Characterizing Fisheries Footprints for Offshore Wind Energy Planning:

Agenda Item G.3.a
Supplemental NMFS/ODFW Presentation 1
March 2023

NMFS and ODFW Joint Technical Assistance to BOEM and NCCOS for BOEM's Oregon Spatial Model

PFMC Meeting March 9, 2023

NOAA FISHERIES

OREGON Fish & Wildlife Marine Resources

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Justin Ainsworth, Caren Braby, Delia Kelly, Jessica Watson (ODFW)

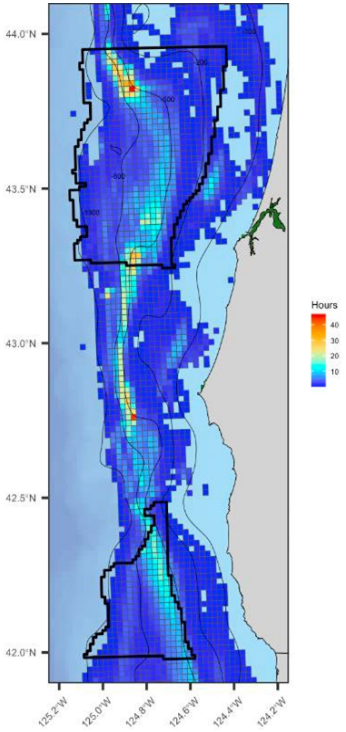
The Objective…

- We were asked to provide data for the Fisheries Submodel of BOEM/NCCOS's suitability analysis that is being used to reduce Call Areas to Wind Energy Areas
  - What data best represent the space used by West Coast fisheries?
    - NMFS and ODFW worked together
      - What metrics?
      - What fisheries?
      - What years of data?
  - In reality, a lot of these answers were based on data available under the deadlines given by BOEM/NCCOS.

How to measure spatial importance for fisheries?

Given short timeline for completing analyses, able to leverage existing geospatial data layers of fishing effort and associated revenue for several fisheries from two ongoing NMFS CCIEA projects.

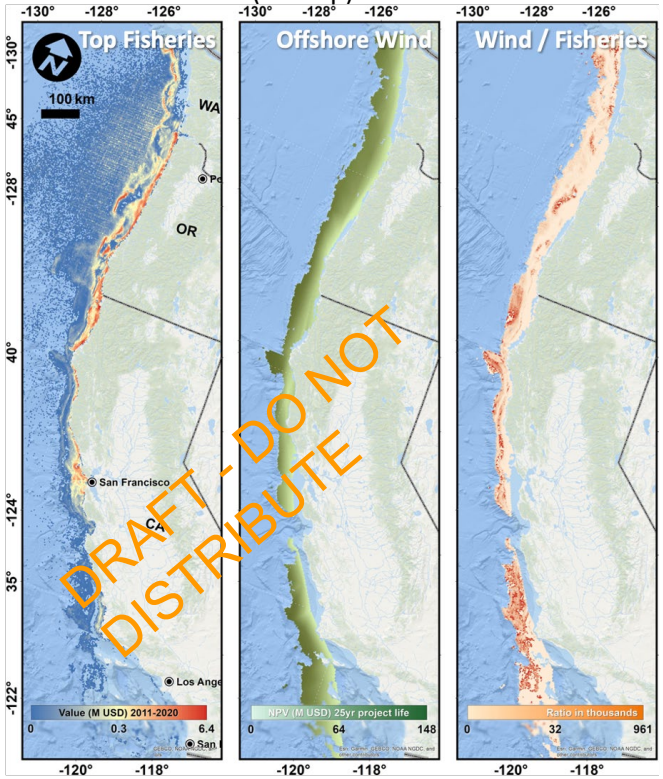
CCIEA Ecosystem Status Reports (2018 - 2022):
Indicators of human activities



Fishing effort of groundfish bottom trawl fisheries (hours trawled)

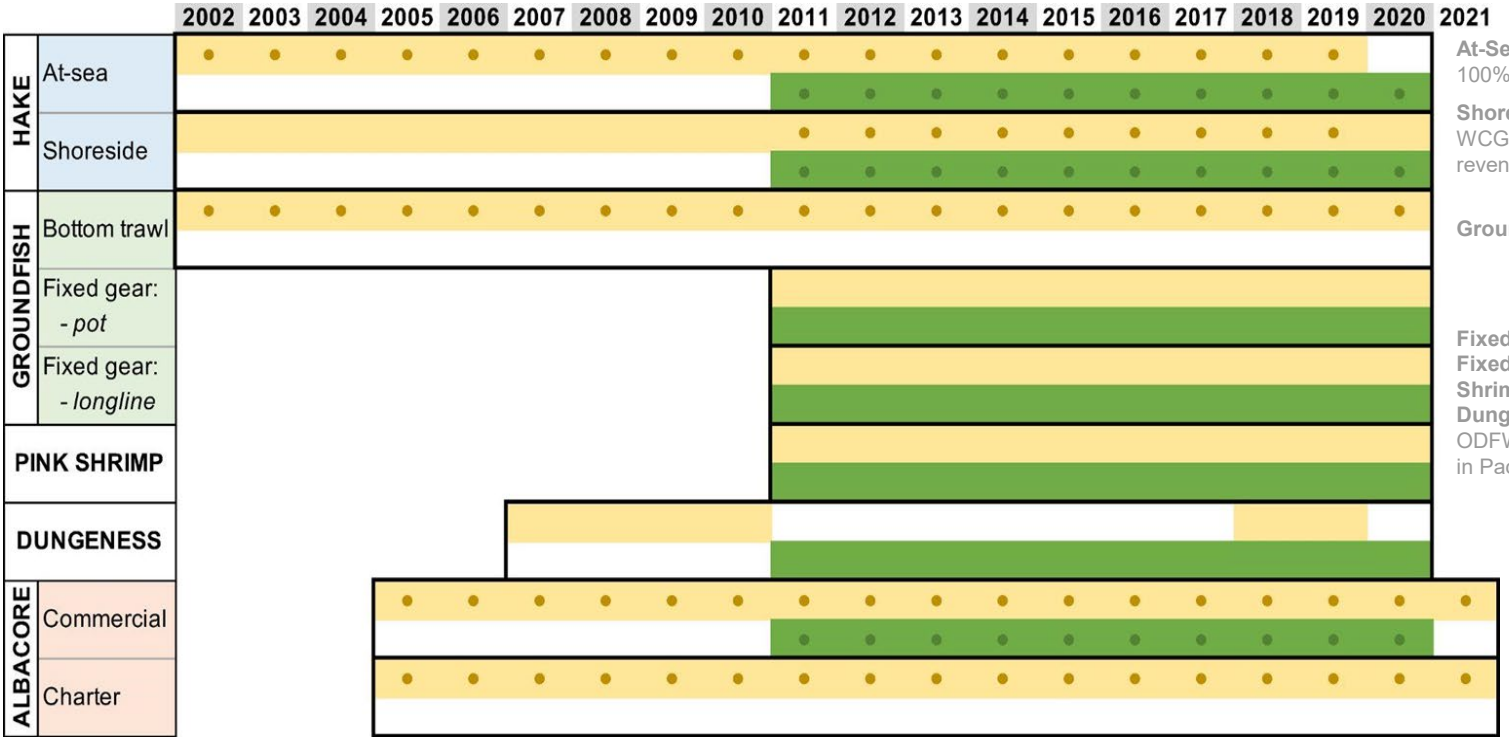
Cumulative Value of Top Fisheries (2011-2020) & Wind Energy

Feist et al. (In Prep) DO NOT DISTRIBUTE



Sectors and Years Analyzed

ASHOP = At-sea hake Observer Program
WCGOP = West Coast Groundfish Observer Program



At-Sea: ASHOP & PacFIN for revenue (nearly 100% coverage)

Shoreside: OR and PacFIN logbook for effort; WCGOP & ODFW Fish Tickets in PacFIN for revenue

Groundfish BT: logbook data from PacFIN

Fixed gear pot,
Fixed gear longline,
Shrimp,
Dungeness Crab:
ODFW State logbooks & ODFW Fish Tickets in PacFIN for revenue

Albacore Commercial and Charter:
Federal logbooks & ODFW Fish Tickets in PacFIN for revenue

● ● Includes catch landed at all ports on the west coast; otherwise only catch landed at OR ports included.

Effort: fishing coordinates, duration fished & amount of fixed gear from state or federal logbooks or ASHOP

Revenue: state or federal logbooks or WCGOP or ASHOP data matched to PacFIN fish ticket database

NOAA FISHERIES

OREGON Fish & Wildlife Marine Resources

Sept 30, 2022

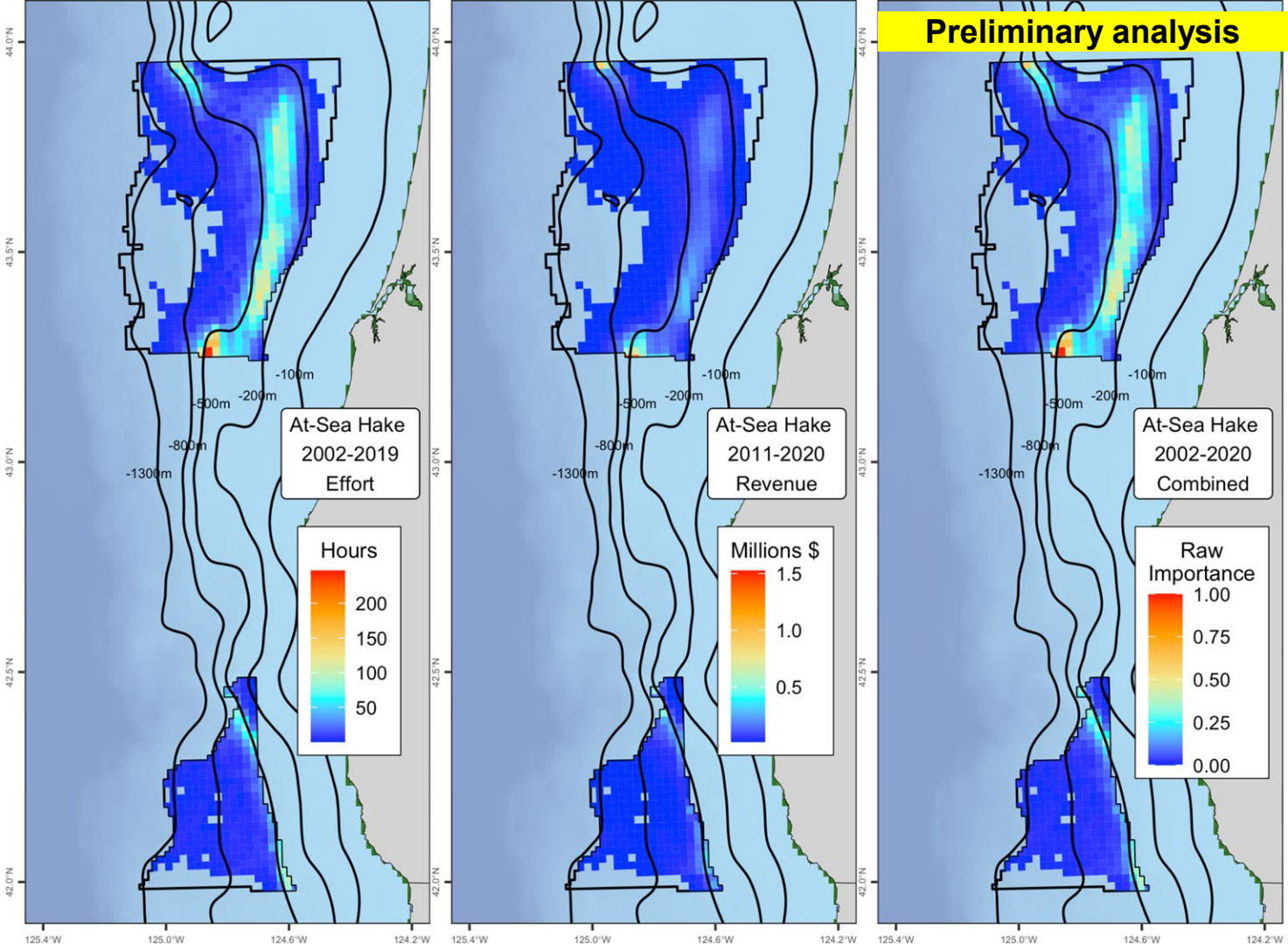
Initial exploration:
What do the data look like?

At-sea hake mid-water trawl

Data source:

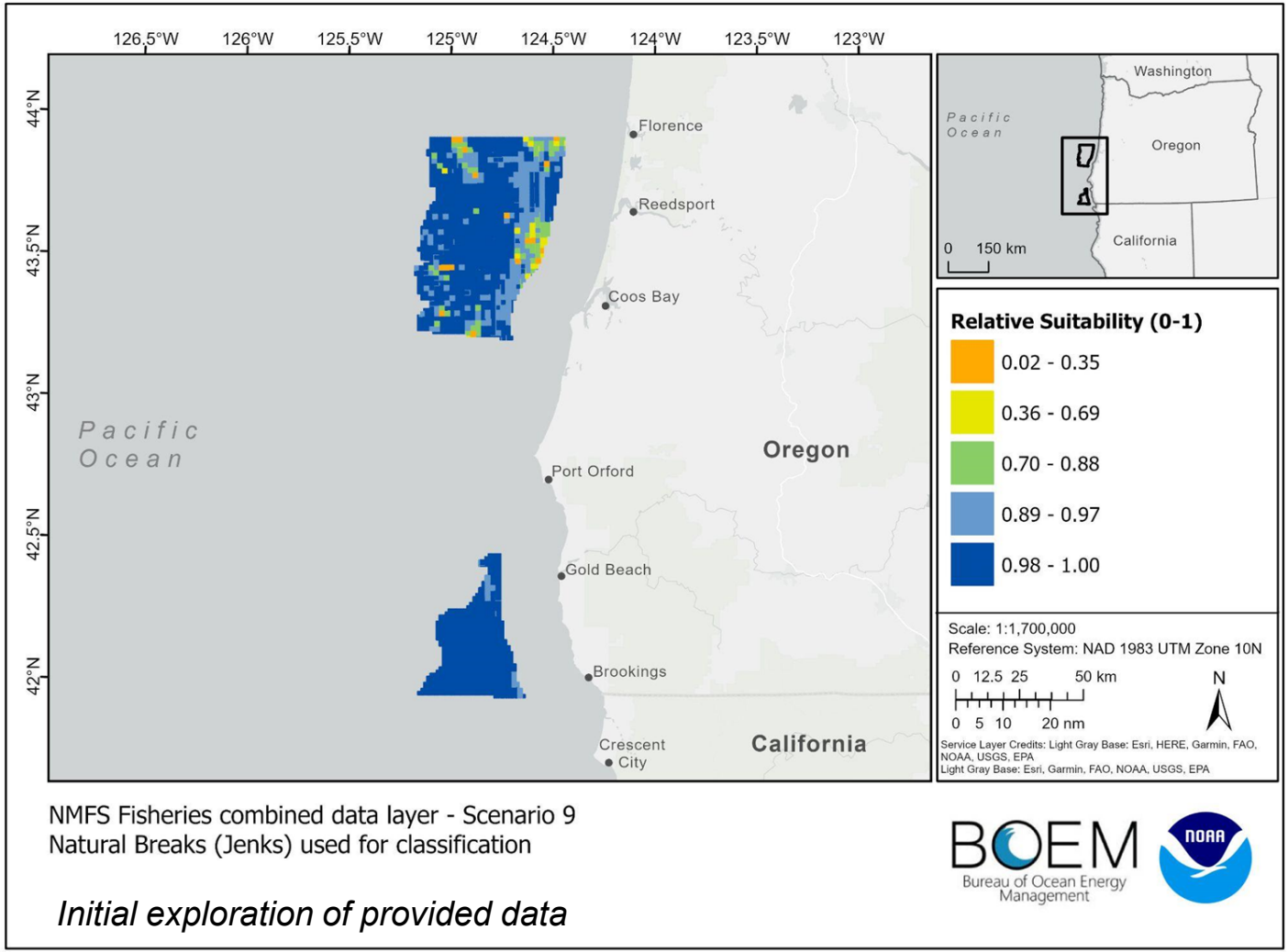
Effort: NMFS At-Sea Hake Observer Program (nearly 100% coverage)

Revenue: NMFS At-Sea Hake Observer Program (nearly 100% coverage) & PacFIN



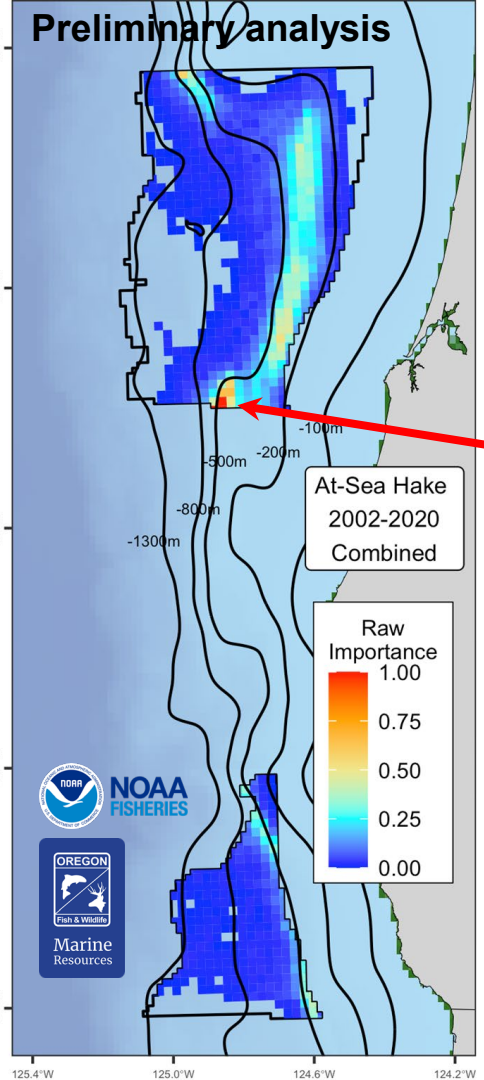
Initial exploration: combining all nine fisheries together

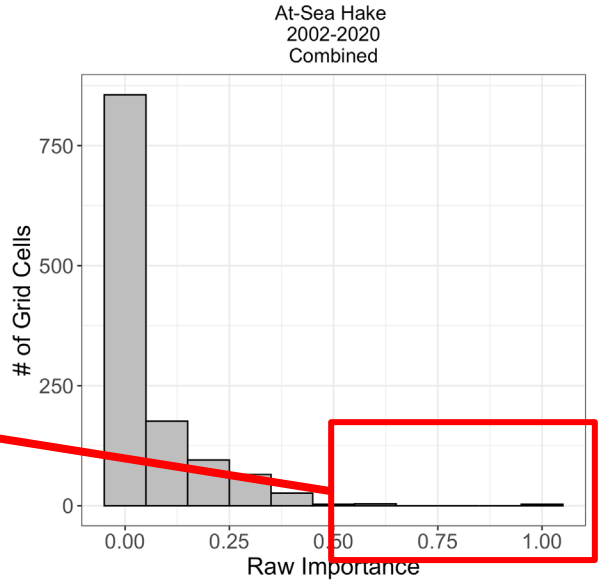
~30 2x2-km grid cells with relative suitability values < 0.7

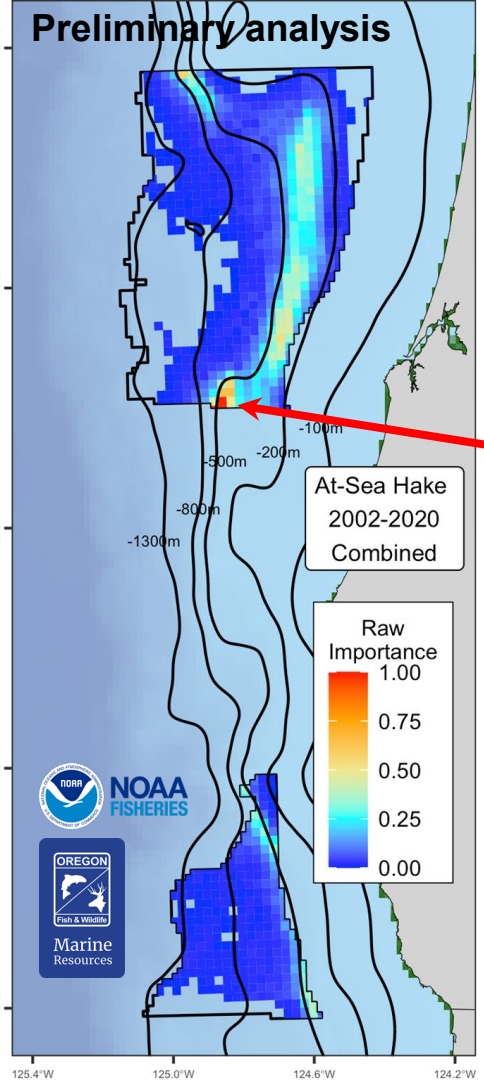


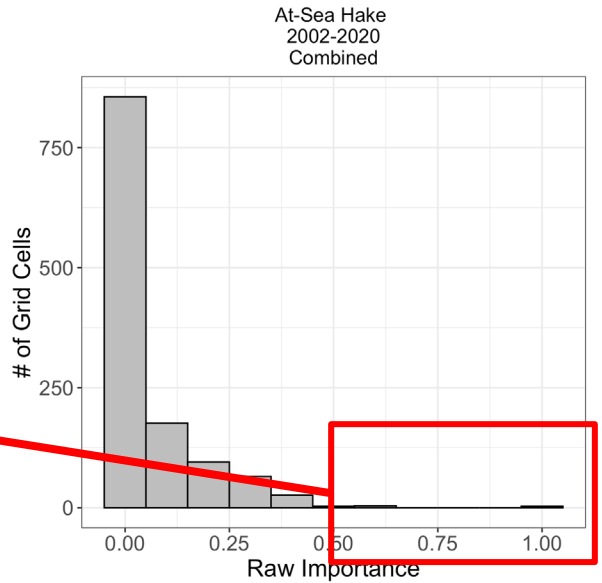
WHY?

Preliminary analysis



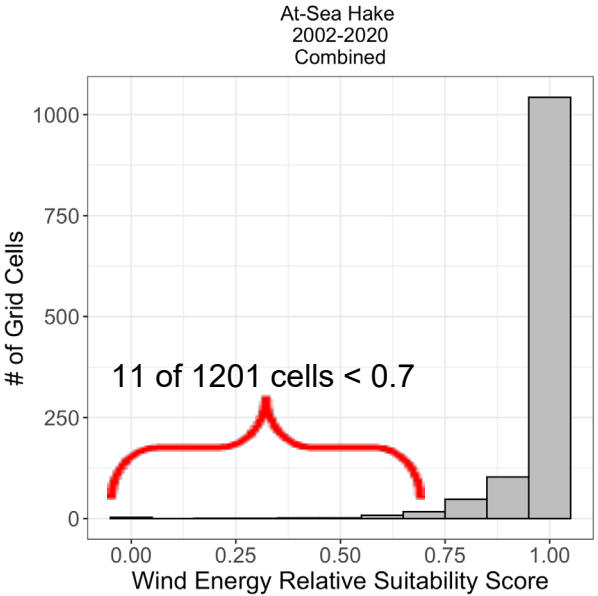






These very few, really high values **de-emphasize** the amount of space used by the fishery…

Transformed to Suitability Scores in the NCCOS model



At-sea hake mid-water trawl

Data source:

Effort: NMFS At-Sea Hake Observer Program (nearly 100% coverage)

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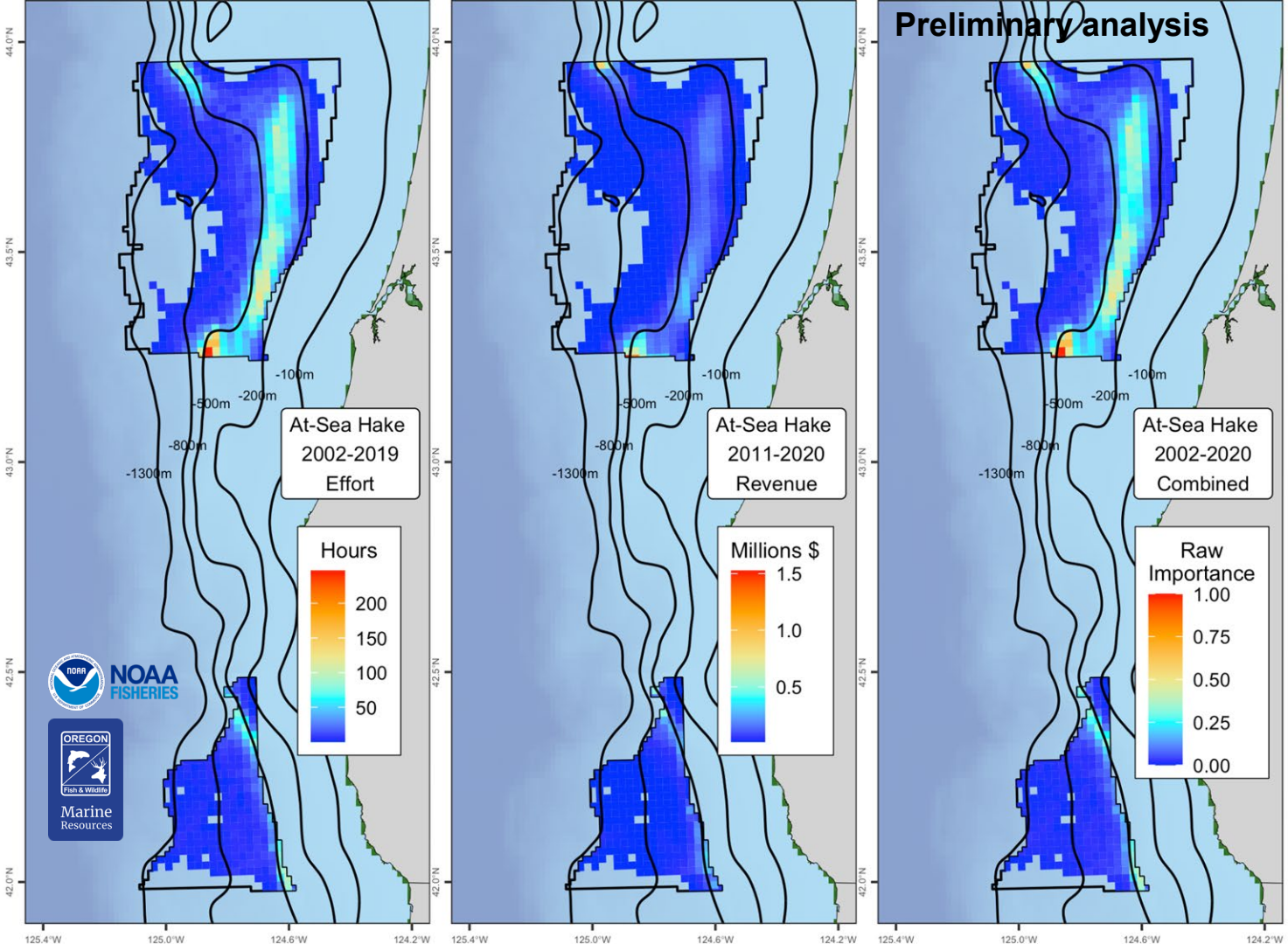

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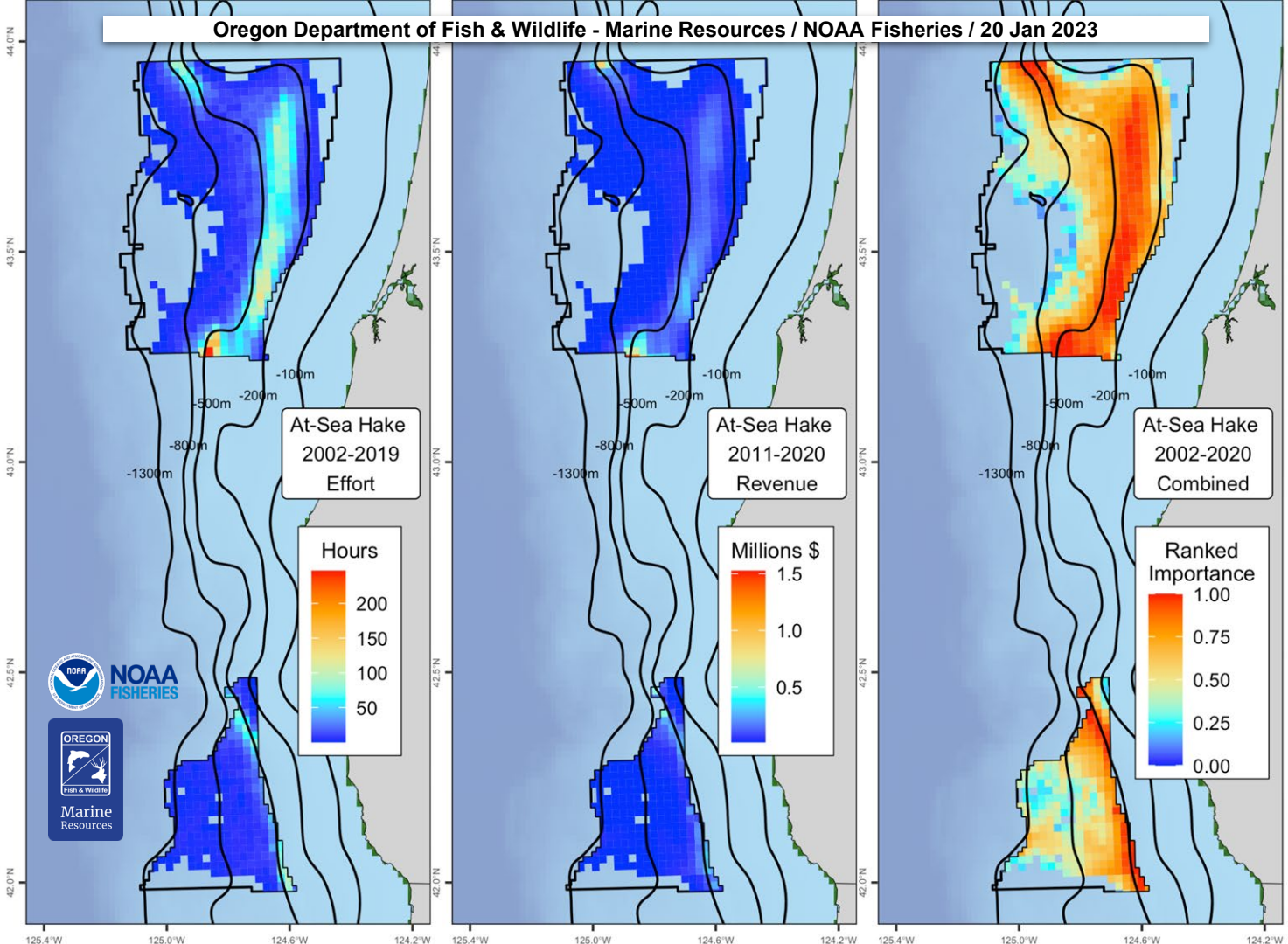
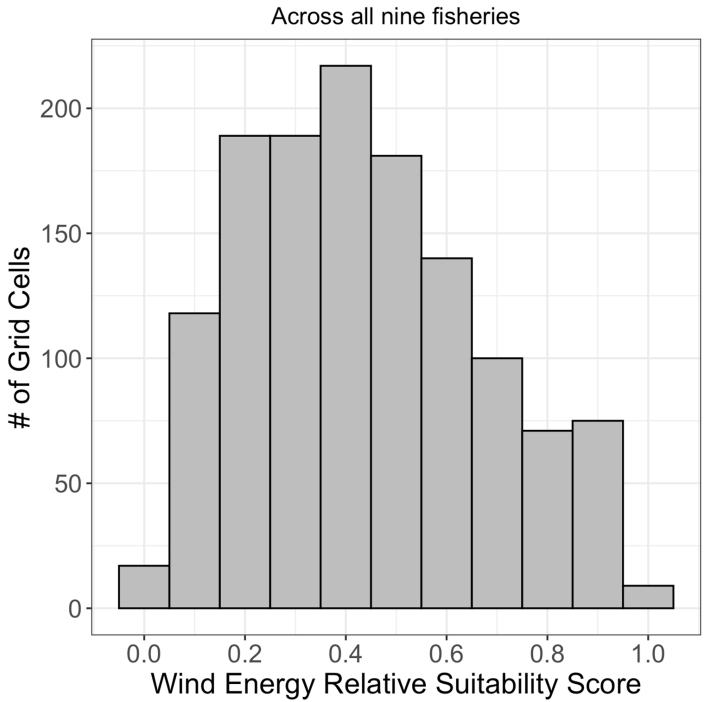
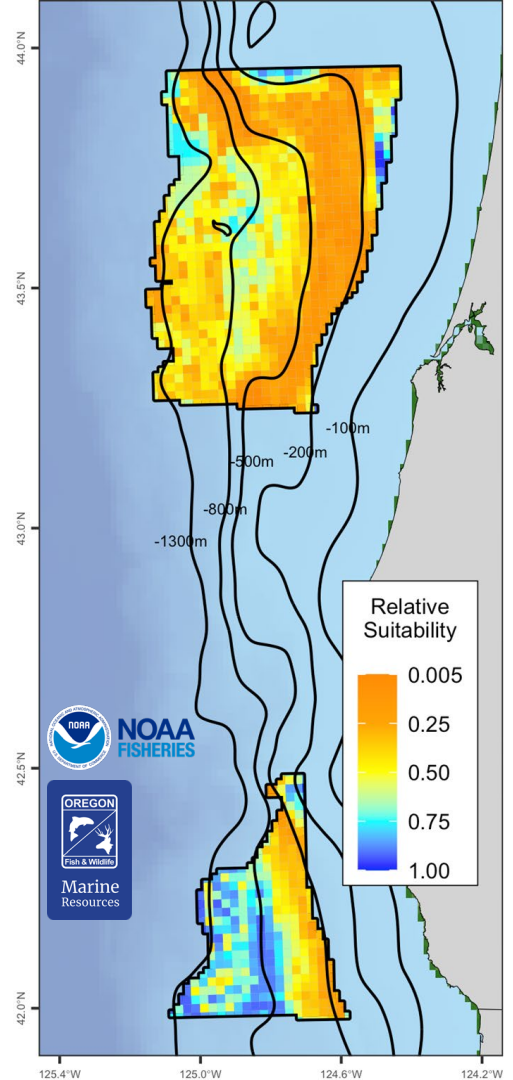


Combined fisheries submodel using Ranked Importance - “Baseline”

More overlap with fisheries



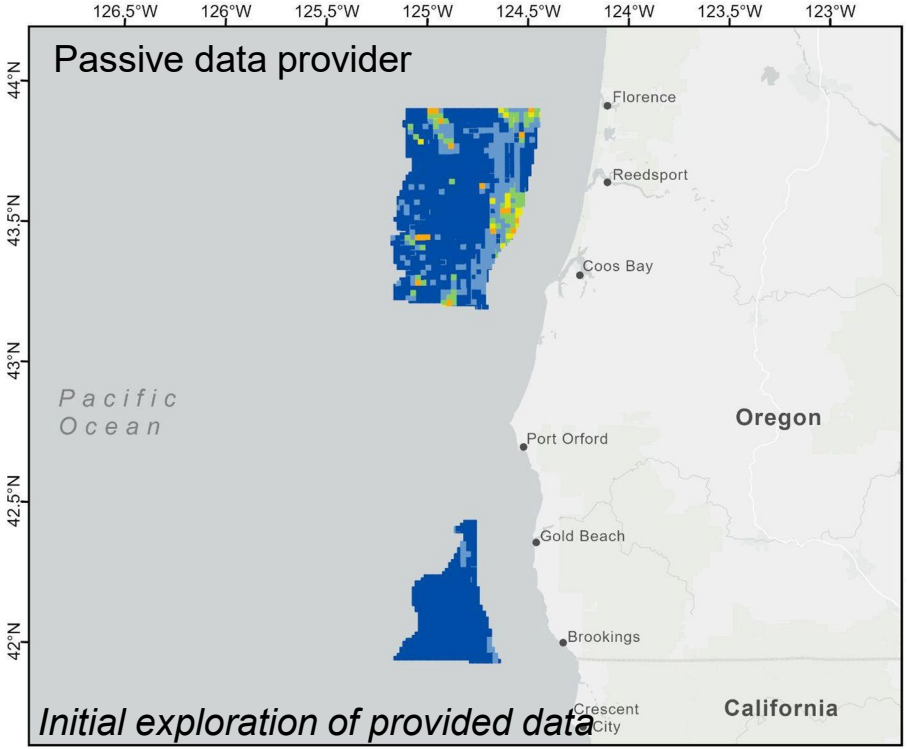
Less overlap with fisheries

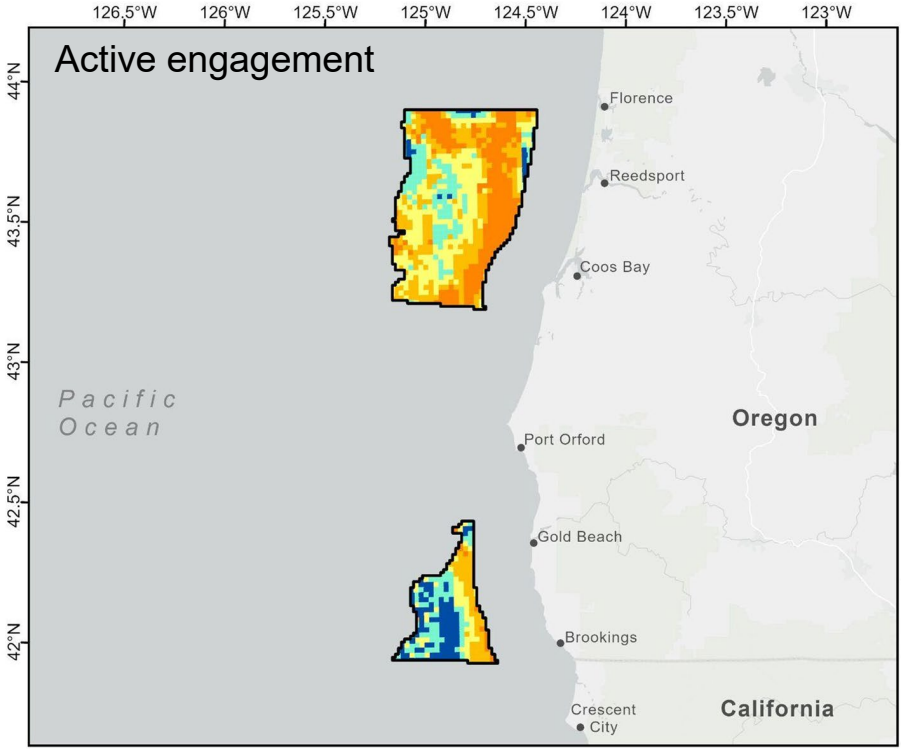


Less suitable to OWE ⟷ More suitable to OWE

Important to have fisheries expertise at the table

Warm colors = more suitable to fisheries





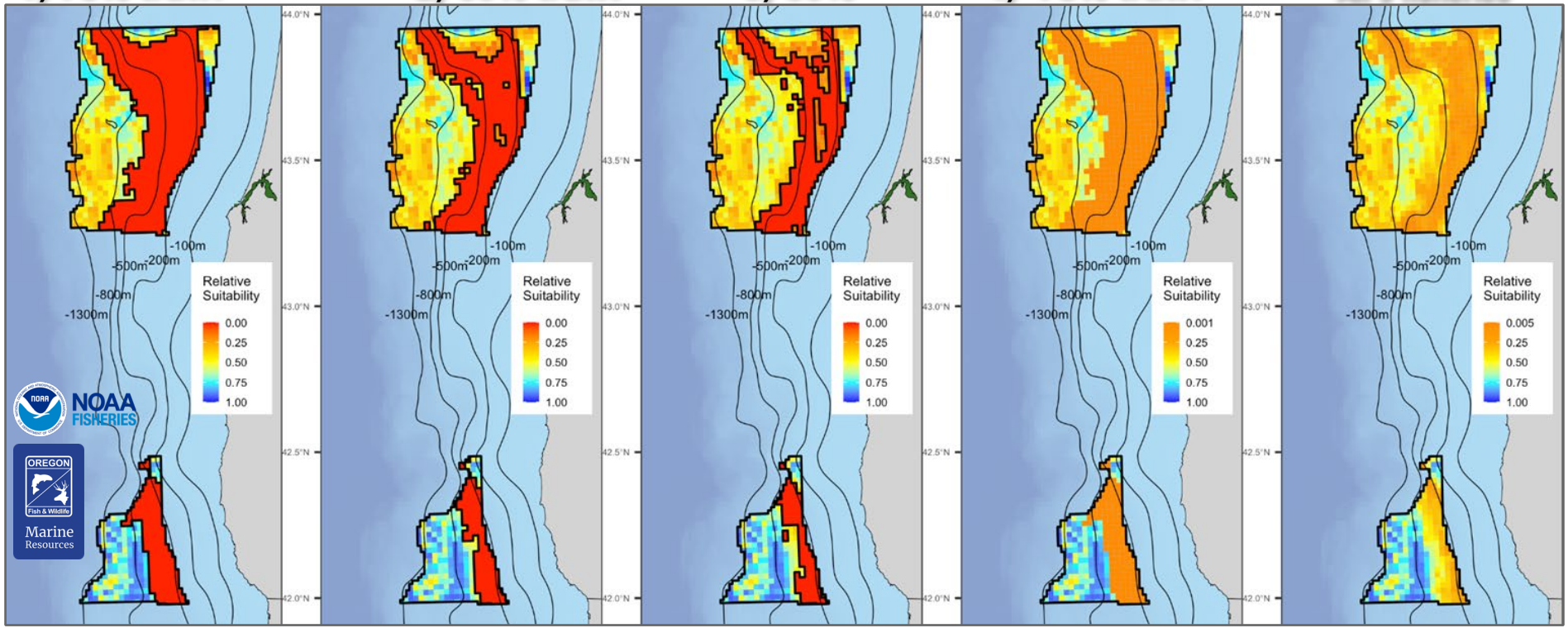
Fisheries Constraints Recommendations

Options for BOEM's Consideration

CONSTRAINT (score = 0)

Score = 0.001

1) 75% trawl | **2) 60% trawl** | **3) 50%** | **4) 75% trawl** | **5) Baseline** All 9 fisheries



Percent calculation = ranked importance of the combined revenue & effort for the 4 trawl fisheries

Thank you. Questions...

Contact

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