

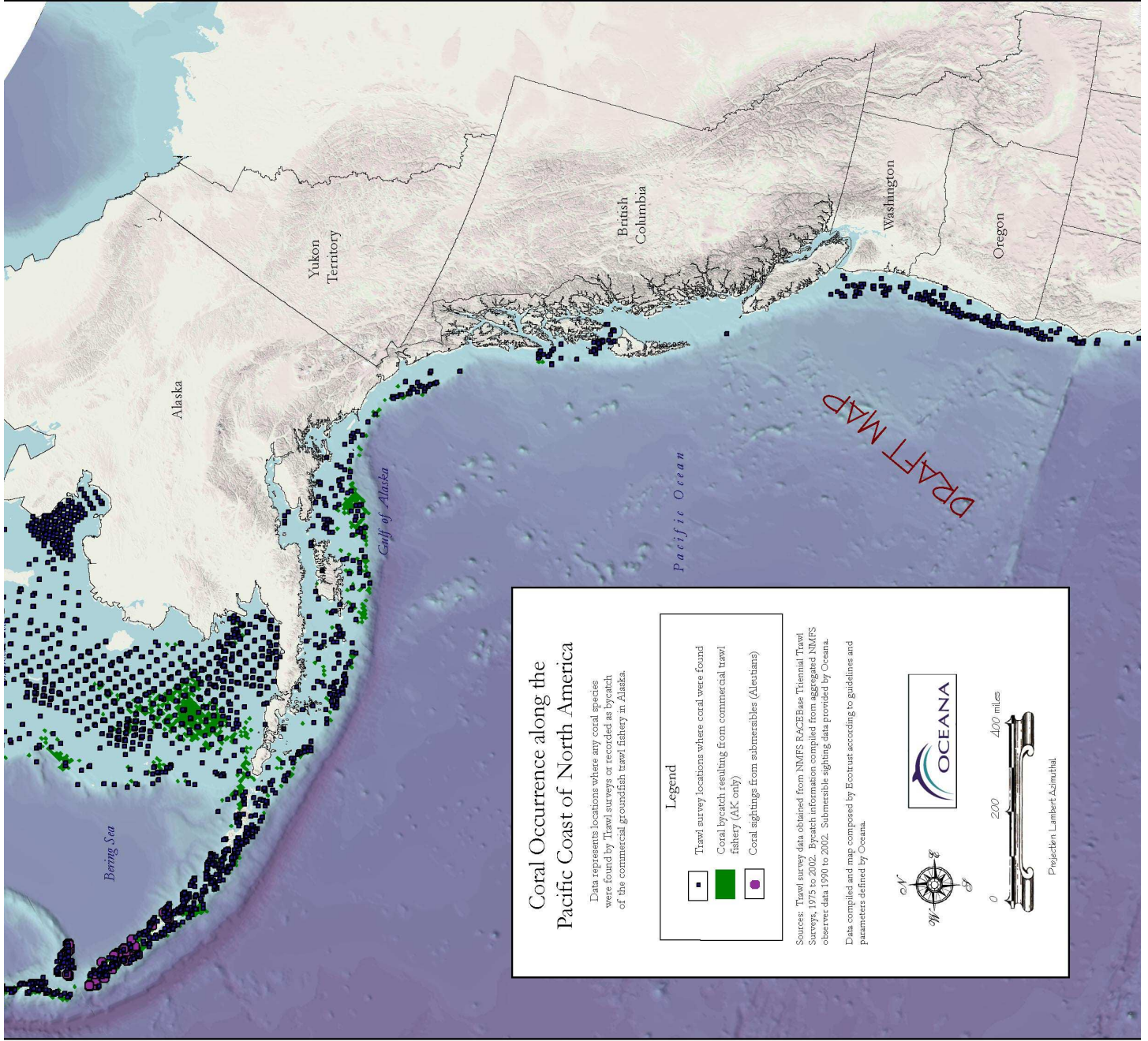
Opportunities and challenges for marine and coastal ecosystem services markets

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Fisheries and Knowledge Systems



RESOURCES TO CONSIDER

- Food – wild harvests, recovering stocks, aquaculture, recreation
- Medicines – Biodiversity (cold water corals, MPA's)
- Energy – wave/tidal
- Carbon – deep ocean injection, mid-ocean dispersion, nearshore kelp beds? (linked to species recovery – sea otter)
- Water – coastal/watershed pollution (ag, cities, etc.)
- Salmon – linking pieces of ecosystems:
(marine/freshwater/terrestrial) – (habitat/water/harvest rights) – (escapements/nutrient transfers/production resilience)



Coral Occurrence along the Pacific Coast of North America

Data represents locations where any coral species were found by Trawl surveys or recorded as bycatch of the commercial groundfish trawl fishery in Alaska.

Legend

- Trawl survey locations where coral were found
- Coral bycatch resulting from commercial trawl fishery (AK only)
- Coral sightings from submarines (Aleutians)

Sources: Trawl survey data obtained from NMFS FACESBase, Trawl Survey, 1975 to 2002. Bycatch information compiled from aggregated NMFS observer data 1990 to 2002. Submersible sighting data provided by Oceana.

Data compiled and map composed by EcoTrust according to guidelines and parameters defined by Oceana.

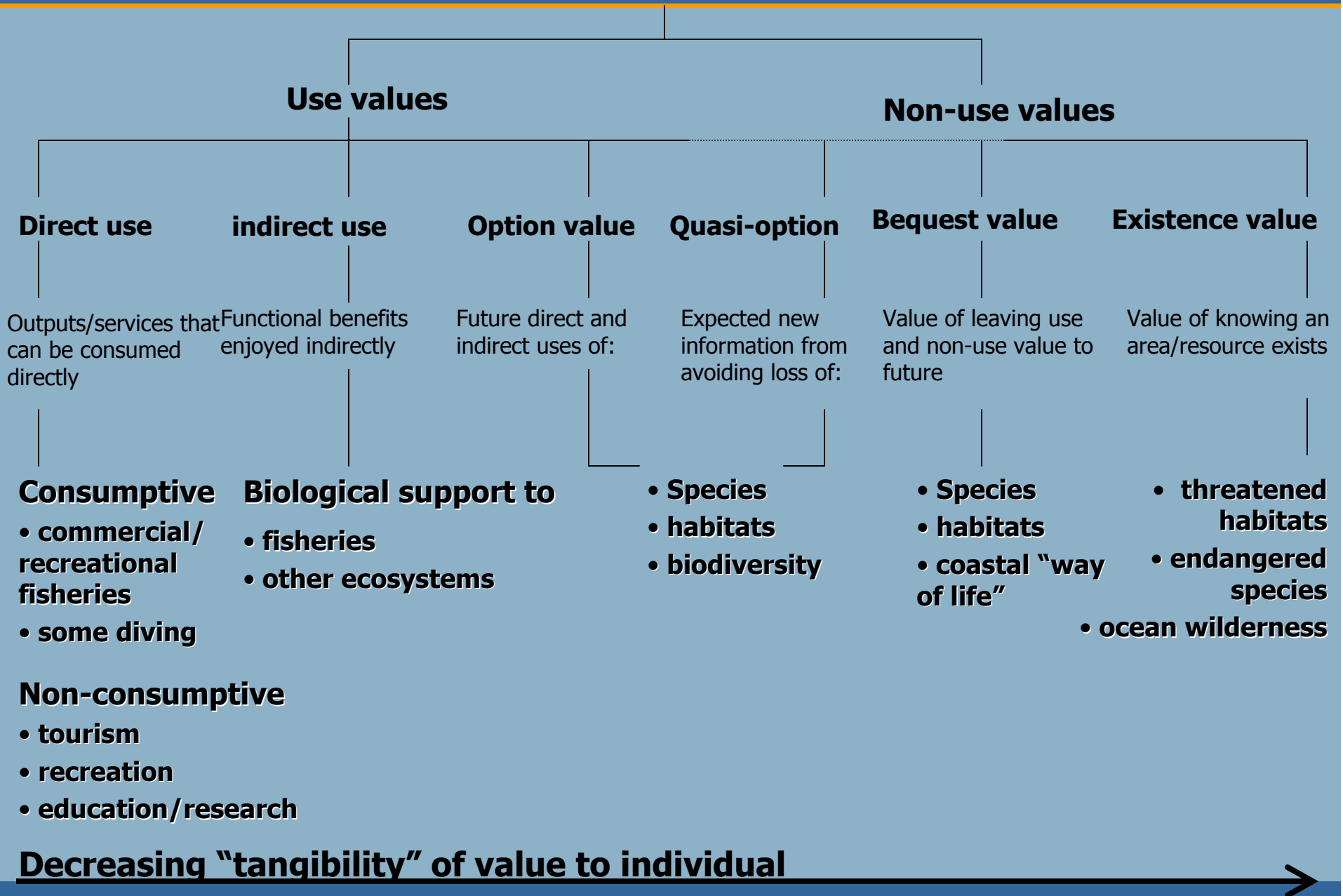


Projection: Lambert Azimuthal

OPPORTUNITIES

- → *Start with Total Economic Value spectrum*
- Site specificity: Use ocean zoning to foster spatial segmentations of resources, valuations, conflicts, leasing, other forms of structured “3E” tempered rights.
- Futures trading?
- Examine current efforts in the development of “community trust” instruments for enhancing stewardship, bioeconomic models, and control of assets as a basis for trading.

Total economic value of marine resources



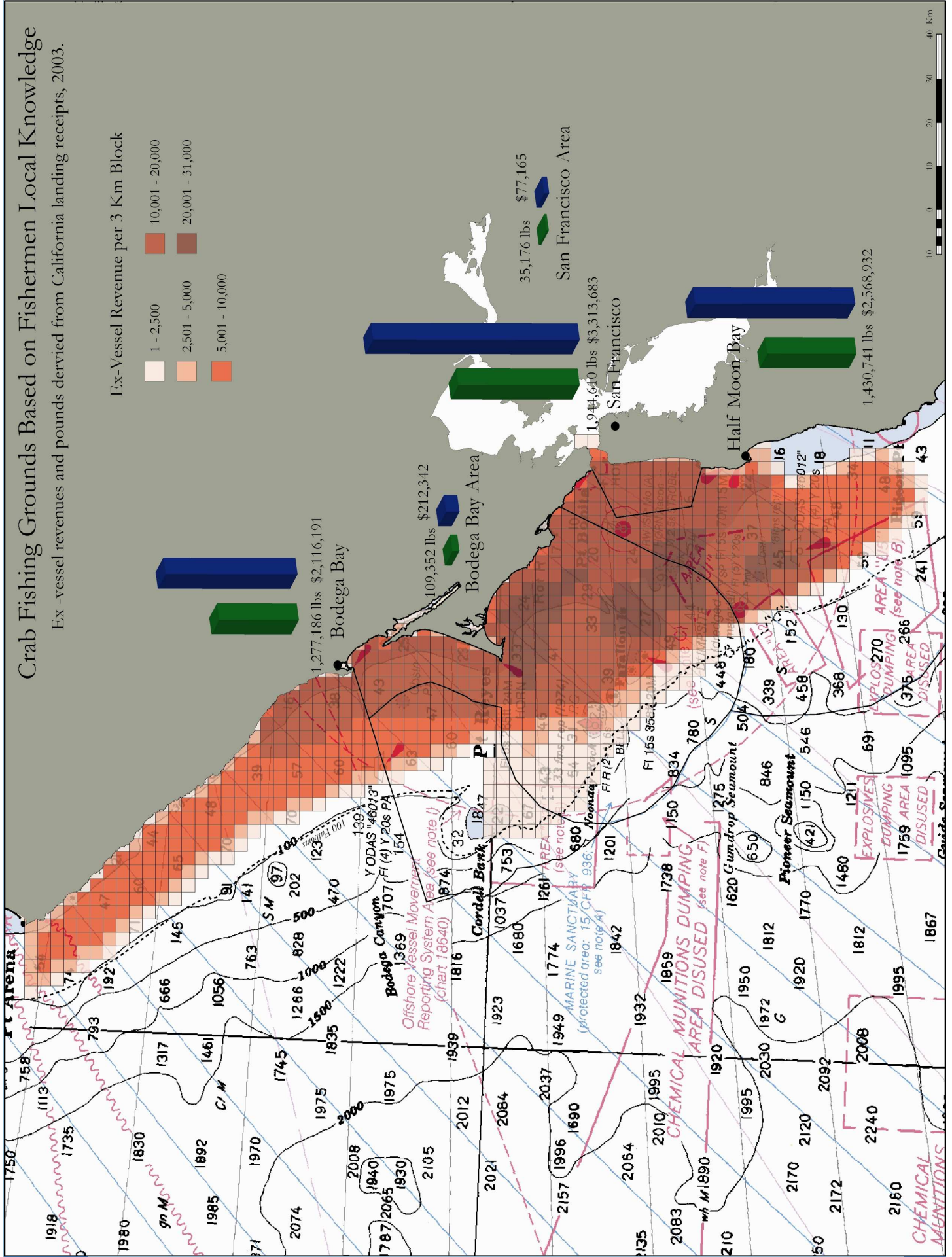
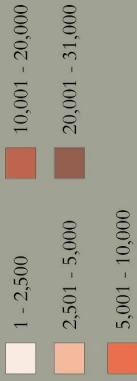
OPPORTUNITIES

- Start with Total Economic Value spectrum
- → Site specificity: Use ocean zoning to foster spatial segmentations of resources, valuations, conflicts, leasing, other forms of structured “3E” tempered rights. Establish the knowledge base.
- Futures trading? Commodities or regional specialties?
- Examine current efforts in the development of “community trust” instruments for enhancing stewardship, bioeconomic models, and control of assets as a basis for trading.

Crab Fishing Grounds Based on Fishermen Local Knowledge

Ex -vessel revenues and pounds derived from California landing receipts, 2003.

Ex-Vessel Revenue per 3 Km Block

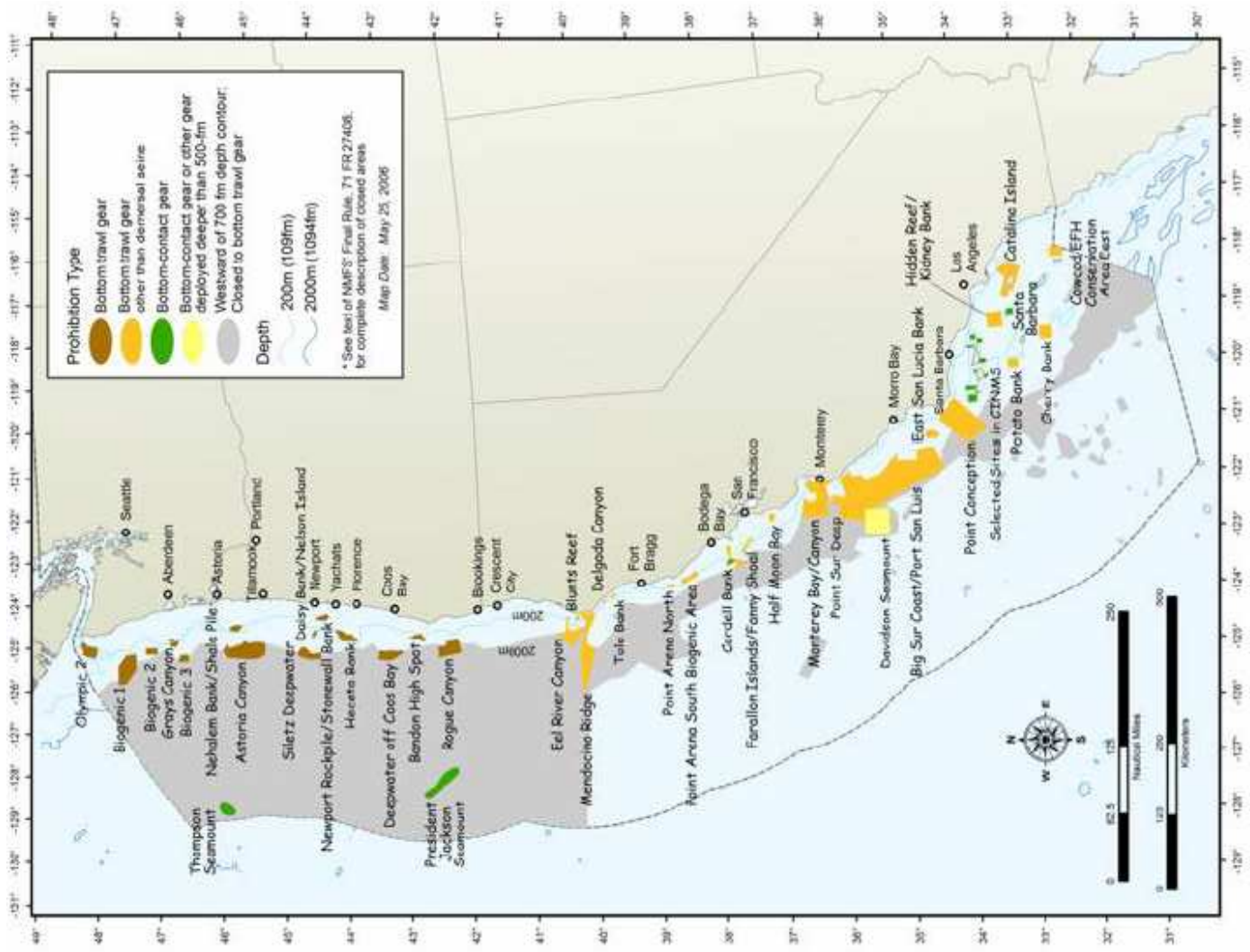


OPPORTUNITIES

- Start with Total Economic Value spectrum
- Site specificity: Use ocean zoning to foster spatial segmentation of resources, valuations, conflicts, leasing, other forms of structured “3E” tempered rights.
- Futures trading? Commodities or regional specialities, bycatch cap and trade?.
- Examine current efforts in the development of “community trust” instruments for enhancing stewardship, bioeconomic models, and control of assets as a basis for trading.
(ownership segmentation)

CHALLENGES

- → *Issues of scale*
- Rights, established culture and the commons
- Regulatory environment unstable (e.g. Councils)
- Sorting singular events (easements/buyouts) vs. true markets (recurrent transactions – e.g. fisheries quotas)
- Desirables (good things) vs. problems (pollution).
- Building trading mechanisms
- Mobile stocks, lack of geographically specific stock assessments
- Disparate market values in fisheries quota markets between regions (AK, BC, PNW)



EFH area closures to protect Pacific Coast groundfish habitat - Coastwide.

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