



# WWF in the Chihuahuan Desert Ecoregion Mexico and USA

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Shared Heritage, Shared Stewardship  
Connecting Sister Parks in the US and Mexico  
Grand Canyon National Park, Arizona  
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# Overview

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1. Overview of what WWF is doing in Mexico; and
2. Explore ways WWF could collaborate with existing and potential new U.S.-Mexican Sister Parks.





# WWF`s Mission

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*“To conserve the natural environment and ecological processes worldwide”*

By

~ Preserving genetic, species and ecosystem diversity;

~ Ensuring the sustainable use of renewable natural resources;

~ Promoting actions to reduce pollution and the wasteful exploitation and consumption of resources and energy





# WWF's Strategies and Campaigns

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## A. Forest for Life

1. Establish an ecologically representative network of protected and effectively managed areas
2. Promote sustainable forest management outside protected areas

## B. Freshwater for Nature and People

1. Demonstrate sustainable approaches to water management which balance long-term human uses and conservation
2. Increase the area of freshwater ecosystems committed for protection, restoration and effective mgmt.

## C. Endangered Seas

1. Introduce measures to ensure sustainable fishing
  - a. Establish effective MPAs
  - b. Reduce subsidies that promote overfishing
  - c. Create incentives for sustainable fishing





# WWF's Strategies and Campaigns

/Cont.

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## D. Species

The conservation of viable populations of selected species of special concern (including. Jaguar, great whales, marine turtles, cactus family).

## E. Toxics

End threats to biodiversity by toxic chemicals

## F. Climate Change

Achieve substantial reductions in emissions of carbon dioxide





# Selection of milestones WWF in (Northern) Mexico

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- 1968** Mexico becomes a priority country for WWF. Species assessment, Grizzly bears
- 1982** Monarch Butterfly research and protected areas
- 1993** WWF establishes the Mexico program office
- 1994** Chihuahuan Desert Program is established as a binational initiative
- 1998** WWF-TNC-Pronatura+, Biological Assessment of Ch D
- 2002** WWF-Profauna-FMCN, Initiative for voluntary payment of water environmental services (Coahuila)
- 2002** WWF-TNC-PronaturaNE, Mexican Prairie Dog PA
- 2003** CONANP-NPS-WWF, Big Bend collaborative initiative
- 2004** WWF-TNC-Pronatura+ Ecoregional assessment for the Chihuahuan desert
- 2007** ECOPAD

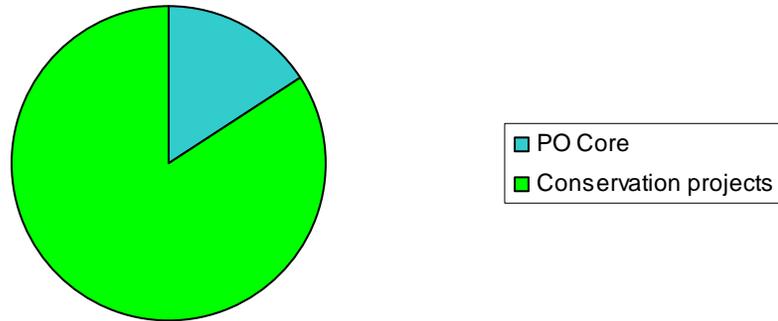




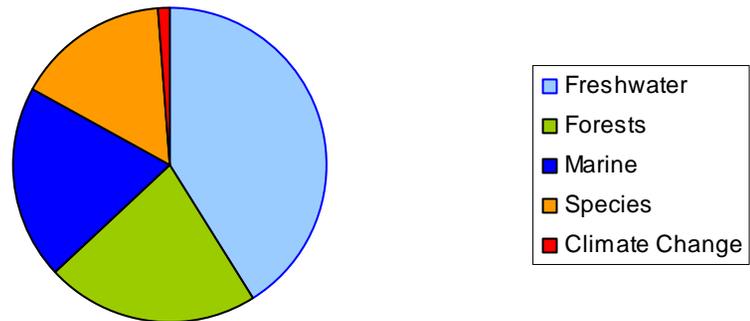
# WWF Mexico Programs and resource allocation



Overall Expenditure 2006

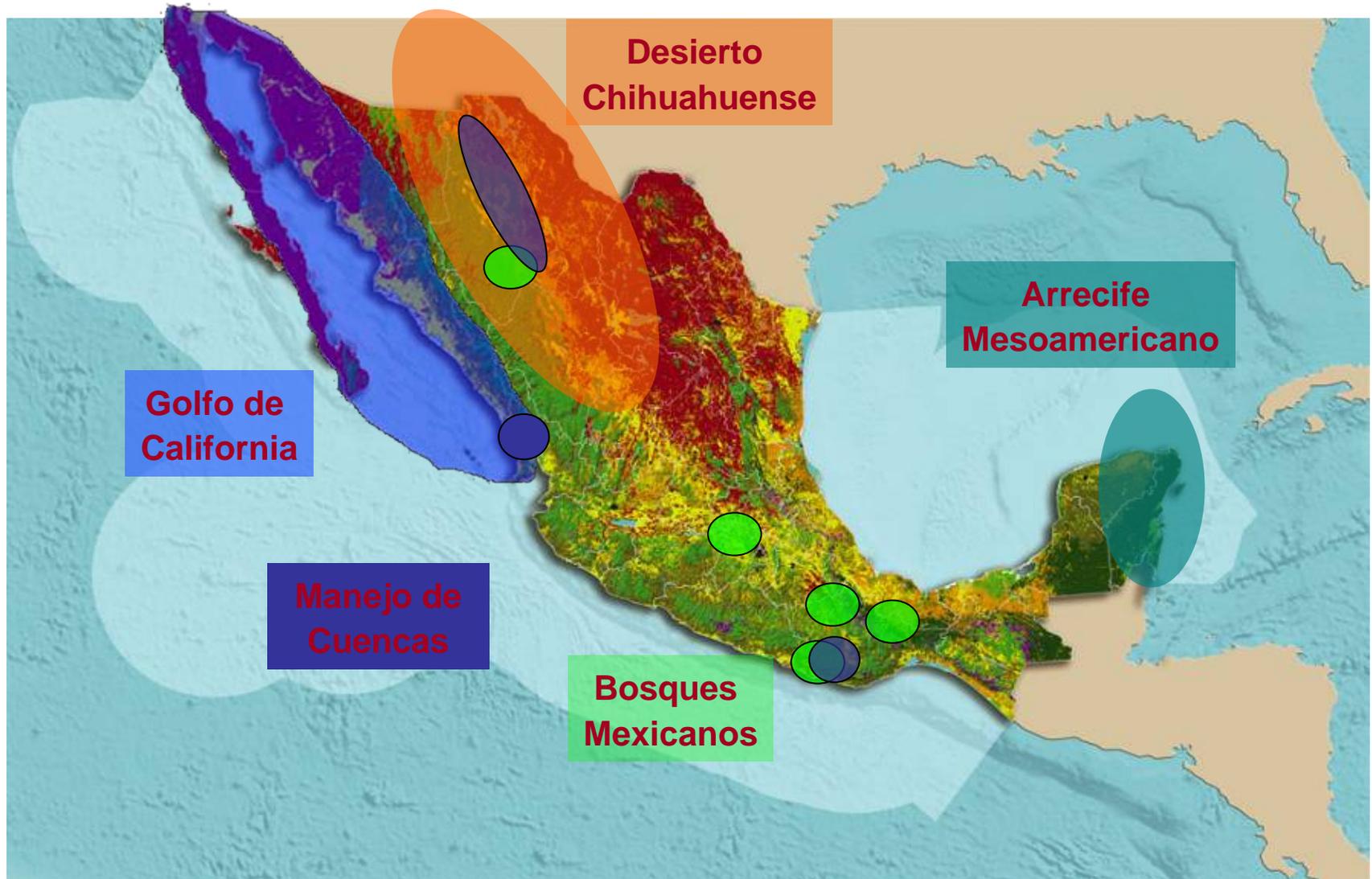


Conservation expenditures 2007





## *Ecoregions and thematic programs*





# WWF Mexico: Roles

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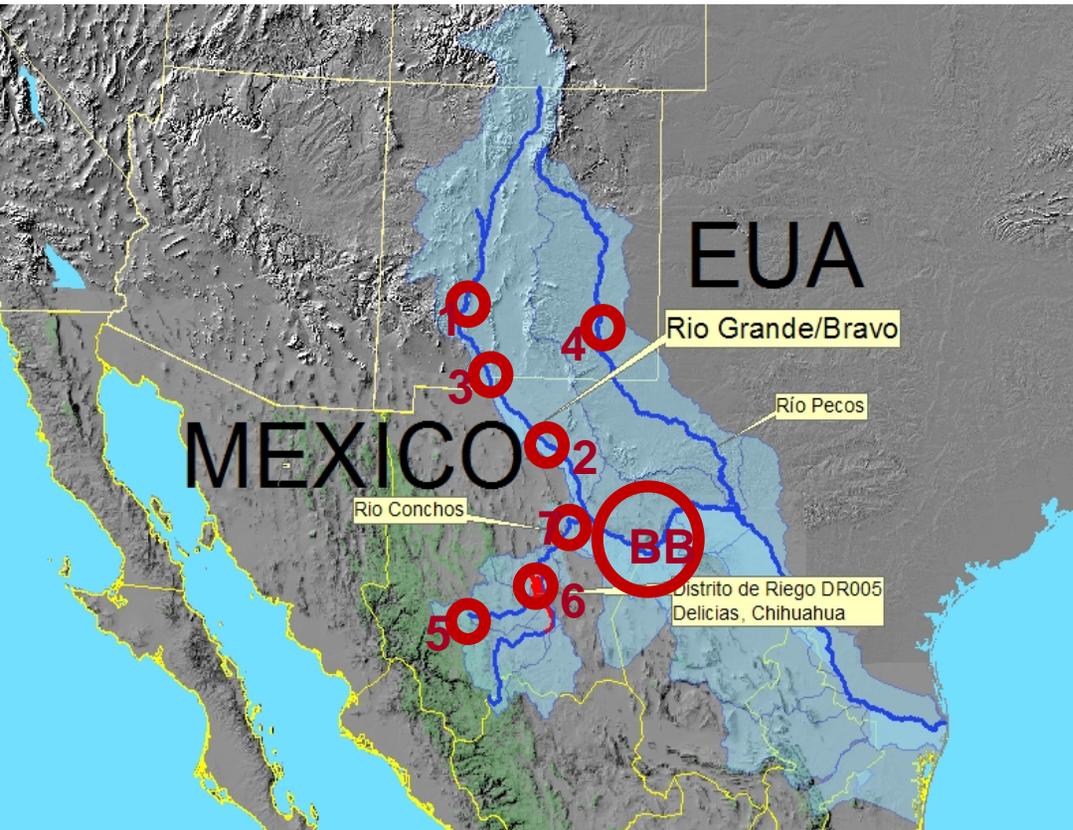
- Multisectorial convener and facilitator
- Technical advisor
- Financial support
- Advocacy and power broker





# The String of Pearls

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1. Elephant Butte Reach
  2. Esperanza Binational Wetland
  3. Rio Bosque Wetlands Park
  4. Bitter Lake National Wildlife Refuge on the Pecos River
  5. Cuenca alta del Conchos (Ejido Panalachi, Sierra Tarahumara)
  6. Julimes (Manantial el Pandeño)
  7. Cañón del Pegüis
- ✿ Complejo Big Bend/Santa Elena

- Ley Nacional de Aguas
- Leyes estatales
- Políticas Públicas
- Regulaciones eficaces
- Sistemas plurales representativos

**Políticas y legislación**

**Qué hacer**

**Asignación  
óptima del  
recurso H2O**

**Cómo lograrlo**

**Estrategias de manejo**

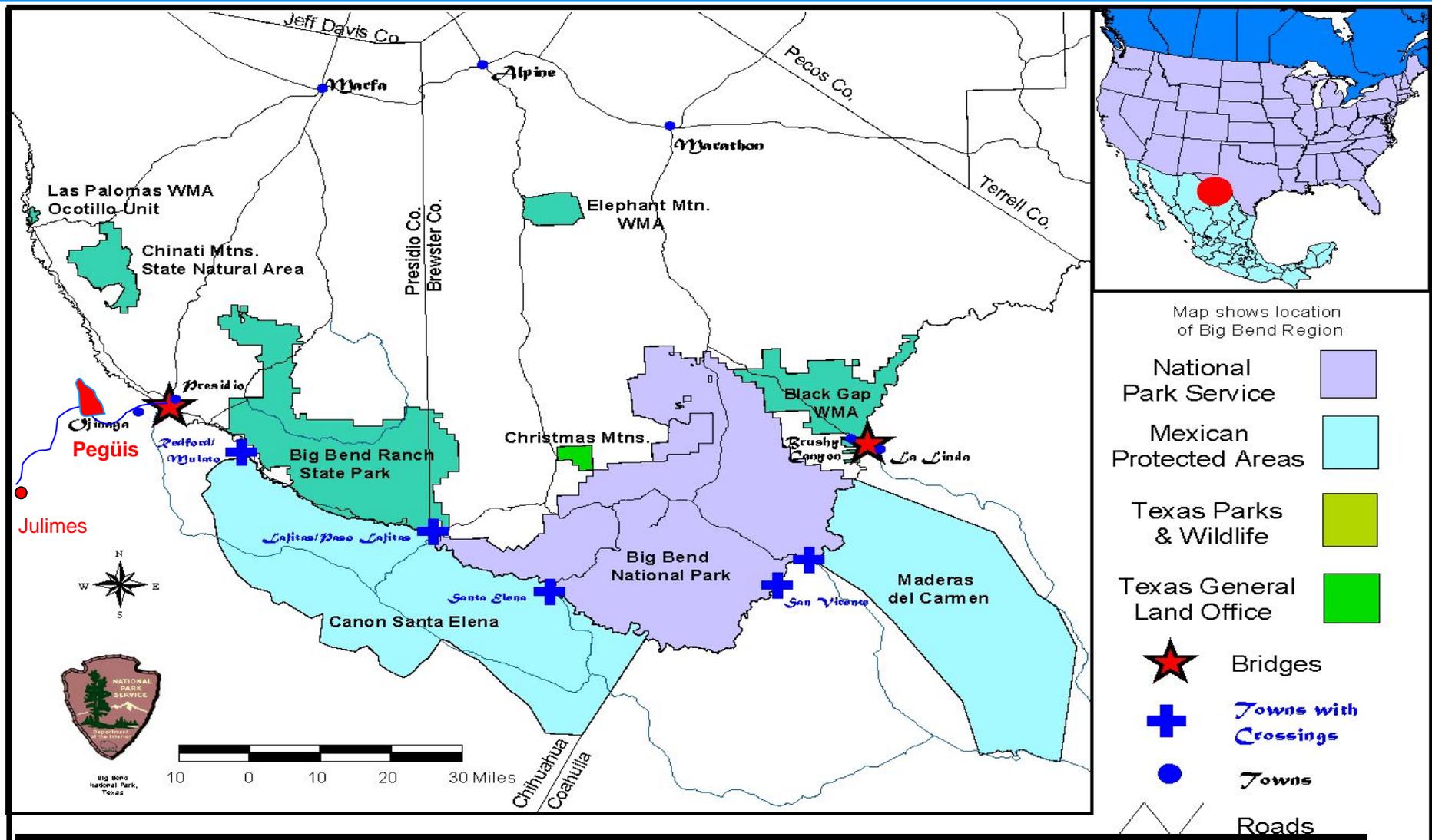
**Capacidad Institucional**

**Manejo adaptativo**

**Determinación de los caudales ecológicos**  
**Monitoreo (disponibilidad y uso)**  
**Modelación, valuación de riesgos y generación de escenarios (argumentos)**  
**Sistema de otorgamiento de derechos y concesiones**  
**Precios y Mercados**  
**Proyectos demostrativos**  
**Información, monitoreo y evaluación**

**Organización y capacidad operativa**  
**Capacidad financiera**  
**Infraestructura y Recursos Humanos**  
**Participación y representatividad/ legitimidad**  
**Gobernanza adecuada**  
**Capacidad técnico-administrativa**  
**Organismos de cuenca**

# Complex of Protected Areas



## Trans-Border Corridor

# What is the problem?

Impounded and Over-allocated

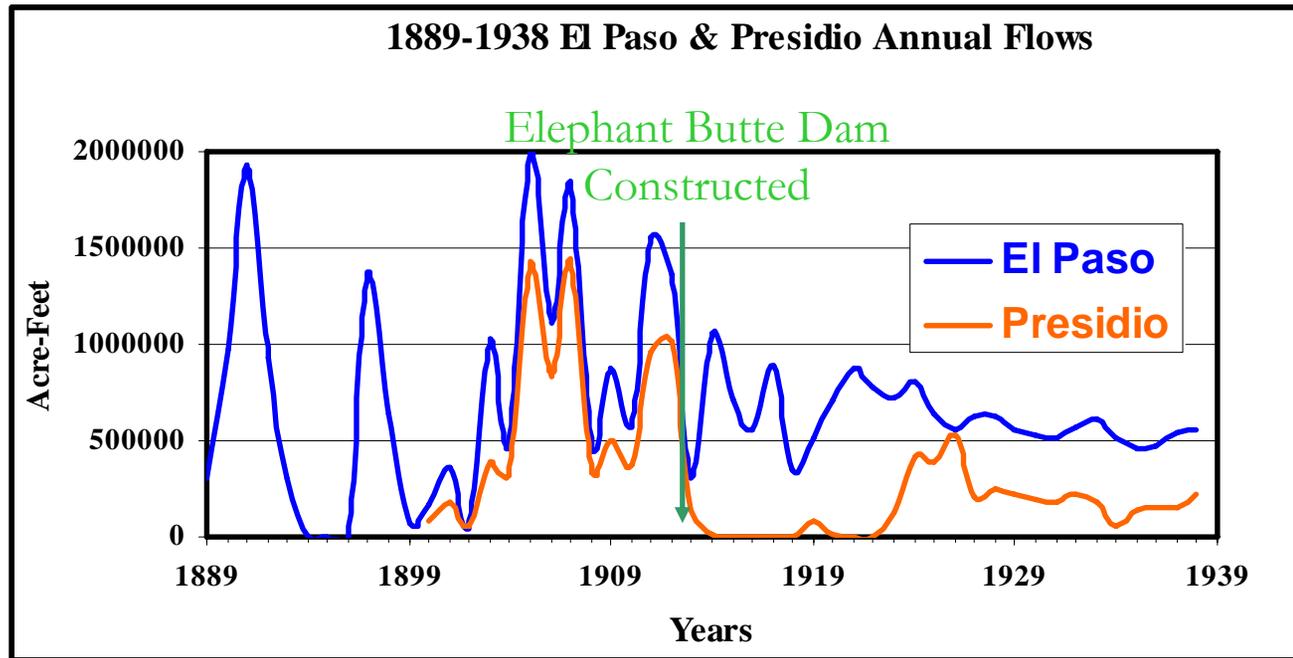
Significant Changes in Hydrologic Characteristics

Significant Changes in Channel Morphology

Significant Biologic Change



# Hydrological effect of dams, annual flows



Increased Elevation Difference Between  
Floodplain and Channel Bed





# Biological changes

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- Seven native fish extirpated;
- Of the remaining native fish, one is listed as federally endangered and two others are listed as species of concern;
- Five Rio Grande mussel species have not been documented since the 1970s;
- Significant decline in the extent and distribution of native bottomland plants;
- Significant increase in the extent and distribution in non-native, invasive plants.



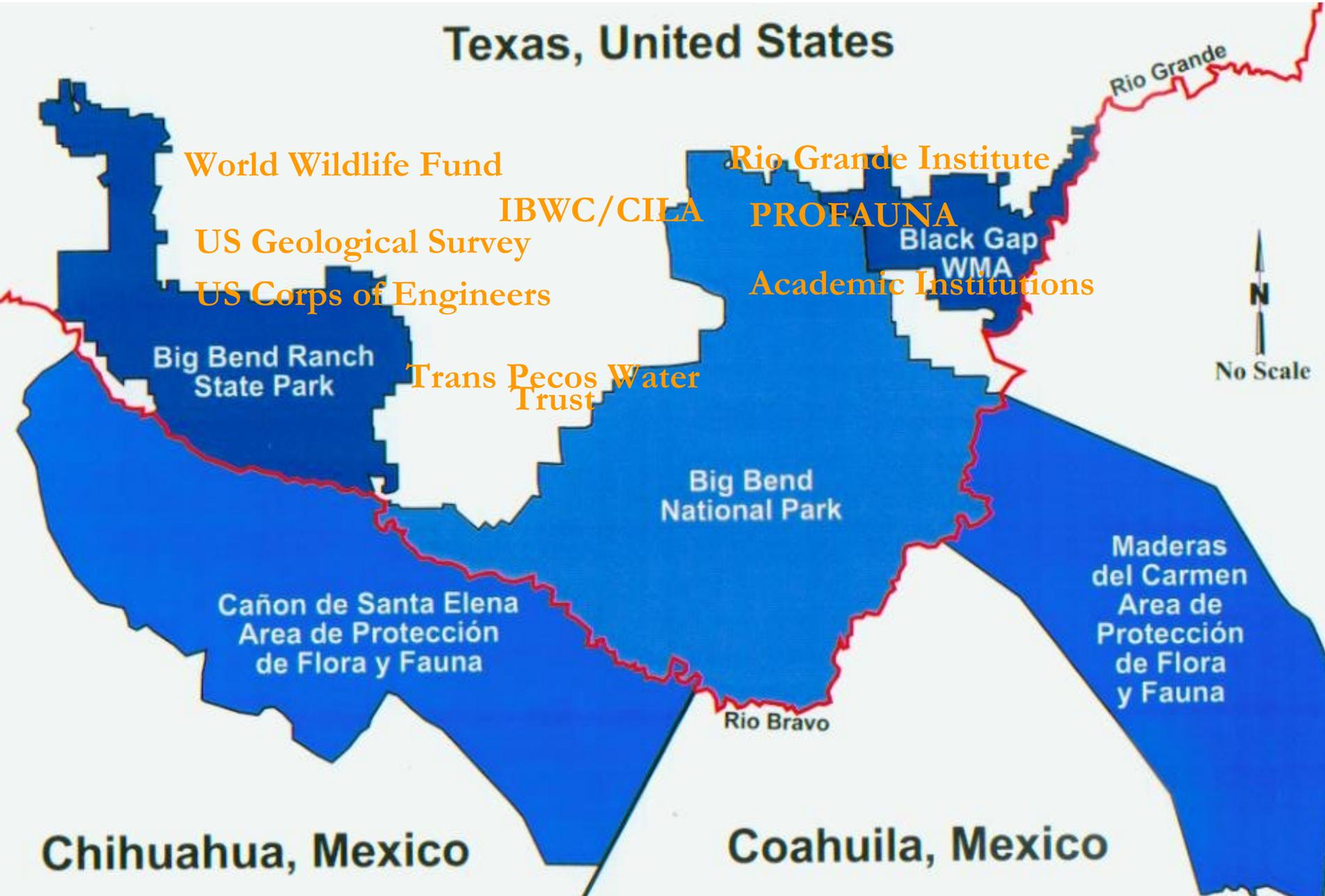


Dense monotypic stands of saltcedar are a manifestation of altered hydrologic conditions

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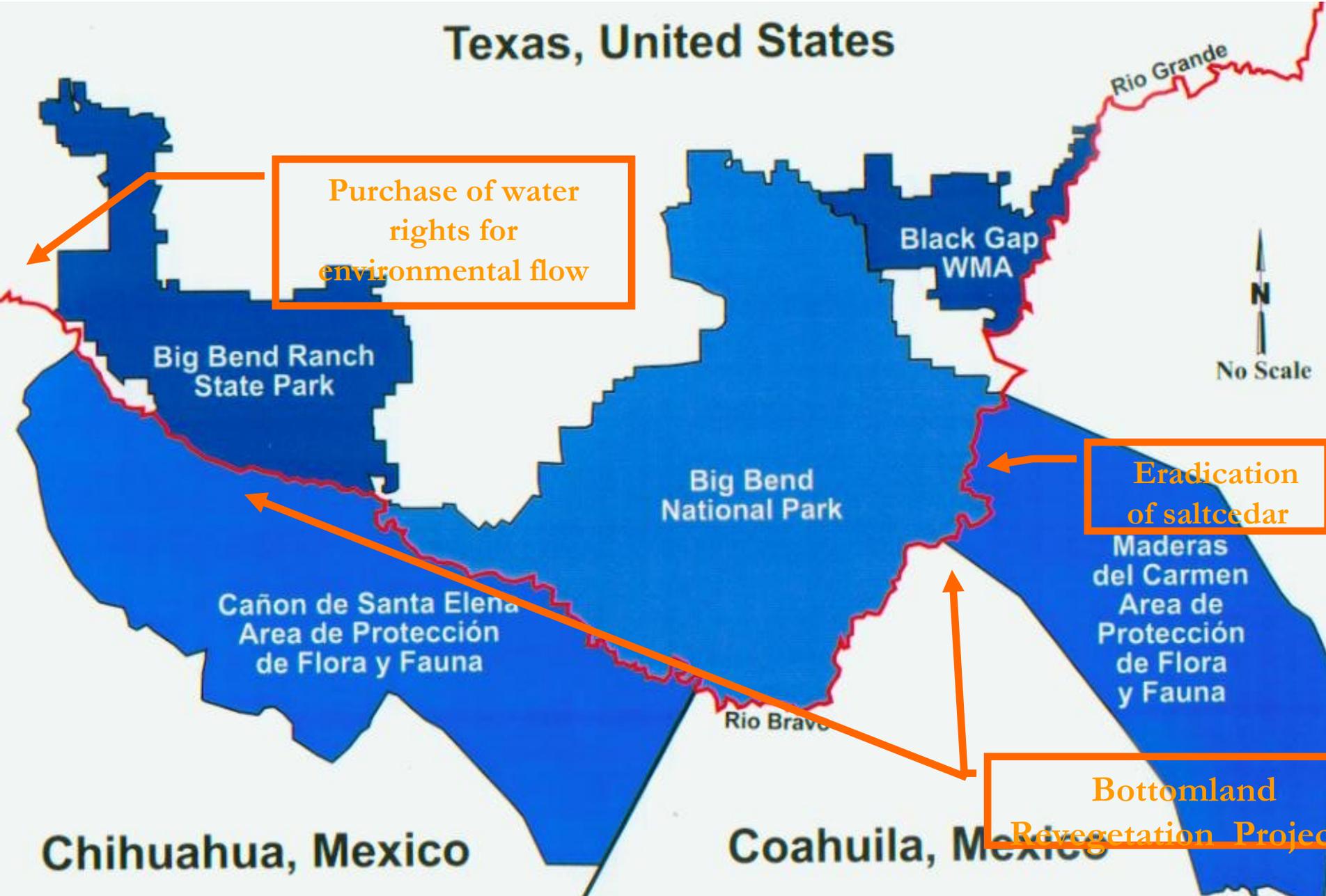


# Addressing the Problem: Formation of a Bi-National Team



# Three Major Efforts Underway

## Texas, United States





# Step 1. Giant reed was burned

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# Step 2: Herbicide applied to both saltcedar and giant reed

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# Step 3: Individual plant sites augered

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# Step 4: Native Plant restoration





# Pre- and Post Treatment



A person wearing a light-colored hat and a plaid shirt stands in a field of tall, green grass and shrubs. The background features a rocky, arid hillside under a clear sky. The text "Step 5. Monitoring and Maintenance" is overlaid in white on the lower half of the image.

## Step 5. Monitoring and Maintenance



# Conclusions and next steps

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The results (at Big Bend) show that the projects are effective, actions were set into motion to create the infrastructure that could create the likelihood of institutionalization and have a positive but short term impact.

2007 Independent 5yr evaluation





# Opportunities and Challenges

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- Concentrate in key areas and simultaneously effectively address larger picture/landscape issues like water flow (Rio Grande water comes from Conchos river)
- Maintain momentum of initiatives
- Increase partnership with community and private sector PA initiatives

Next immediate steps in Big Bend Region

- Workshop to take stock of last five years and develop new agenda for river restoration
- Develop a common agenda among public and private protected areas in the Big Bend Region



# Kinship tools and experiences

WWF-TNC-Pronatura Ecoregional Plan  
and Biological assessment for Ch D  
NACAPs (CEC)

Burrowing Owl, Black tailed Prairie Dog,  
Ferruginous Hawk and Monarch Butterfly

GPCAs (CEC)

NAMPAN and B2B (CEC)

ECOPAD

[All available in www](#)



# Coda

## Chihuahuan desert grasslands

- RMBO/Profaua/CONABIO/TNC:
  - 20x20 km study sites
  - Between 2007 and 2008
  - 19/36 sites habitat modified or not accessible
- Chihuahuan desert grasslands are being lost at an accelerated pace...in Mexico and beyond