# California Ocean Uses Atlas Project

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**National Marine Protected Areas Center**

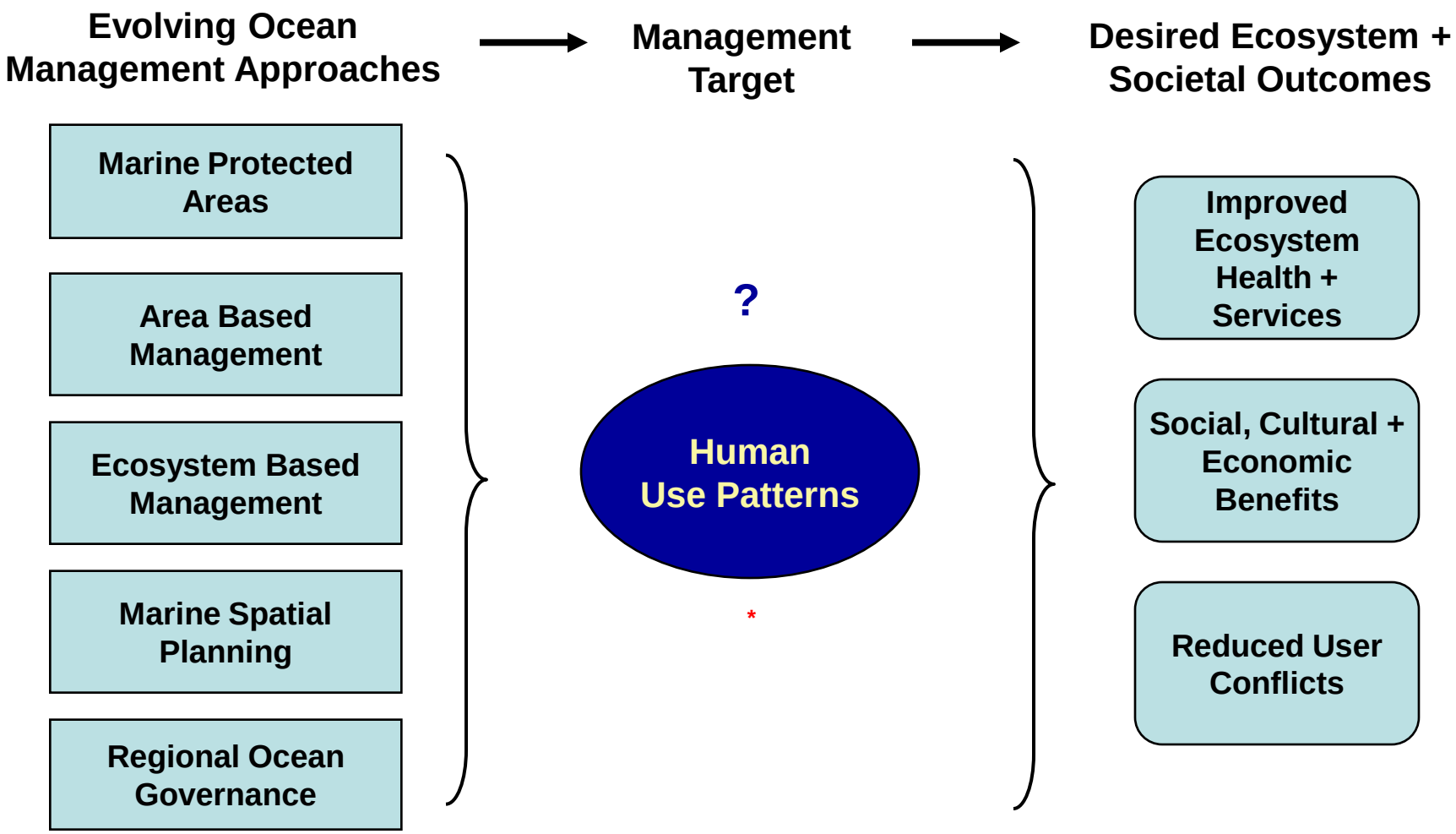
**Coastal Atlas Workshop**
**April 23, 2009**

Resources Legacy Fund Foundation

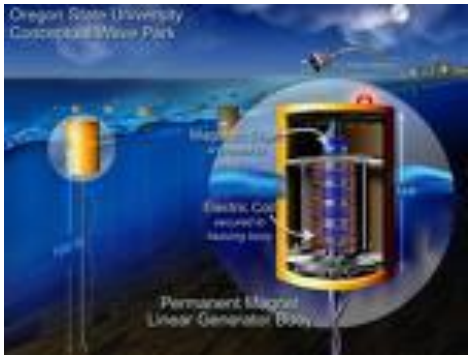
# Presentation Outline

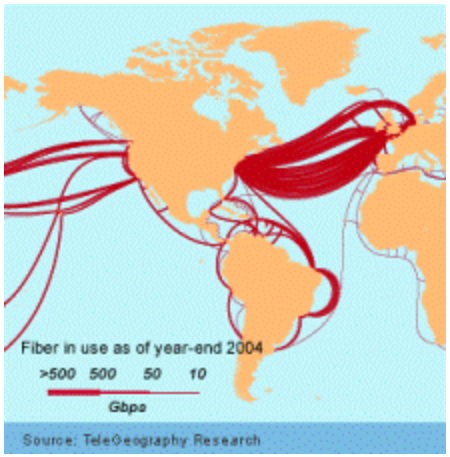
- Ocean Uses Atlas Rationale
- Project Design
  - Uses Mapped
  - Workshop Design
  - Tools Used
- Sample Products
- Next Steps

# We Manage the Ocean By Managing Ocean Uses



# How We Use the Ocean:
## *Industrial and Military Uses*





# How We Use the Ocean:
## *Fishing Uses*

# How We Use the Ocean: *Non-Consumptive Uses*

# Ocean Uses Mapped

**3 Themes Mapped For Each Use:**

- Maximum Use Footprint
- Dominant Use Areas
- Future Use Areas

**Non-Consumptive Sector (9)**

- Swimming
- Surface water sports
- Paddling
- SCUBA and snorkeling
- Motorized boating
- Sailing
- Tide pooling
- Beach use
- Wildlife viewing from charter boats

**Industrial – Military Sector (8)**

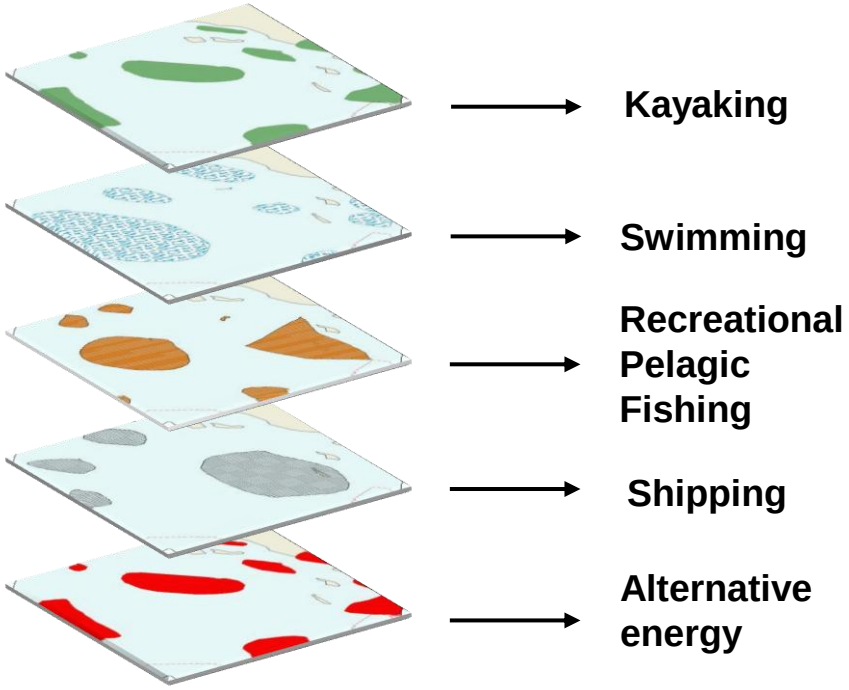
- Offshore oil and gas
- Offshore alternative energy
- Mining and mineral extraction
- Underwater cables
- Maritime shipping
- Cruise ships
- Military operations
- Aquaculture

**Fishing Sector (9)**

- Recreational fishing from boats
- Recreational fishing from shore
- Recreational dive fishing
- Kayak fishing
- Commercial pelagic fishing
- Commercial fishing w/ benthic fixed gear
- Commercial fishing w/ benthic mobile gear
- Commercial dive fishing
- Commercial algae harvesting

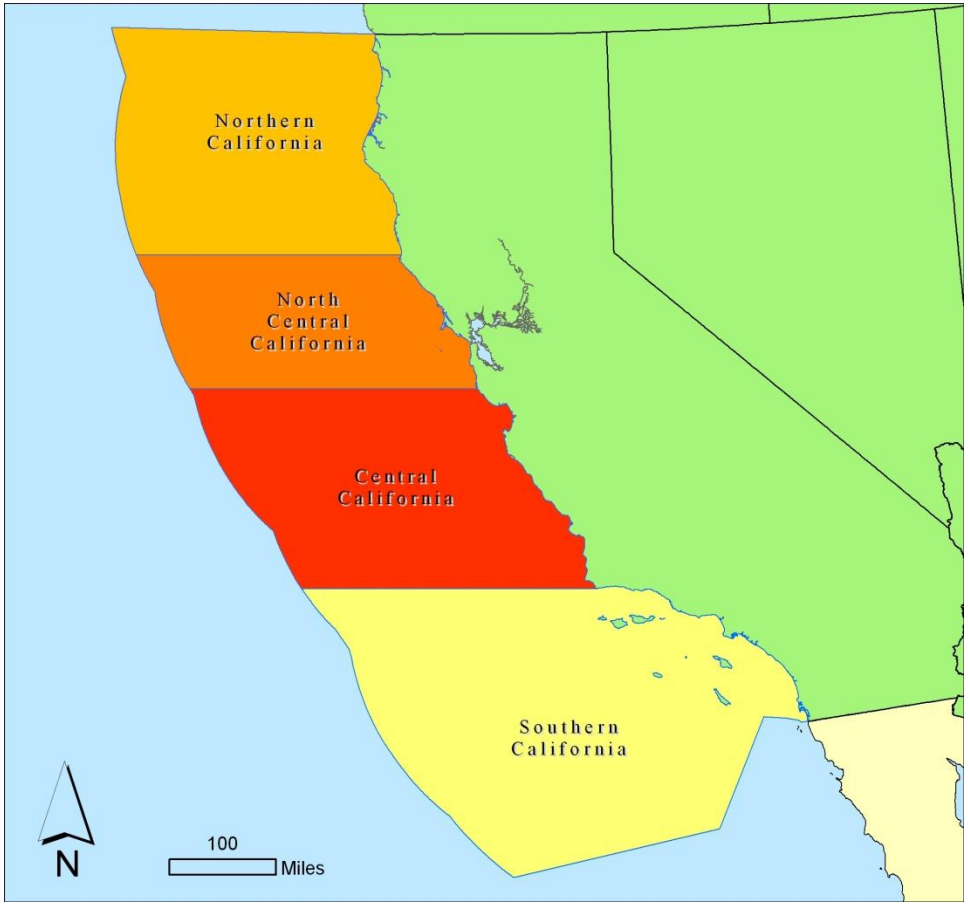
# Project Goal

- Map 30 identified uses with a methodology that allows for comparison among uses
  - Data source for all uses
  - Data precision
  - Mapping scale
- Conduct expert workshops to standardize data collection across disparate data types



# Project Design

- California divided into 4 regions
  - Southern (Sept. 2008)
  - Northern (Feb. 2009)
  - North Central (Apr. 2009)
  - Central (June 2009)
- Workshop held in each region
- Participants with expertise in many uses
  - Local, state and federal agency representatives
  - Lifeguards
  - Harbor Masters
  - Fishing group representatives
  - Others as recommended



# Workshop Design

- Participants divided into 3-4 groups based on expertise
- Groups are paired with a facilitator and GIS specialist
- Provided orientation to technology, basemap
- Give up the pen

# Workshop Requirements

Software

- ESRI ArcGIS 9.2
- ESRI ArcSketch 1.2 Extension

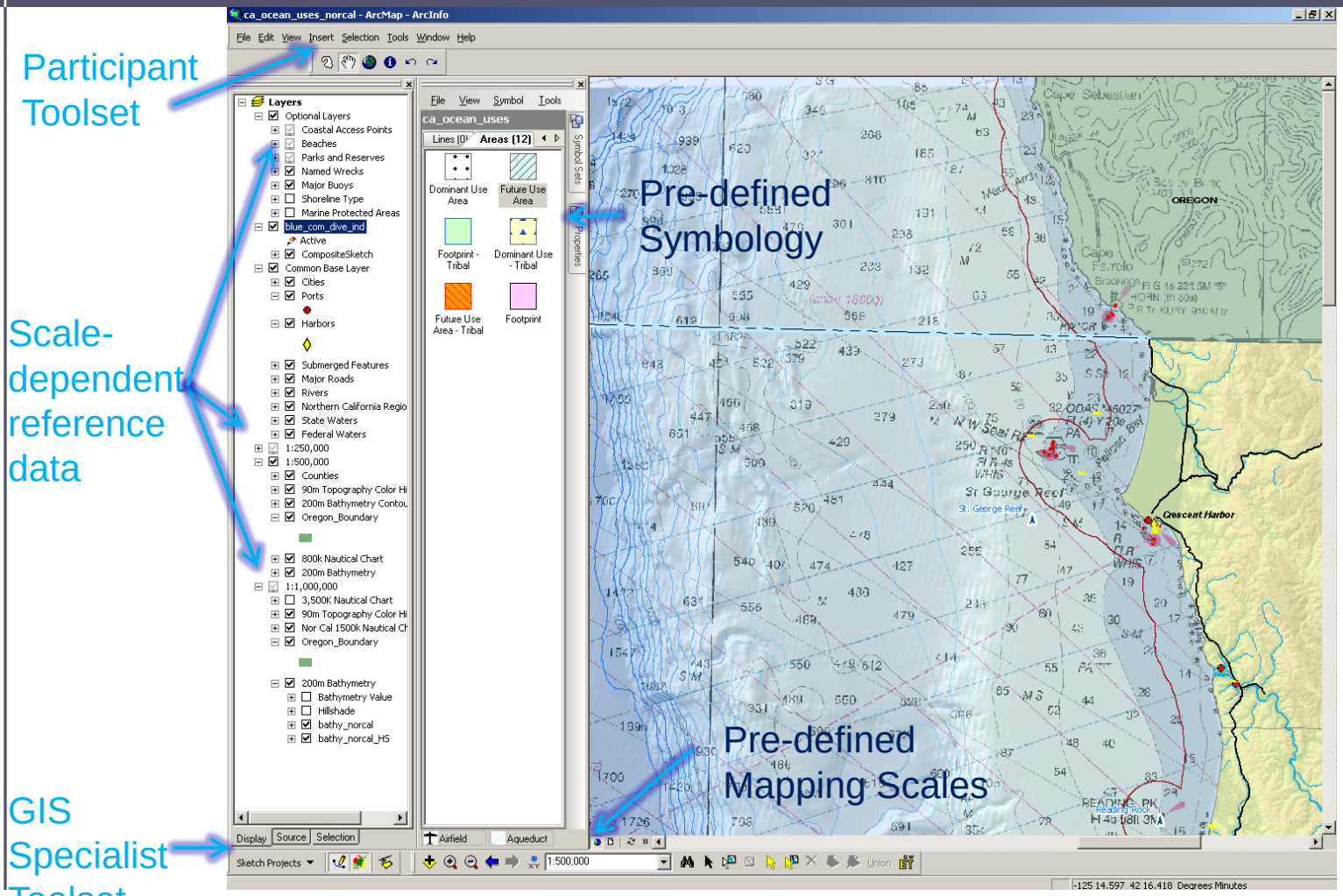
Hardware

- E-Beam Electronic Whiteboard
- Sympodium Digital Tablet

Data

- Basemap

# Workshop Basemap

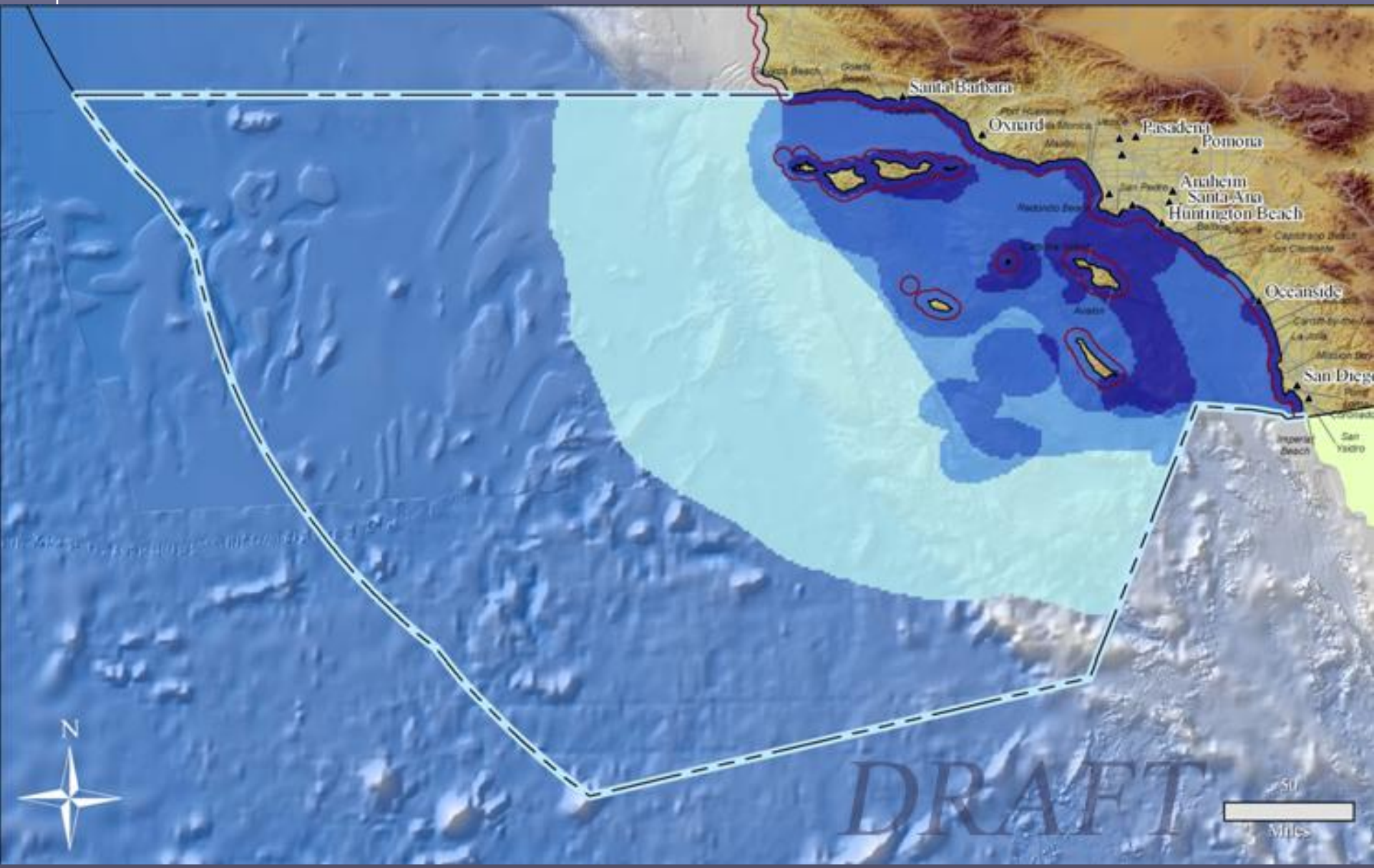


# Data Collection

Provide groups with sufficient information to orient to the basemap

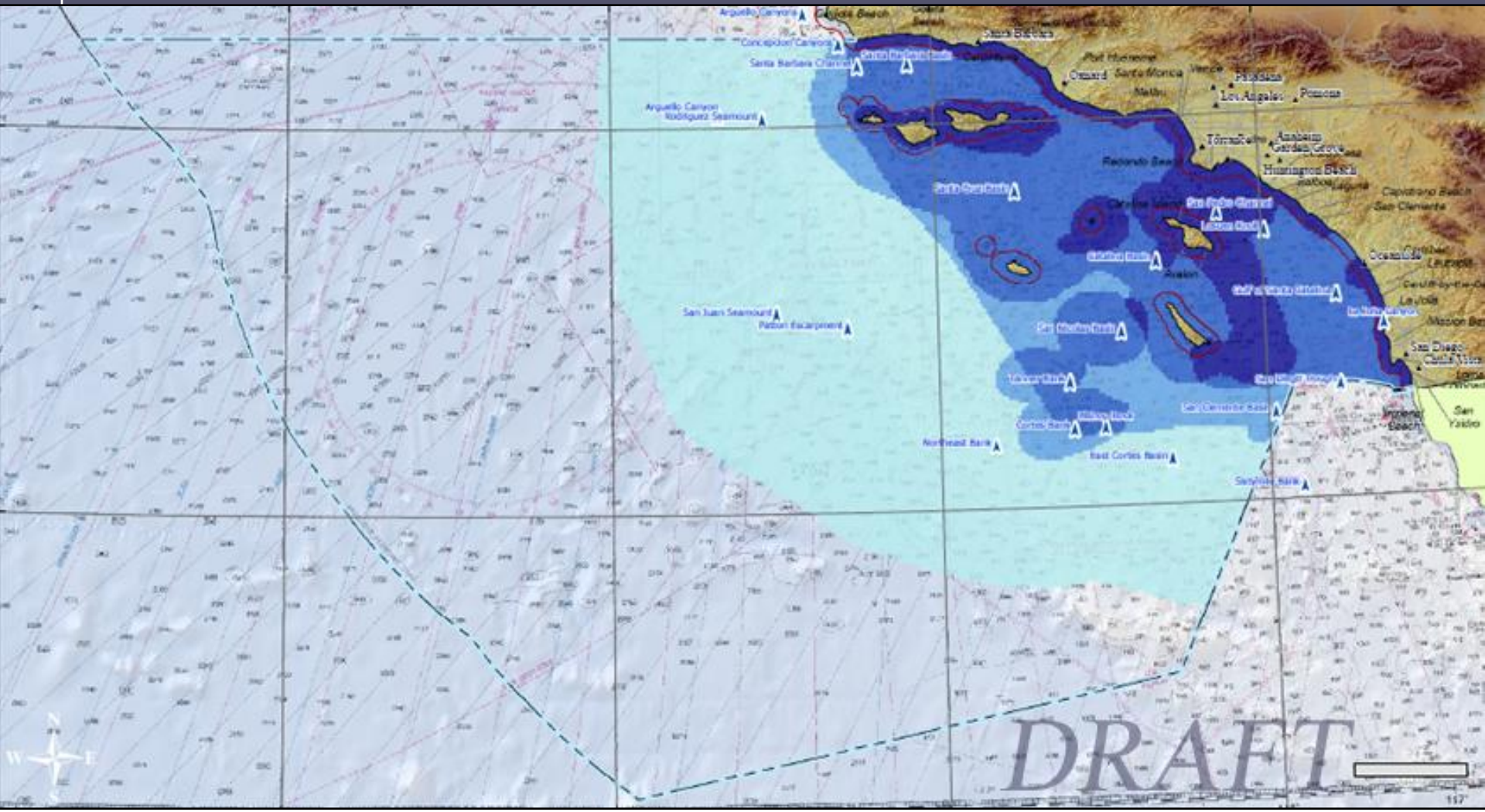
Provide multiple methods to input data and opportunity to “play” with technology

# Data Processing



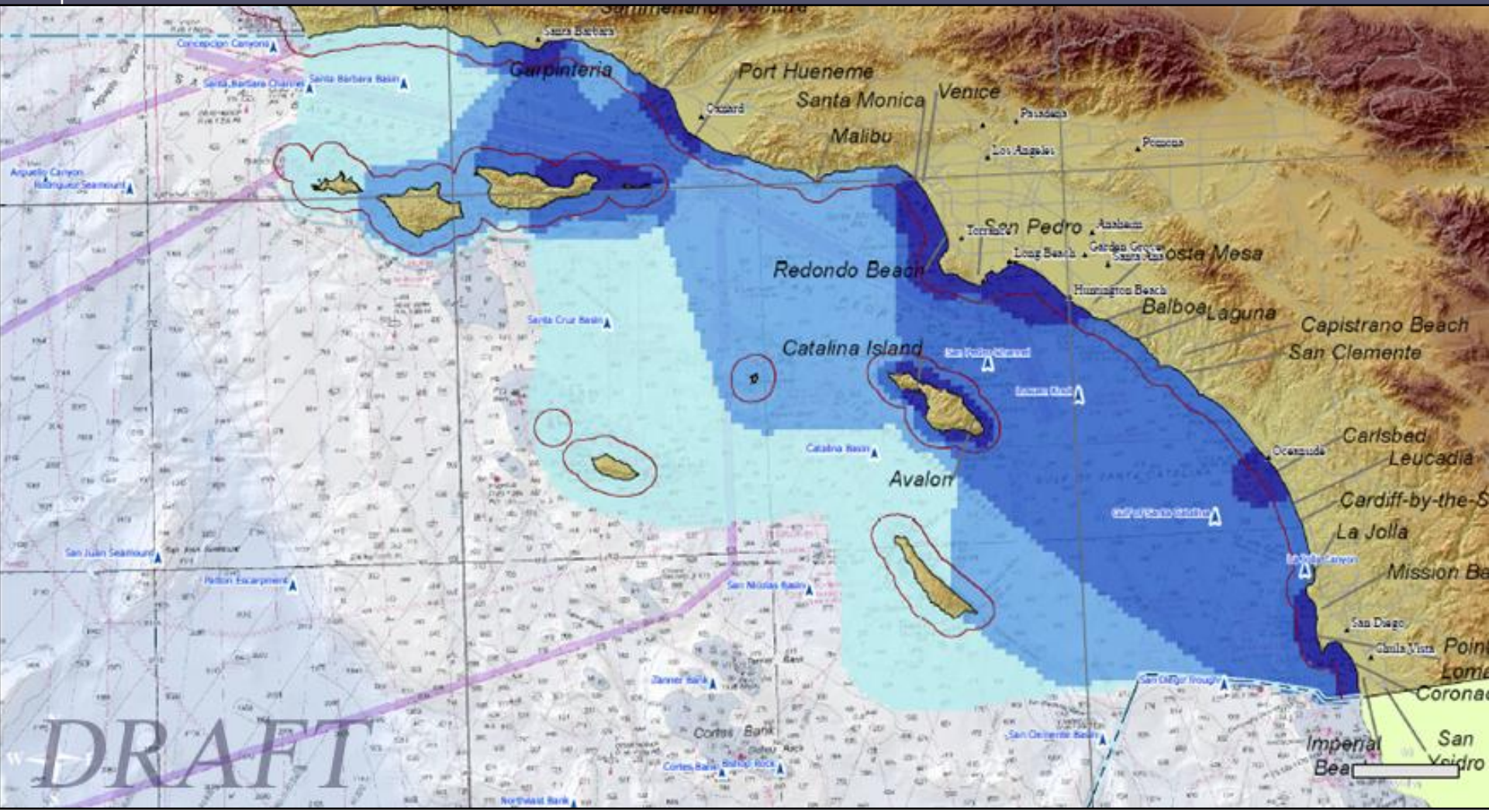
# Maximum Footprint

*Motorized Boating*



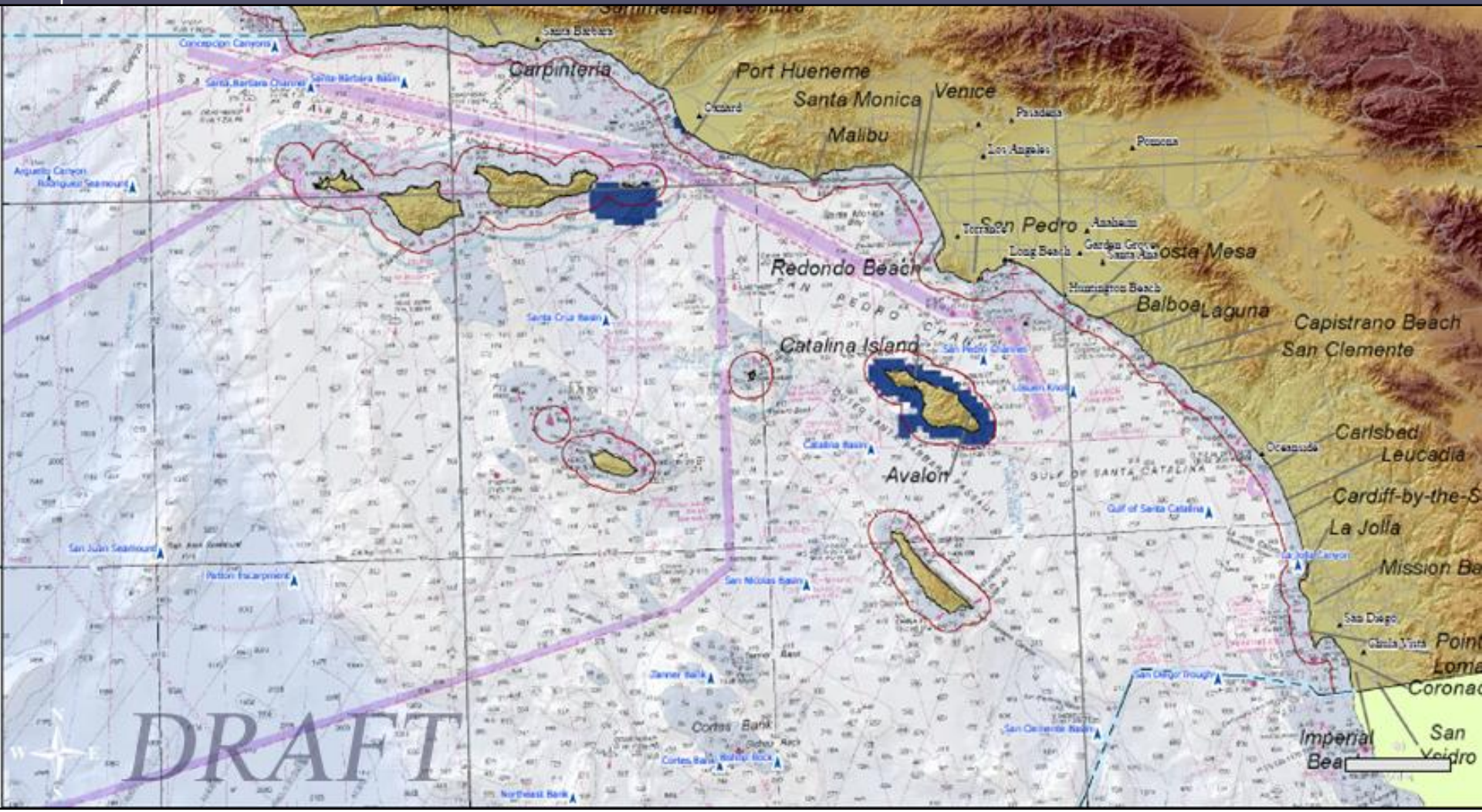
# Dominant Use Area

*Motorized Boating*



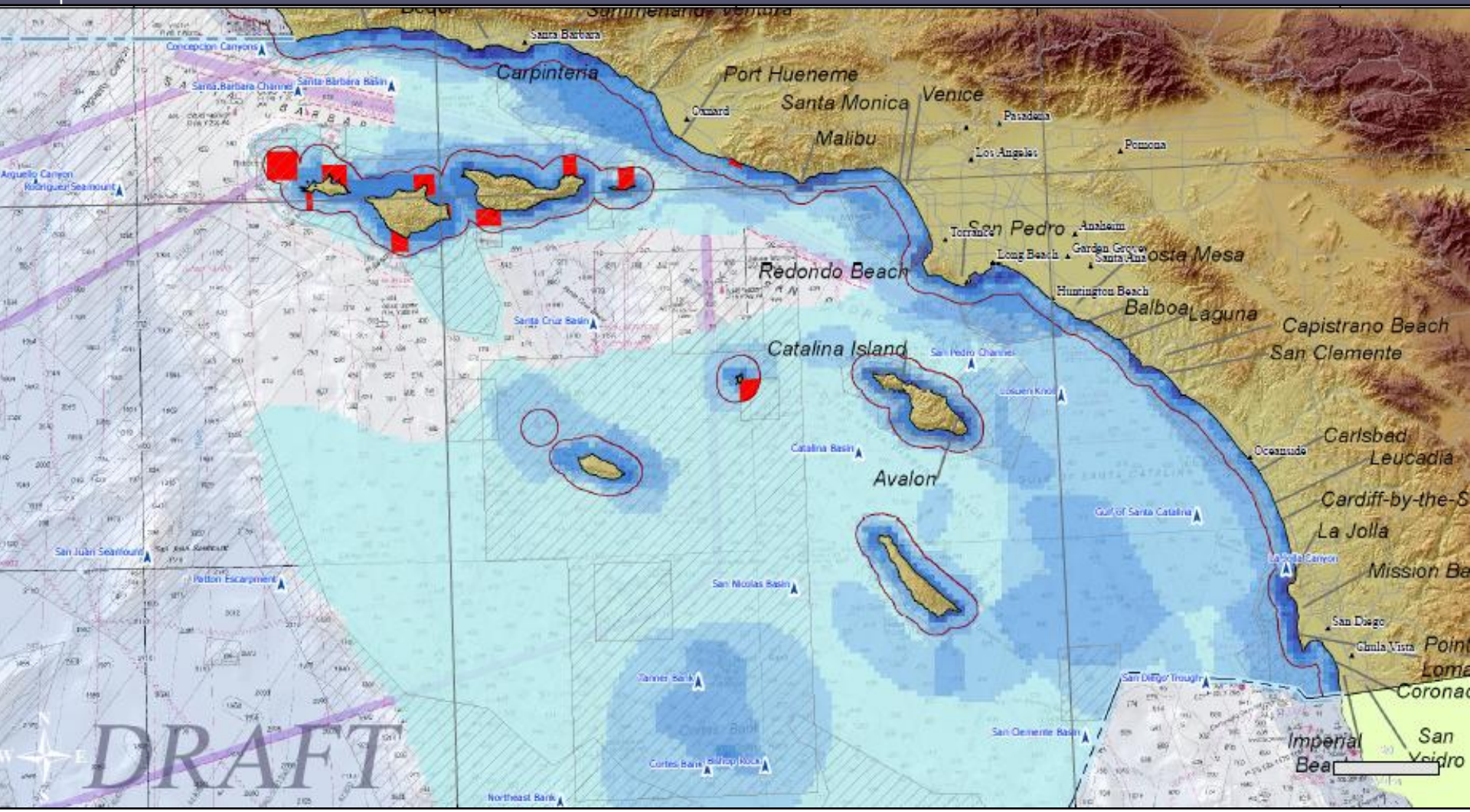
# Future Use Area

## *Motorized Boating*



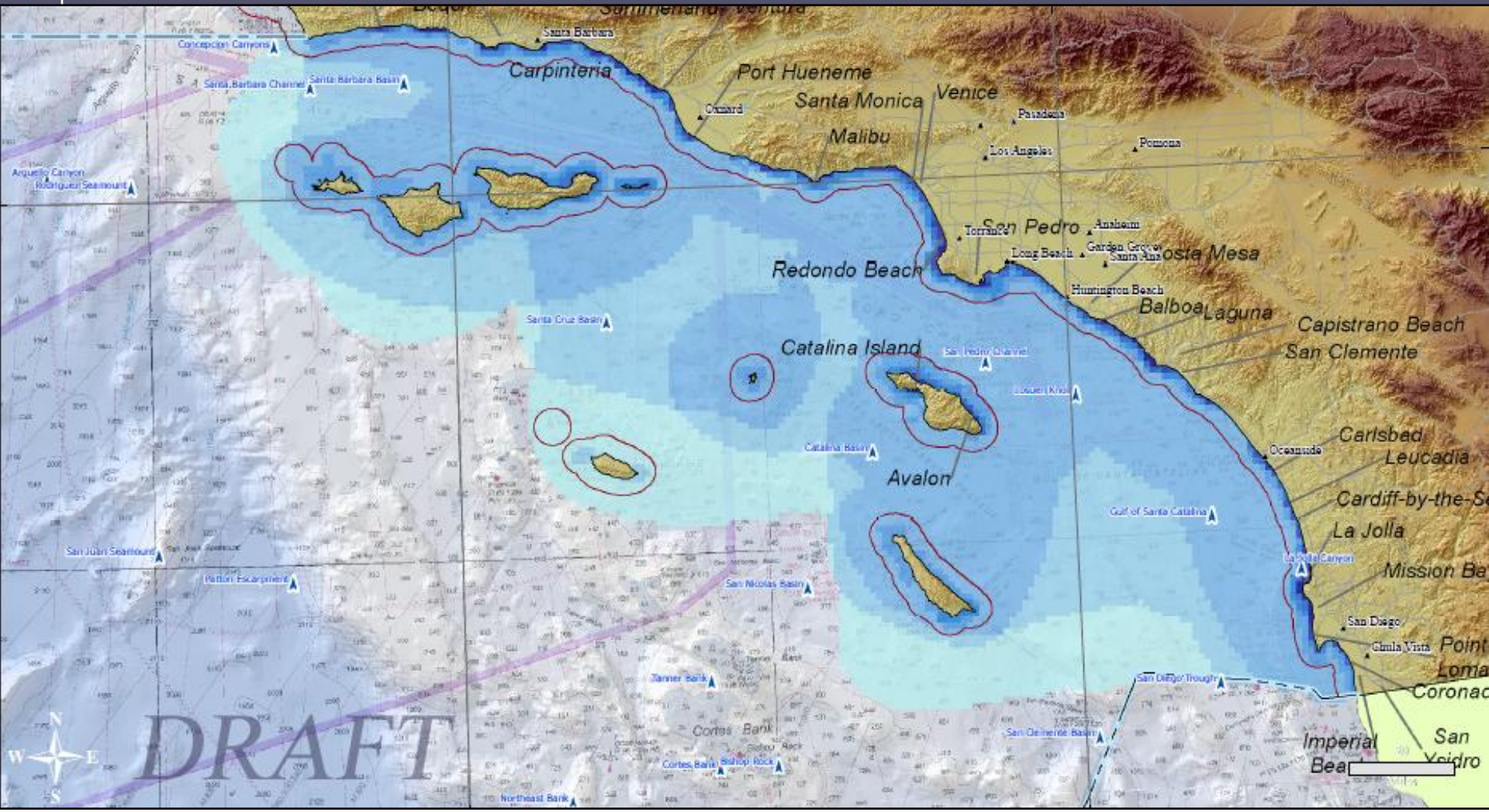
# Related Uses Combined

## *Fishing Sector*

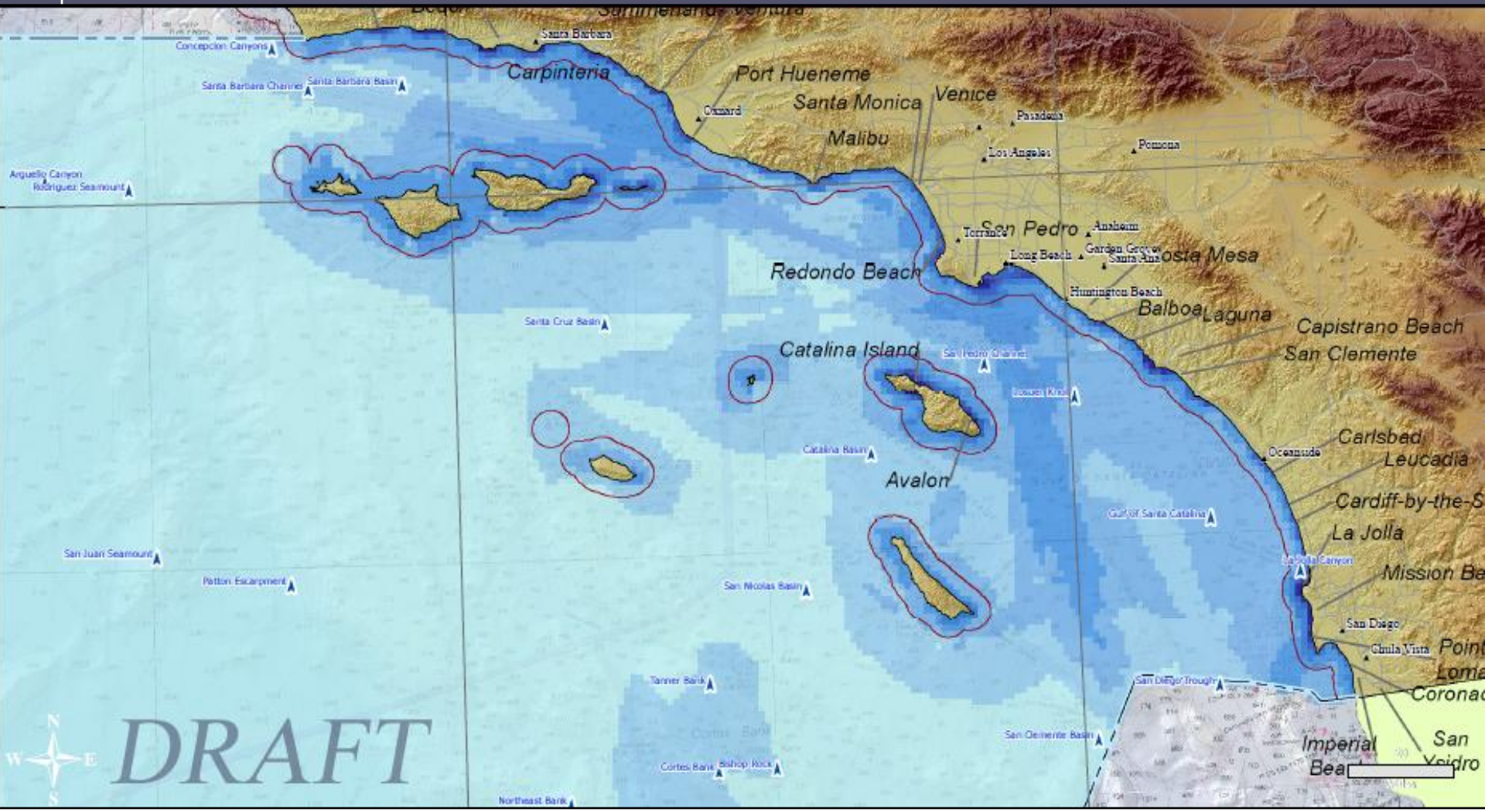


# Related Uses Combined

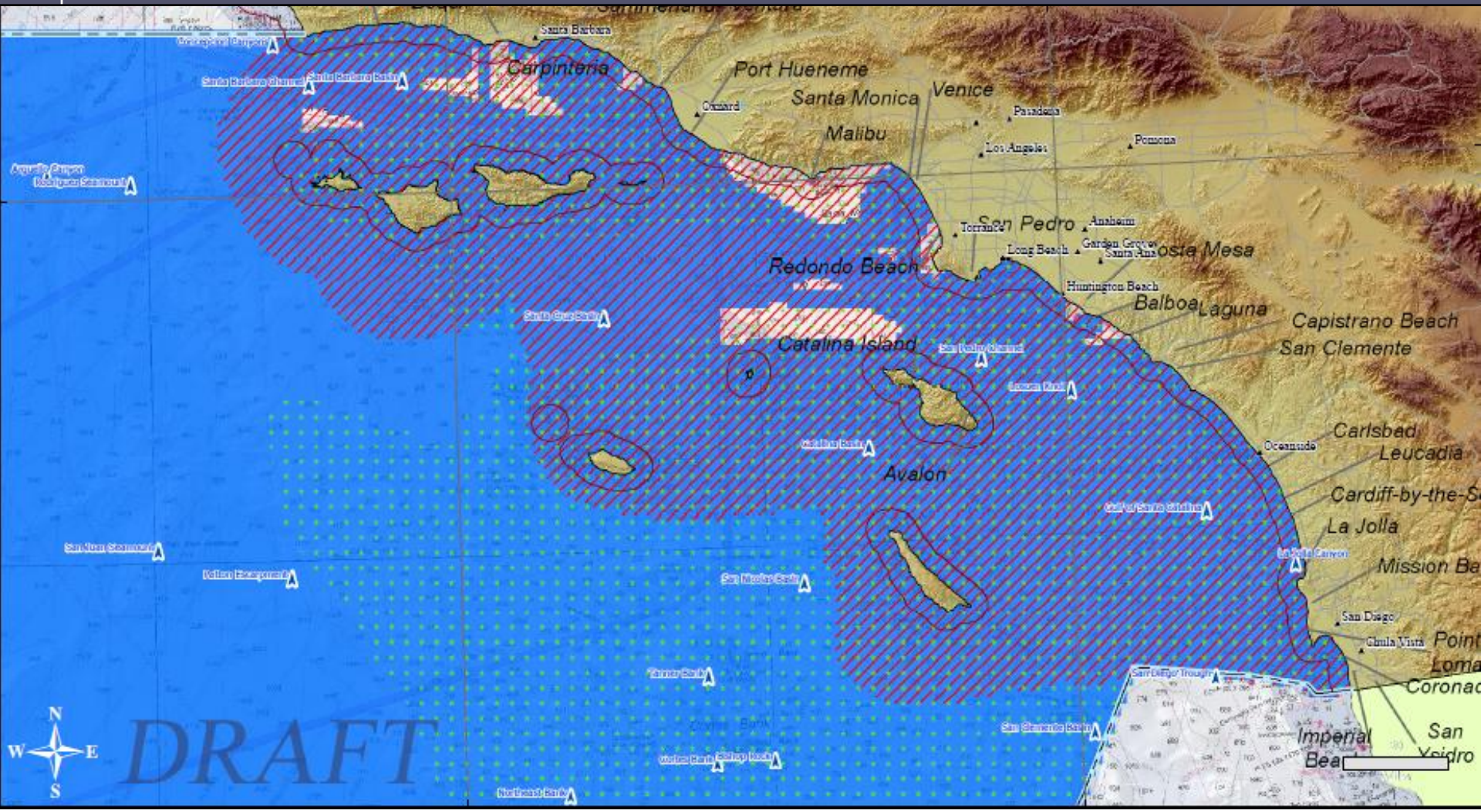
## *Non-Consumptive Sector*



# All Uses Combined



# Overlap Among Use Sectors



# Challenges Encountered

- Significant investments
  - Purchase of hardware
  - Requirements for data serving
- Abundance of “Best Available Data”
- Participant buy-in
  - Trust
  - Group dynamics
- Data validation
  - How do we compare results with other data sources?

# Lessons Learned

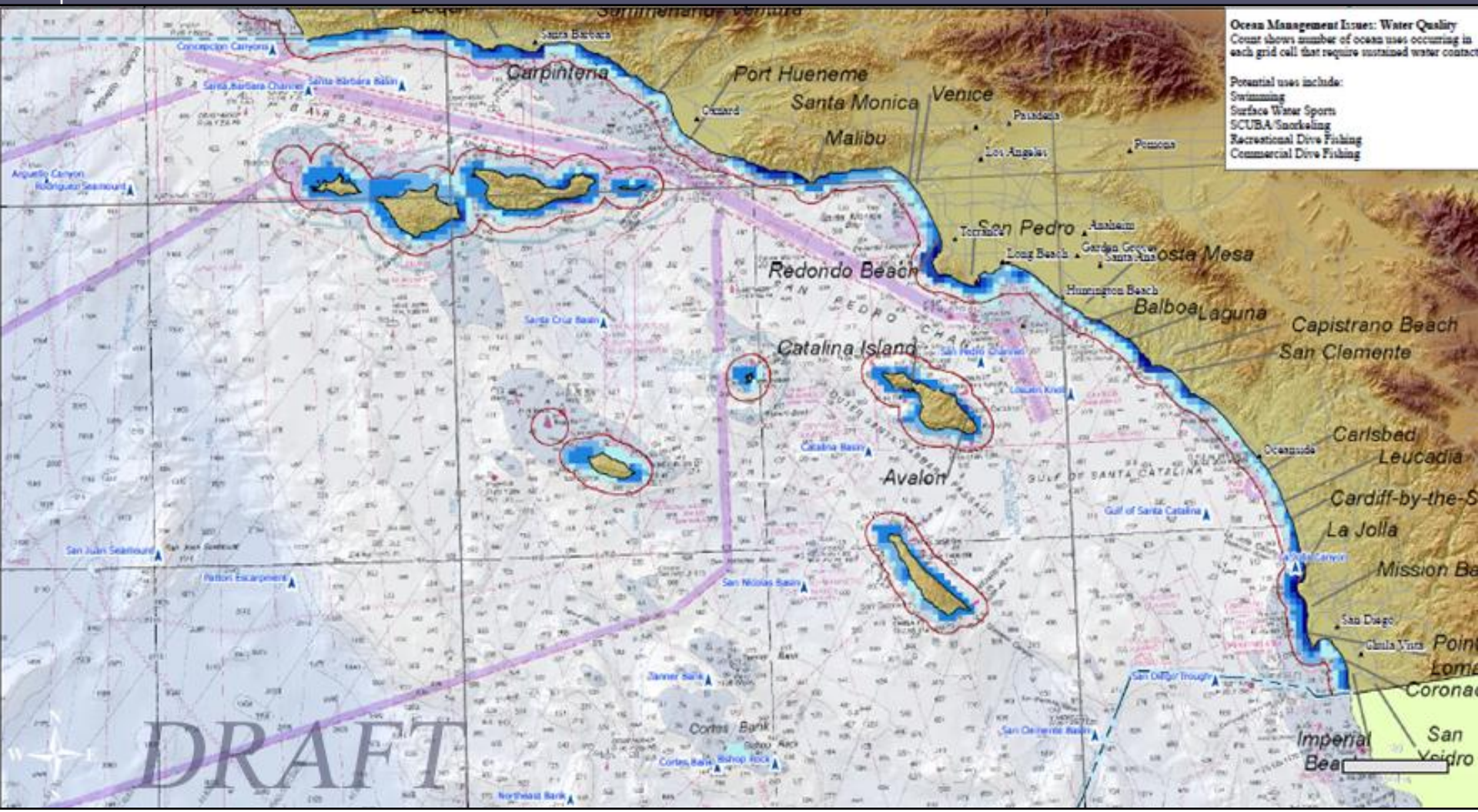
- The methodology works
- Vital to find the right mix of people to attend workshop
- Capture qualitative information from discussions
- All uses of interest have to be mapped
  - Aggregated uses are more useful than individual uses

# Next Steps

- Complete California Workshops
  - Two remaining regions
  - Design criteria for online mapping tool
- What can we do with the data?

# Ocean Management Issues

## *Uses Affected by Water Quality*



# Next Steps

- Complete California Workshops
  - Two remaining regions
  - Design criteria for online mapping tool
- What can we do with the data?
  - Explore additional use aggregation combinations
  - Consider comparisons between California regions
- Expand Atlas project to other areas
  - Only data requirement is for spatial orientation of participants
  - Basemap can be refocused with local reference points
- With more workshop time, the methodology can be expanded to map more discrete use categories and at a finer scale
- Use this process to tell the use story throughout the US

# Questions?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