
A Framework for Effective Conservation Management of the Sonoran Desert in California



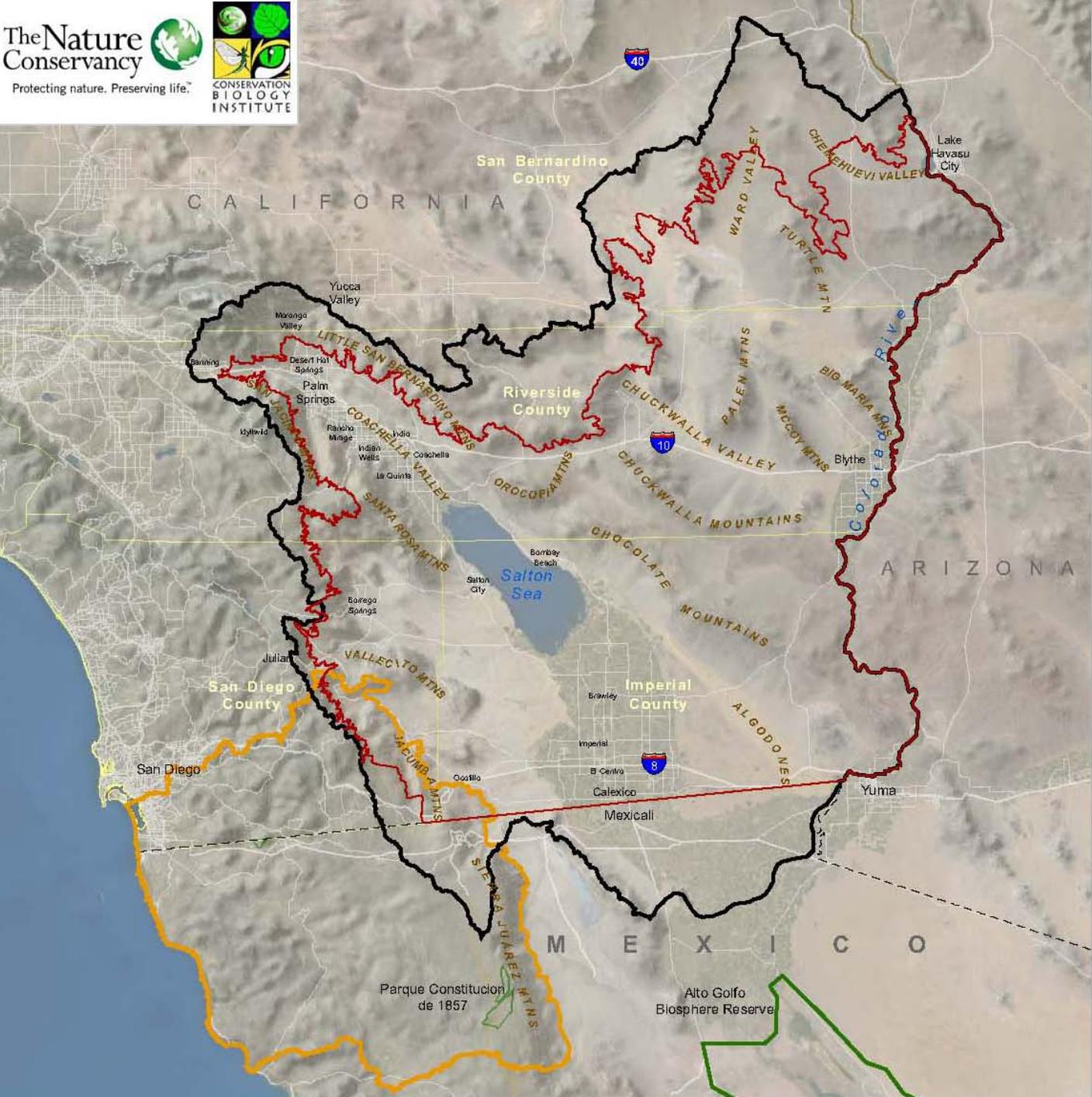


Project Objective

To assess, define, and prioritize conservation opportunities in the Sonoran Desert in California

SONORAN DESERT CALIFORNIA

Project Area



Project Area

-  Transboundary Study Area
-  Sonoran Ecoregion, California
-  Las Californias

Administrative

-  International Border
-  State Boundary
-  County Boundary



Sources:
 Imagery from ESRI, 2007
 Transboundary Study Area derived from CalWater 2.2 (U.S.) and SRTM elevation data (Mexico).
 Jepson Boundary from UC Davis, ICE, 1996.
 Las Californias Boundary from Las Californias Binational Conservation Initiative, 2005.

General Approach

- Describe the Conservation Landscape
 - Natural vegetation communities
 - Special desert elements
 - Landscape-scale ecological processes
 - Focal species
-

General Approach

- Describe the Conservation Landscape

- Natural vegetation communities
- Special desert elements
- Landscape-scale ecological processes
- Focal species

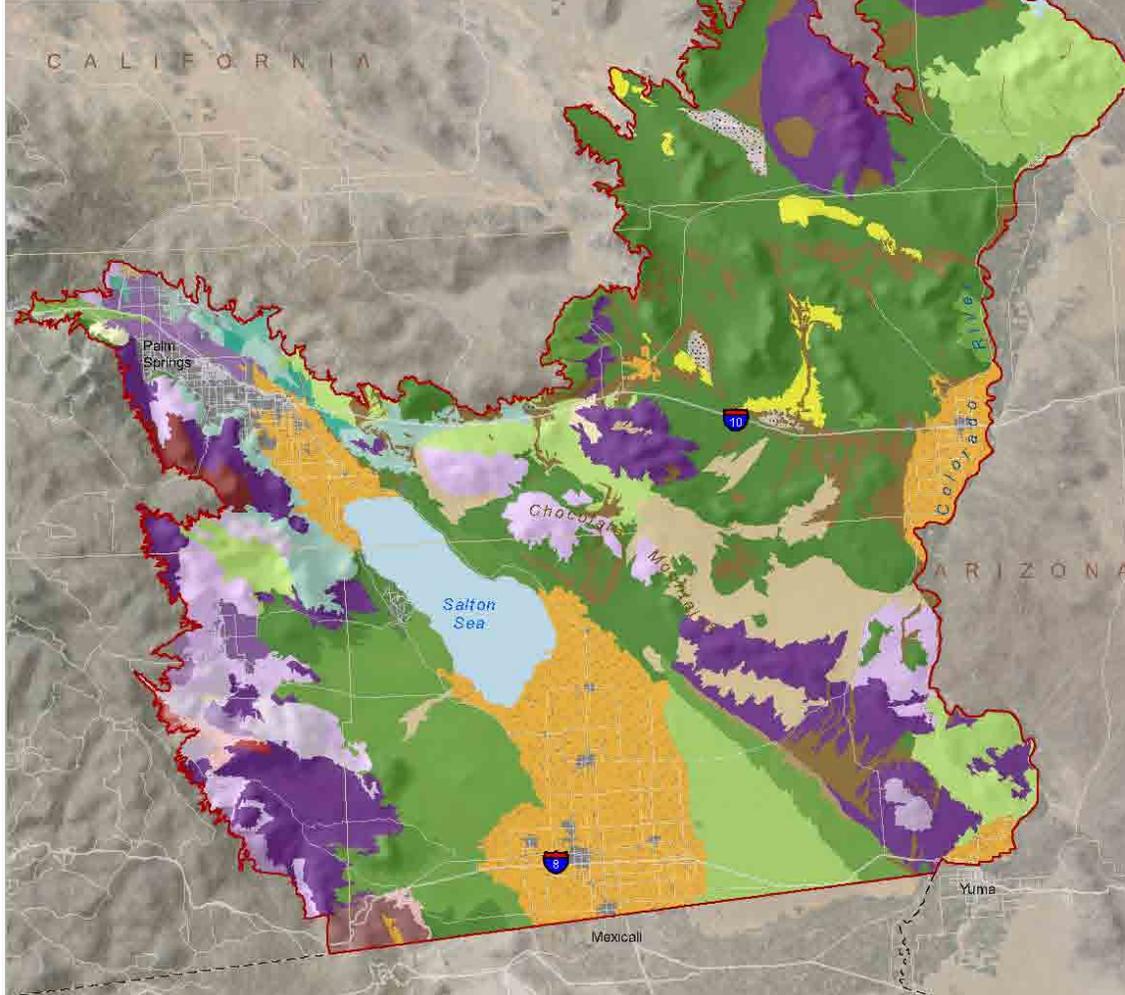


Conservation
Targets

General Approach

- Describe the Conservation Landscape
 - Natural vegetation communities
 - Special desert elements
 - Landscape-scale ecological processes
 - Focal species
 - Identify Conservation Needs
 - Describe current management and protective status
 - Describe and map conservation challenges and threats
 - Evaluate challenges and threats to conservation targets in relation to existing protective status
 - Identify and prioritize conservation opportunities
- } Conservation Targets
-

Natural Vegetation Communities



SONORAN DESERT CALIFORNIA Vegetation

Project Area

Ecoregional Boundary

Vegetation

Desert Dry Wash Woodland

- Desert Dry Wash Woodland with Chenopod Scrub
- with Desert Dunes
- with Mojave Creosote Bush Scrub
- with Sonoran Creosote Bush Scrub
- with Sonoran Desert Mixed Scrub

Mojave Creosote Bush Scrub

- Mojave Creosote Bush Scrub with Mixed Woody and Succulent Scrub
- with Sonoran Desert Mixed Scrub
- degraded

Mojavean Pinyon and Juniper Woodland

- with Semi-Desert Chaparral
- with Sonoran Desert Mixed Scrub

Peninsular Pinyon and Juniper Woodland

- Peninsular Pinyon and Juniper Woodland with Semi-Desert Chaparral
- with Sonoran Cottonwood-willow Riparian Forest
- with Sonoran Desert Mixed Scrub

Sonoran Creosote Bush Scrub

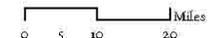
- Sonoran Creosote Bush Scrub with Desert Dry Wash Woodland
- with Desert Dunes
- with Desert Saltbush Scrub
- with Mojave Desert Scrub
- with Non-Native Grassland
- with Sonoran Desert Mixed Scrub
- degraded

Sonoran Desert Mixed Scrub

- Sonoran Desert Mixed Scrub with Mesquite Bosque
- with Mojave Desert Scrub
- with Mojavean Pinyon and Juniper Woodlands
- with Non-Native Grassland
- with Peninsular Pinyon and Juniper Woodland
- with Sonoran Creosote Bush Scrub
- degraded

Other

- Agricultural Land
- Alkali Playa
- Desert Dunes
- Non-Native Grassland
- Permanently-flooded Lacustrine Habitat
- Urban or Built-up Land



Sources:
Vegetation from GAP Land Cover 1998. Updated with GIS of D. Zorn

Special Elements

- Water related
 - Pupfish habitat
 - Ciénagas (alkali marshes)
 - Streams, washes, riparian systems
 - Desert ephemeral playas
 - Other
 - Palm oases
 - Saguaros
 - Mesquite bosques
 - Sand dunes (active, stabilized, partially stabilized)
-

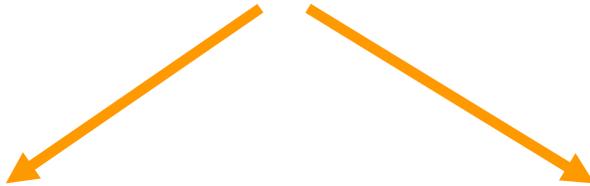
Landscape-scale Ecological Processes

- ❑ Watershed integrity
 - ❑ Connectivity
 - Connectivity among protected areas
 - Connectivity along elevational gradients
 - Connectivity to protected areas outside the study area
 - ❑ Eolian Processes and Sand Deposition
-

Focal Species (candidate list)

- Flat-tailed horned lizard
 - Desert tortoise
 - Bighorn sheep
 - Migratory birds of the Salton Sea
 - Least Bell's Vireo
 - Tripple-ribbed milkvetch
 - Peirson's milkvetch
-

Evaluation of Targets in Terms of....

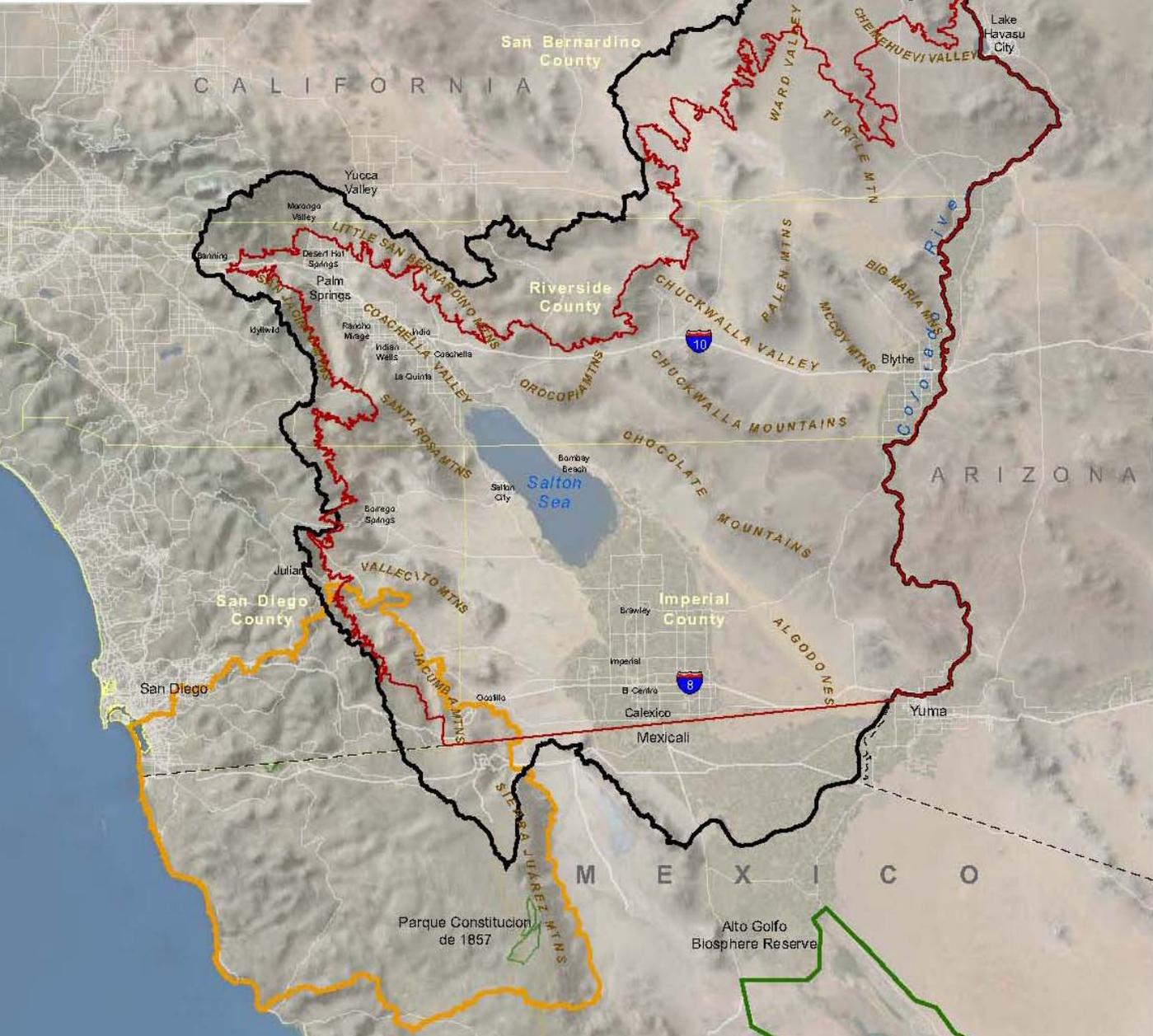


Threats & Challenges

- Land conversion & habitat fragmentation
- Land use impacts
- Invasive species
- Modified fire regimes
- Climate change

Existing Protection

- Land ownership
- Protective status
- On-the-ground management



Project Area

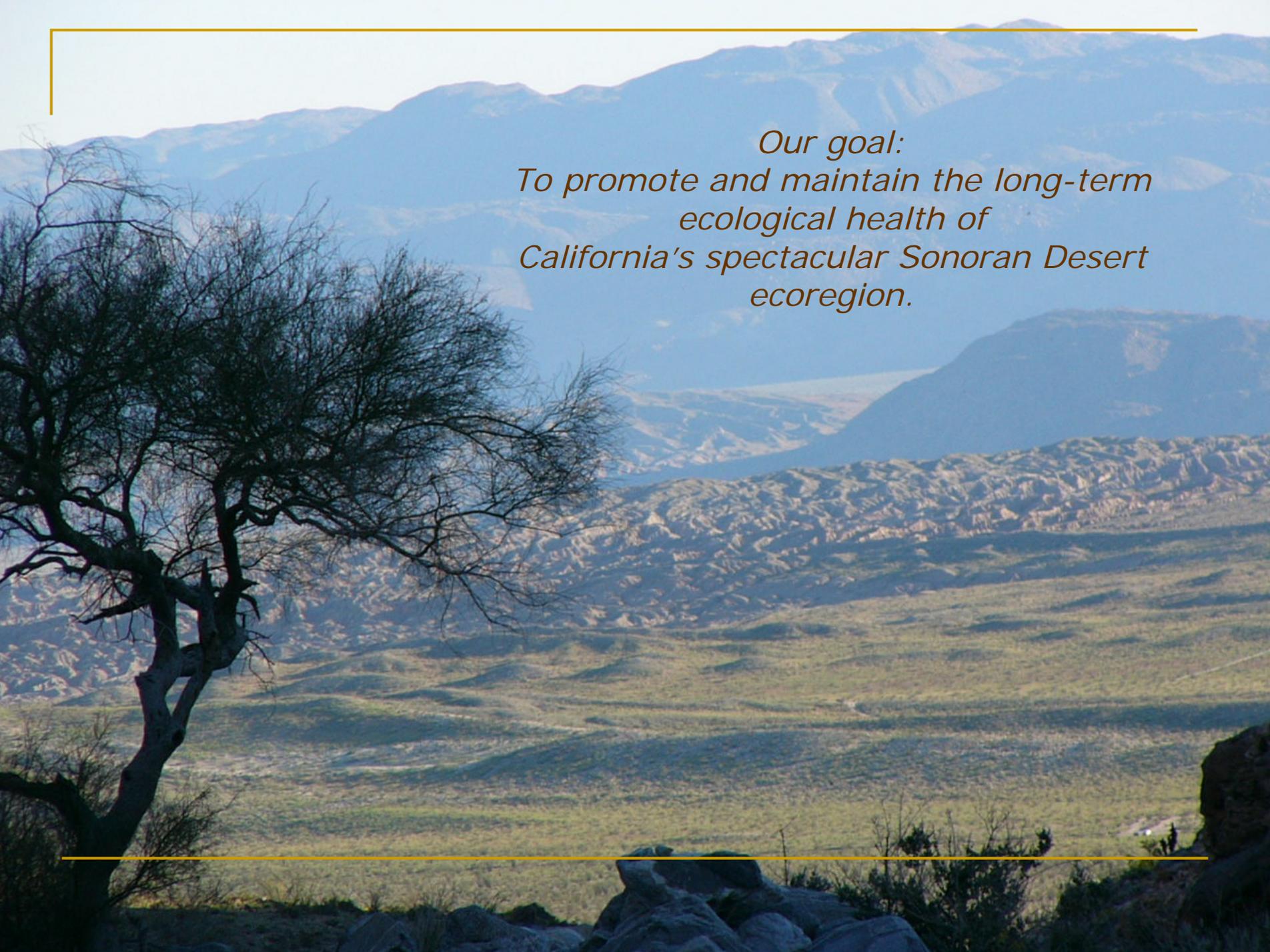
- Transboundary Study Area
- Sonoran Ecoregion, California
- Las Californias

Administrative

- International Border
- State Boundary
- County Boundary



Sources:
 Imagery from ESRI, 2007
 Transboundary Study Area derived from CalWater 2.2 (U.S.) and SRTM elevation data (Mexico).
 Jepson Boundary from UC Davis, ICE, 1996.
 Las Californias Boundary from Las Californias Binational Conservation Initiative, 2005



*Our goal:
To promote and maintain the long-term
ecological health of
California's spectacular Sonoran Desert
ecoregion.*