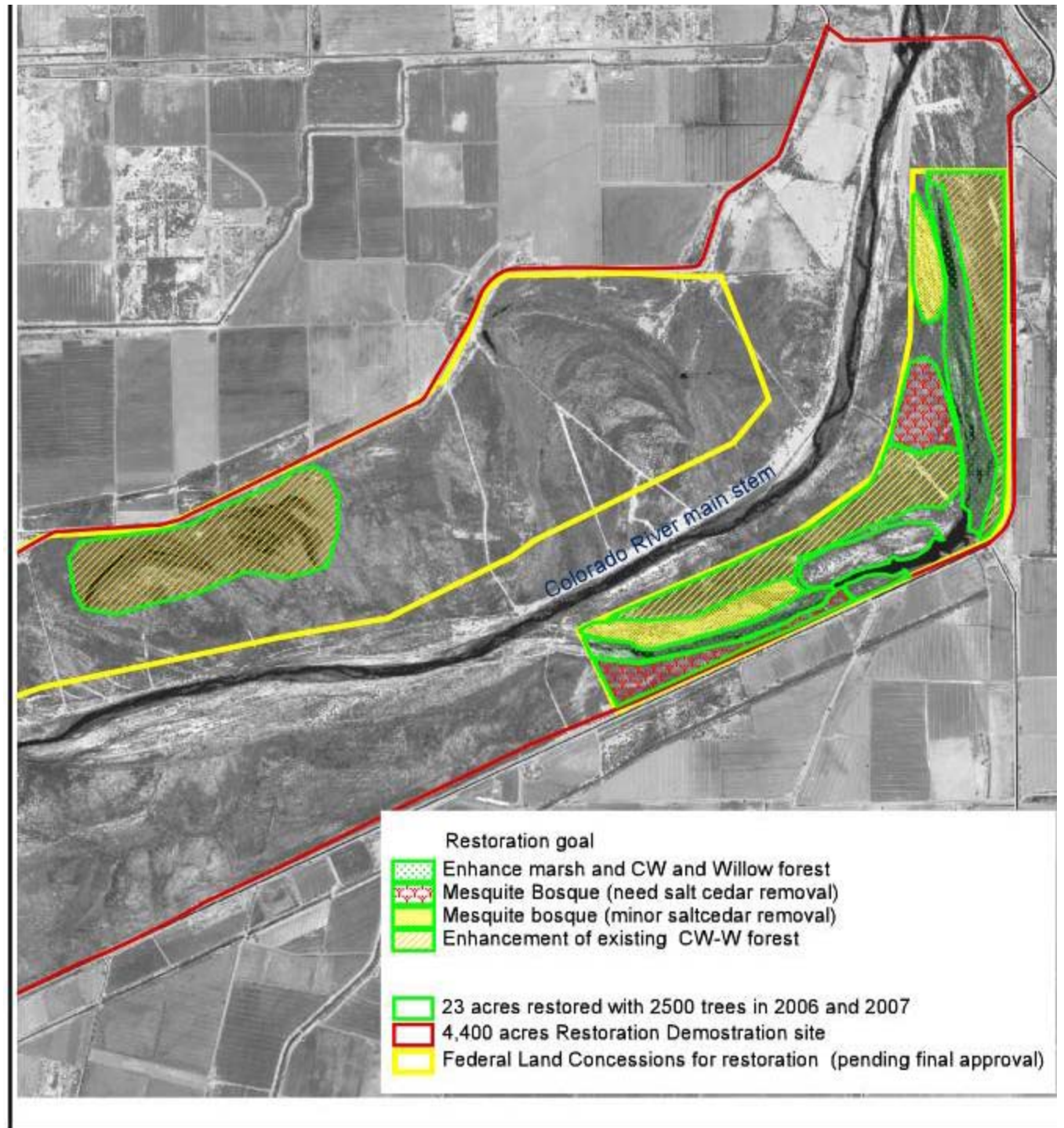
Reached over 1,500 local community members and 60 government officials, 20 percent of which participated in restoration actions.

Created five full-time jobs.



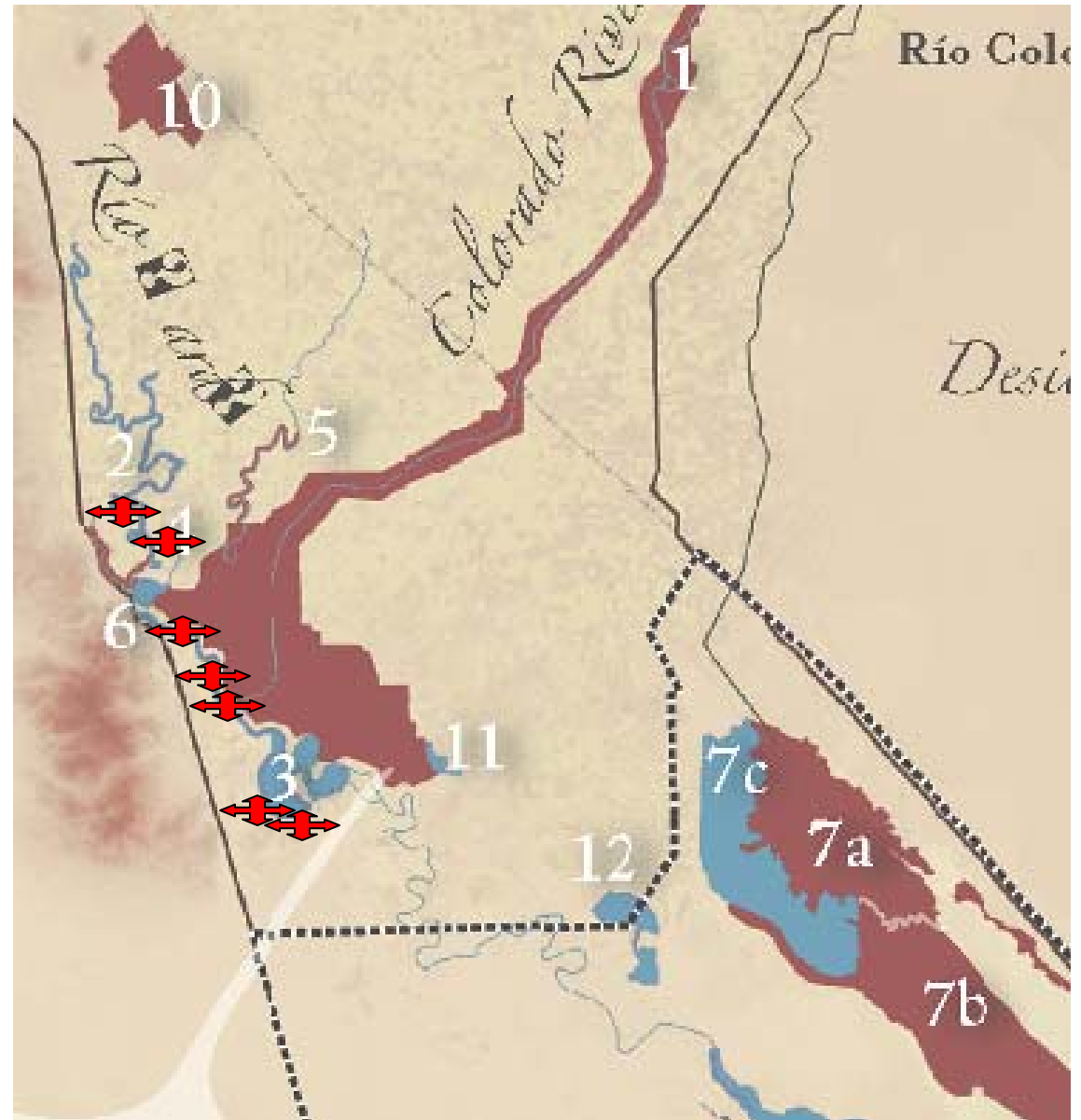
In the Next 2-3
years

Enhance 250
acres and
secure 5,000 af
of water

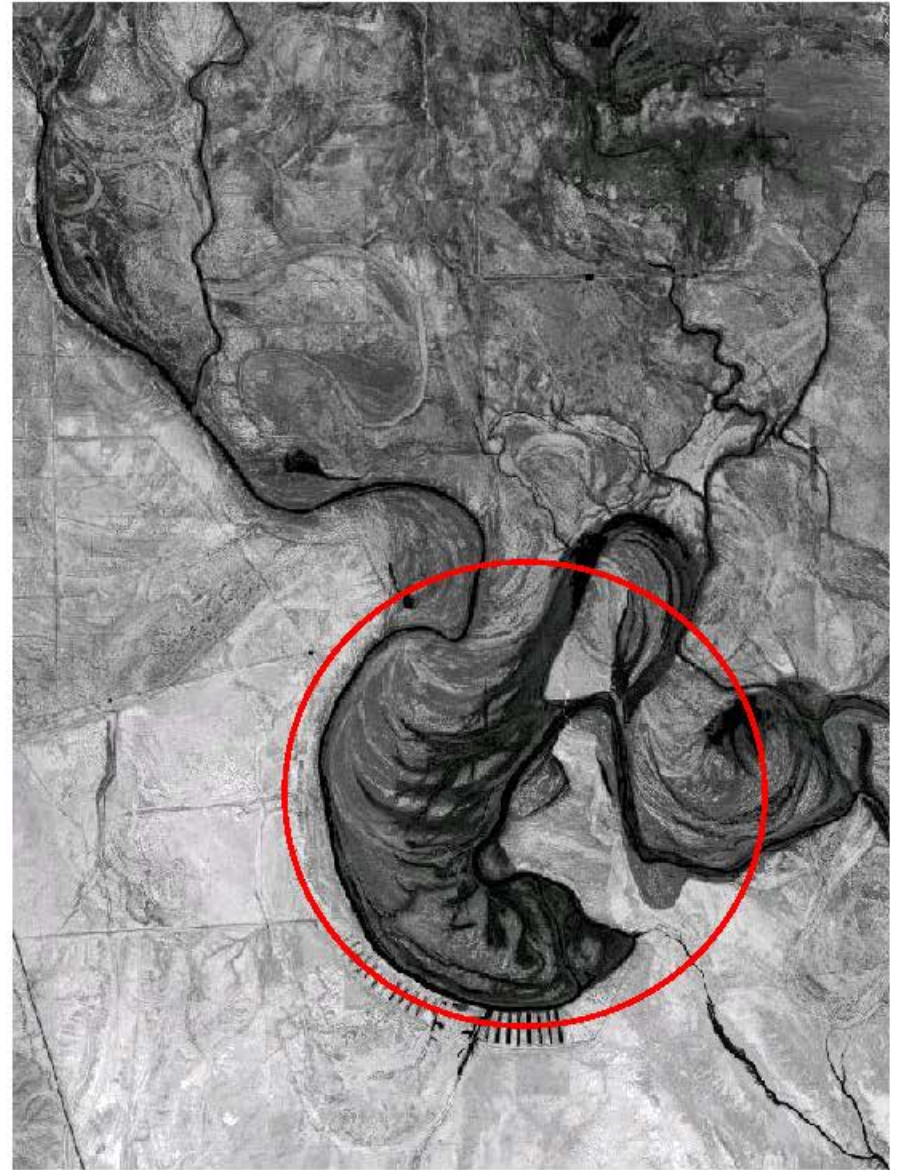


Results to date Hardy River

- Planted native trees in a total of 36 acres in 7 sites
- Inundated about 2,500 acres, which are in process of becoming marsh wetlands



Results to date Hardy River



Hardy River is very important for local people



Extremely important for the Cucapá Tribe in Mexico



Campo Ramona



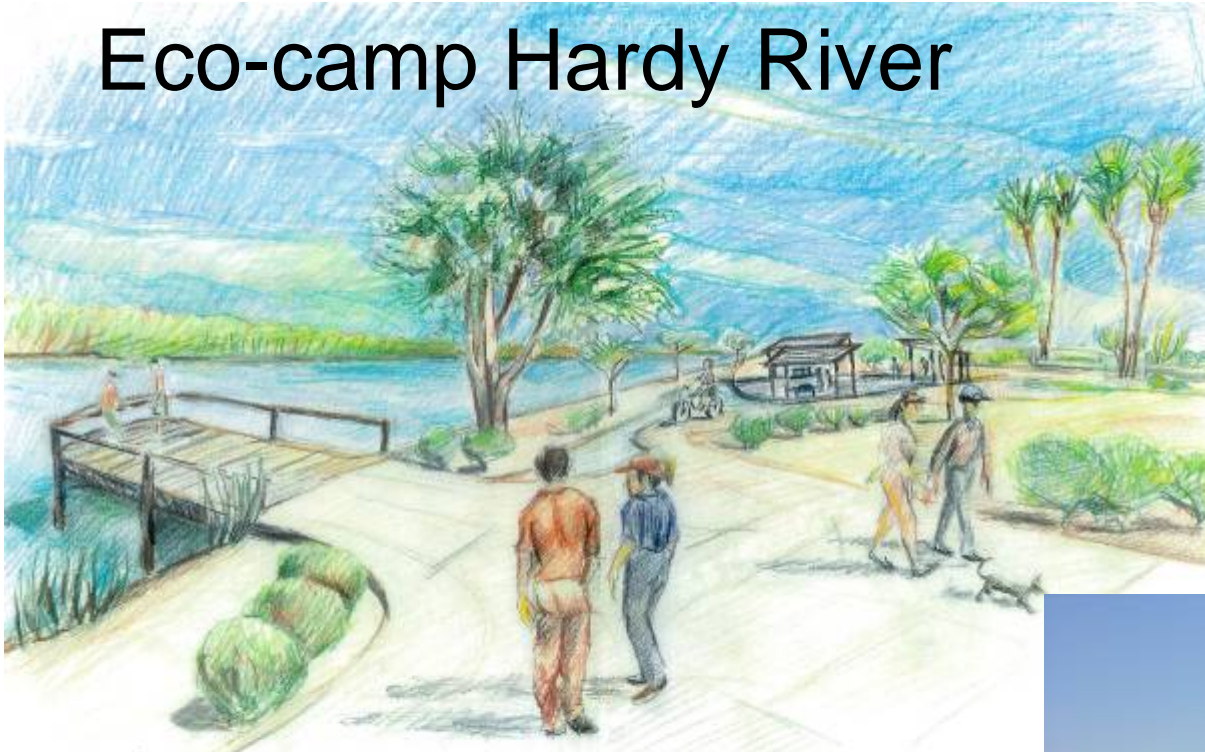
Campo Munoz



Campo Mosqueda



Eco-camp Hardy River



Local  students



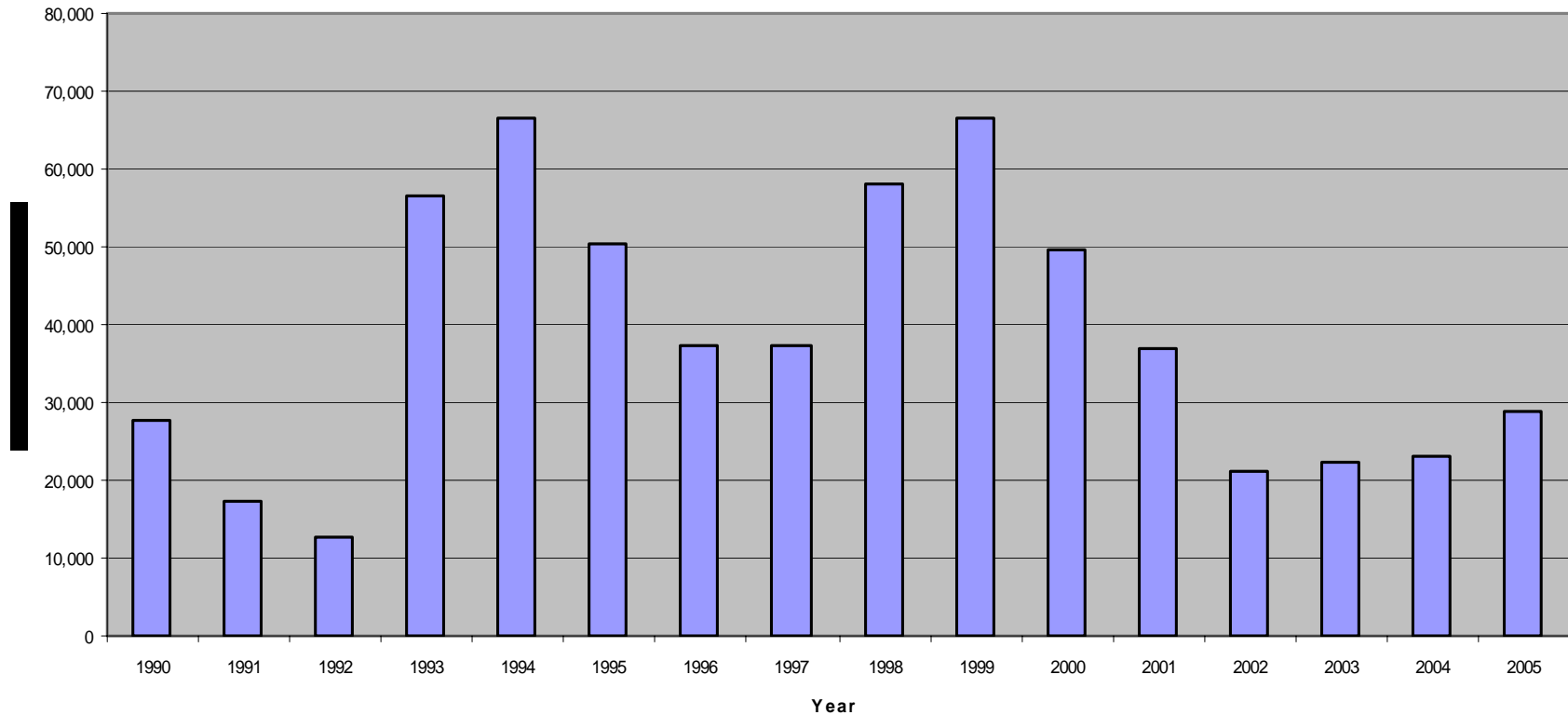
 Law students from
New College

Native tree nursery
built in 2002,
rehabilitated in 2006:
produced 5,000+
trees



Water and land policy – Hardy River

Total drainage water flows into Hardy River



Annual average flow of 21,000 acre feet at 0.9 cubic meters/s

Average salinity 3-5 parts per thousand

How to secure a permanent flow to the Hardy River?

The State of Baja California signed an agreement to dedicate 0.5 cubic meters/second of treated water



Mini-Estuary Experiment

- Dr. Karl Flessa from the University of Arizona is leading the project to explore if a portion of the estuary can be restored with limited water supply.

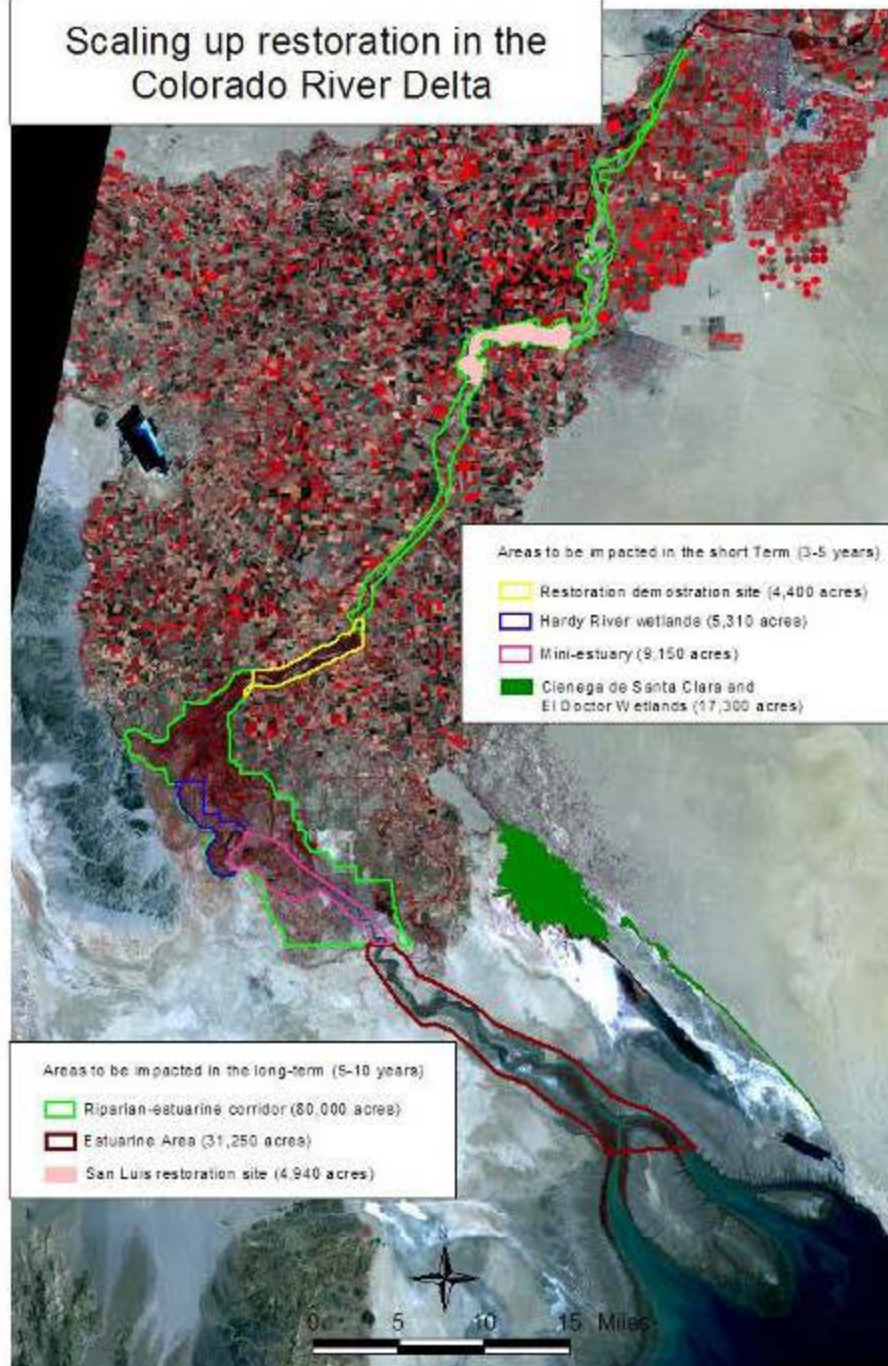




Initial workshop and field trip in may 2007



Scaling up restoration in the Colorado River Delta



Challenges

- Water quantity
- Water quality
- Funding for research, monitoring, implementation
- Lack of data vs decision making
- Impacts of climate change:
 - Drought
 - Sea level rise

Conclusions

- Restoration allows the environment itself to become more resilient in the face of climate change or human impacts.
- Modest amounts of water from Mexico would produce ecologically significant riparian corridors
- It is feasible and recommendable to implement pilot/demonstration projects while developing a detailed large-scale restoration strategy.

Take –home messages:

- Large-scale restoration of the Delta in Mexico is feasible and cost-effective,
- It requires relatively modest water flows, strong collaboration at different levels, a solid community-based foundation, and proper management



But also heart and passion



A photograph of a sunset over a body of water. The sky is filled with vibrant orange and red clouds, reflecting on the calm water below. The silhouettes of trees and land are visible in the background. The word "Gracias!" is written in a yellow, sans-serif font in the upper left quadrant.

Gracias!

Thank you !