Revised maps:
Addressing comments on preliminary draft plan
Fishing map revisions:
- Intensity data description
- Years/source of data
- Fathom curves
- Latitude and Longitude
Understanding the Ecologically Important Areas off the Washington Coast: A Forthcoming Report

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PURPOSE OF THE COMPARISON REPORT

• EIAs by WDFW are intended as “one of several sources” used to inform the ecology off the Washington Coast.

• The ERA by TNC “This assessment is a spatially explicit, quantitative analysis of biological diversity on the west coast … and can be used to guide planning processes and inform conservation planners and decision-makers”

• TNC is building a contextualized knowledge base on MSP in various country and regional programs relating to EIAs and other aspects of habitat protection in MSP.
OUR GOALS

• Understand the importance and distribution of Ecologically Important Areas (EIAs) in the Washington MSP

• Compare the Hotspot map to TNC’s 2013 “Ecoregional Assessment of the California Current” Map 8: Irreplaceability Scenario

• Strengthen what we know, address what we don’t

• Lay the foundation for potential grant applications for gathering new science
Areas are “ecologically or biologically important” because of the higher potential for, or more lasting consequences of, harm at that location, AND the greater potential for long-term benefits to be obtained by effective management. (DFO, Canada).

- EIAs ARE: representative of the natural component of the system (ecological uses and processes) that may affect existing/future human uses.
- EIAs ARE NOT: a representation of current human uses.
- EIAs are the voice for ecological function in the Use Analysis.
PURPOSE FOR EIA MAPPING IN WA MSP

- Maps must show “the key ecological aspects of the marine ecosystem, including physical and biological characteristics, as well as areas that are environmentally sensitive or contain unique or sensitive species or biological communities that must be conserved and warrant protective measures” (RCW 43.372.040)

- Base all planning on **best available science**. This includes **identifying gaps** in existing information, recommend a **strategy for acquiring science needed** to strengthen marine spatial plans, and create a process to adjust plans once additional scientific information is available;” -RCW 43.372.005(3)(b)
Hexagons important across multiple individual layers may indicate higher ecological activity than those important to fewer (39 total layers shown here).

Areas of importance are along the continental shelf break and at the heads of submarine canyons.

Hotspot map shown here was boiled down to scores for subsectors (8) to be used in Use Analysis to ensure the # of layers in EIA does not outweigh other existing use data (while displaying similar patterns).
Scores indicate the conservation or biodiversity value of a unit determined by the # of times Marxan selects that unit in the solution (equal suitability).

Important areas include continental shelf break, heads of submarine canyons.

Nearshore: seabird colonies, islands, kelp and marine mammals drove clumping

Offshore: rocky reefs partially drove clumping as important habitat

High degree of clumping may indicate where data exists over lack of data
Hotspots for all combined EIA layers. Each hexagon’s value is the number of layers with an importance score of 1 or 2 in that location (the scores indicating greatest ecological importance).

Map 8: Marxan Irreplaceability Results. Scores indicate the conservation or biodiversity value of an assessment unit (AU) as determined by the number of times that AU is selected in a Marxan solution. The scores are generated using Marxan under the assumption that all AUs are equally suitable for conservation.
Data Gaps and Limitations to Explore

• Significant gaps exist in biological data available. Data availability is skewed towards species of commercial or conservation importance
  • E.g. fish data is biased as it was collected by people looking for fish, and not random sampling.
• “Time Budget” of several key species remains unknown.
  • Data collection during winter months is difficult, and any data collection off the coast is very expensive
• Impacts of climate change remain unknown on species abundance and distribution
• Connectivity between habitats is important and difficult to map, linked to the “Time Budget”
Thank You!

Questions? Comments?
Email me: claire.dawson@tnc.org

Important Links:
(2) TNC. (2013). *Pacific Northwest Marine Ecoregional Assessment.*