

# Gulf of California

## Developing a MPA Network

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CONSERVACION  
INTERNACIONAL

# A Unique Ecosystem



- Marine area  
38,782,015 ha
- Terrestrial area  
41,048,263 ha
- High primary  
Productivity  
two upwellings per year
- Coastal wetlands  
600,000 ha
- Mangroves  
256,000 ha
- 930 Islands
- Marine Habitat
  - Coral reef
  - Rocky reef
  - Soft sea beds
  - Seagrass beds
  - Hydrothermal vents

# Biological richness



**6,000 species of marine macro fauna**



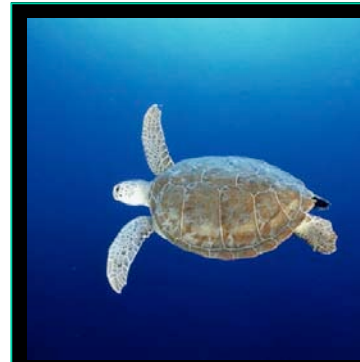
**891 fishes**



**34 marine mammals**



**181 seabirds**



**6 marine reptiles**



**4,853 macro-invertebrates**



**770 endemic species  
*Phocoena sinus* Vaquita  
*Totoaba macdonaldi***



**39 IUCN Red List**

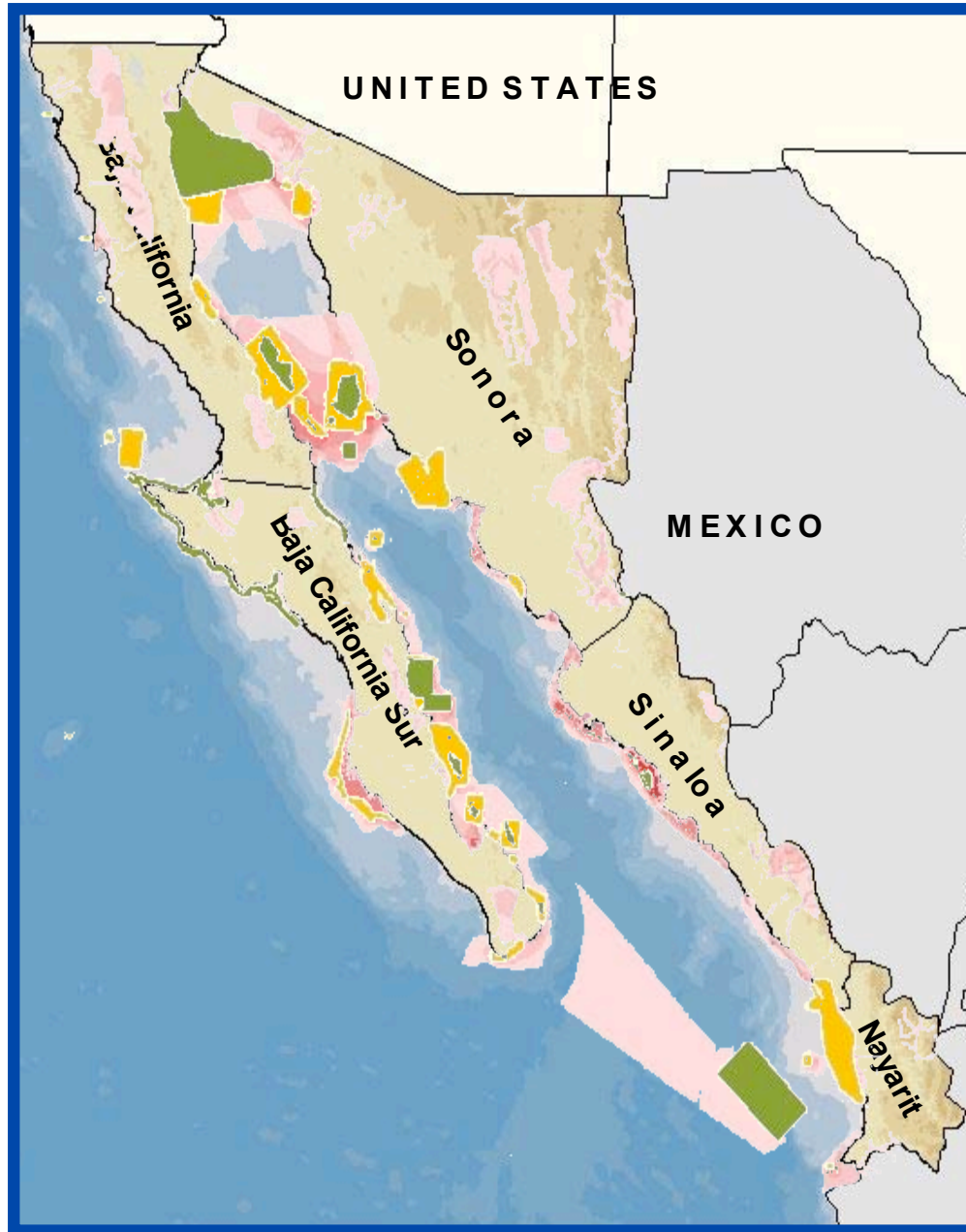
# Biological Importance



● Areas of Biological Importance

● Marine and Coastal Protected Areas, less than 4% and 0.004% is no-take zone

# Priority Areas for MPAs



**MPAs as biodiversity conservation tool.**

- Improved management of existing ones.
- Establish new MPAs

**MPA goal 10% Gulf's waters**

# How Guaranty Interconnectivity



Reserve Distance  
in a Network  
< 100 Km

Based on:

- Fish larval sources and nurseries protection.
- Larval dispersal.

Connectivity areas:

- Upper Gulf
- Midriff Islands
- Guaymas-Tortugas
- South Baja
- South Continental

# MPA's Monitoring and Evaluation

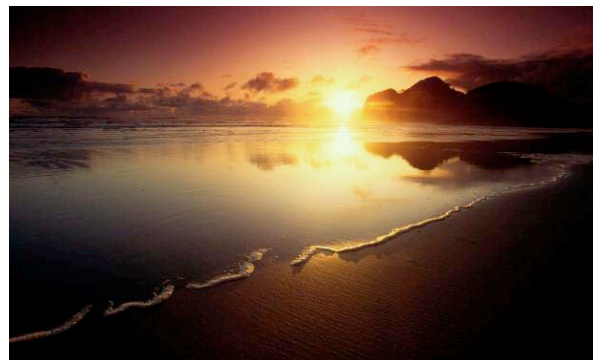


## Model developing in progress

- Definition of conservation goals.
- Modeling the effects of reserves .
- Monitoring frameworks.
- Evaluation of reserve efficacy.

## Model's expectations

- Useful and practical to decision makers.
- Outline how to assess management effectiveness, measure long-term trends in ecosystems, and evaluate economic impacts, community attitudes, and compliance.



## Model's products

- Handbook.
- Decision software.

# MPA Initiatives in Process



## Upper Gulf

- Soft sea beads -
- Vaquita refuge

## Midriff Islands

- Rocky reef -
- Bahia de los Angeles
- San Lorenzo Archipelago
- Bahia Kino

## Priority Wetlands

- Mangrove -
- Marismas Nacionales

## Southern Islands

- Coral reef -
- Espiritu Santo
- Islas Marietas

7.6 %  
Gulf's waters





# MPA's Challenges



**Marine  
Biodiversity  
Users**

**Small  
scale  
fishery**

**Shrimp  
trawling  
Sardine  
fishery**

**Sport Fishing**

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