OREGON Fish & Wildlife
Marine Resources

Monitoring Oregon's nearshore fish for now and the future

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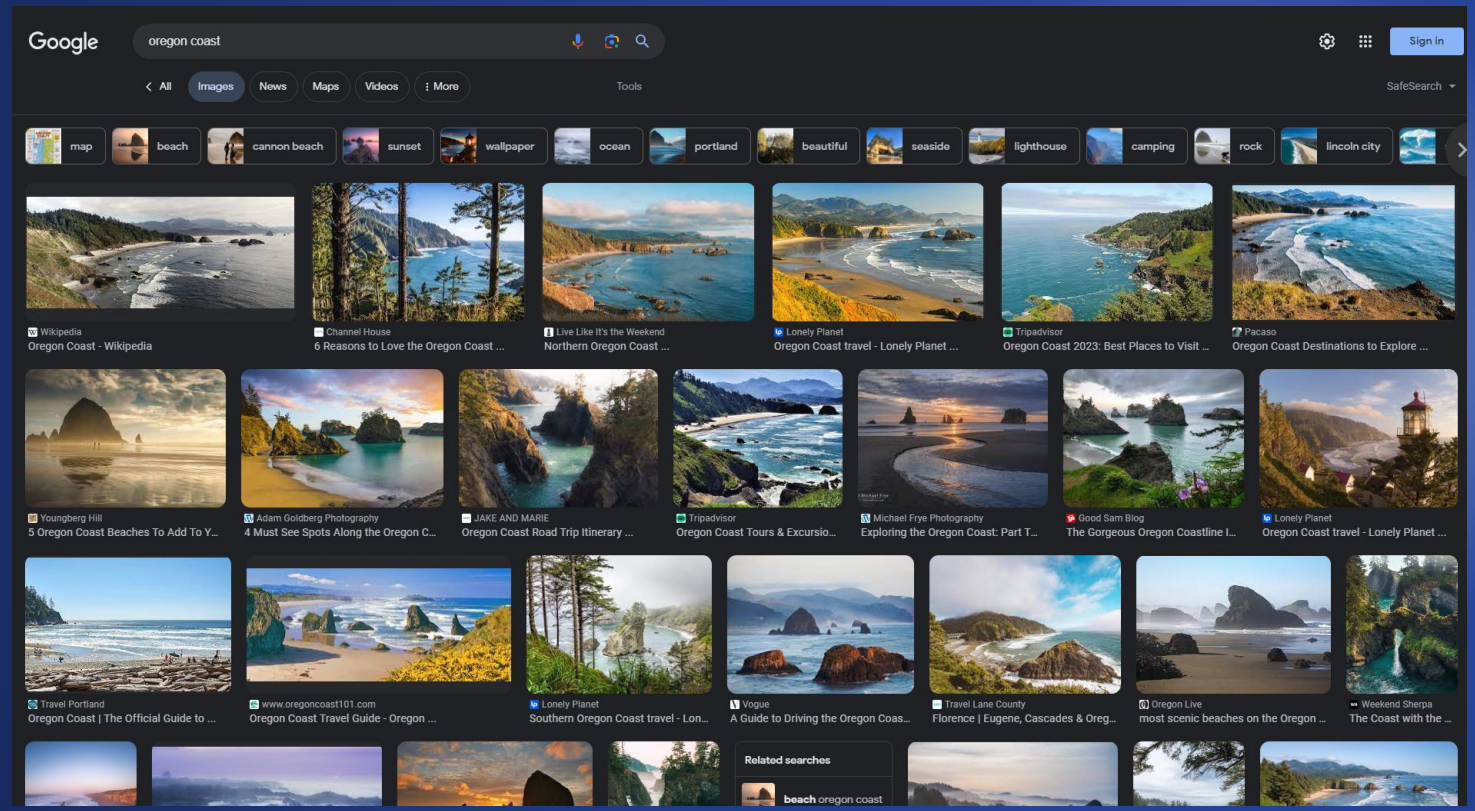
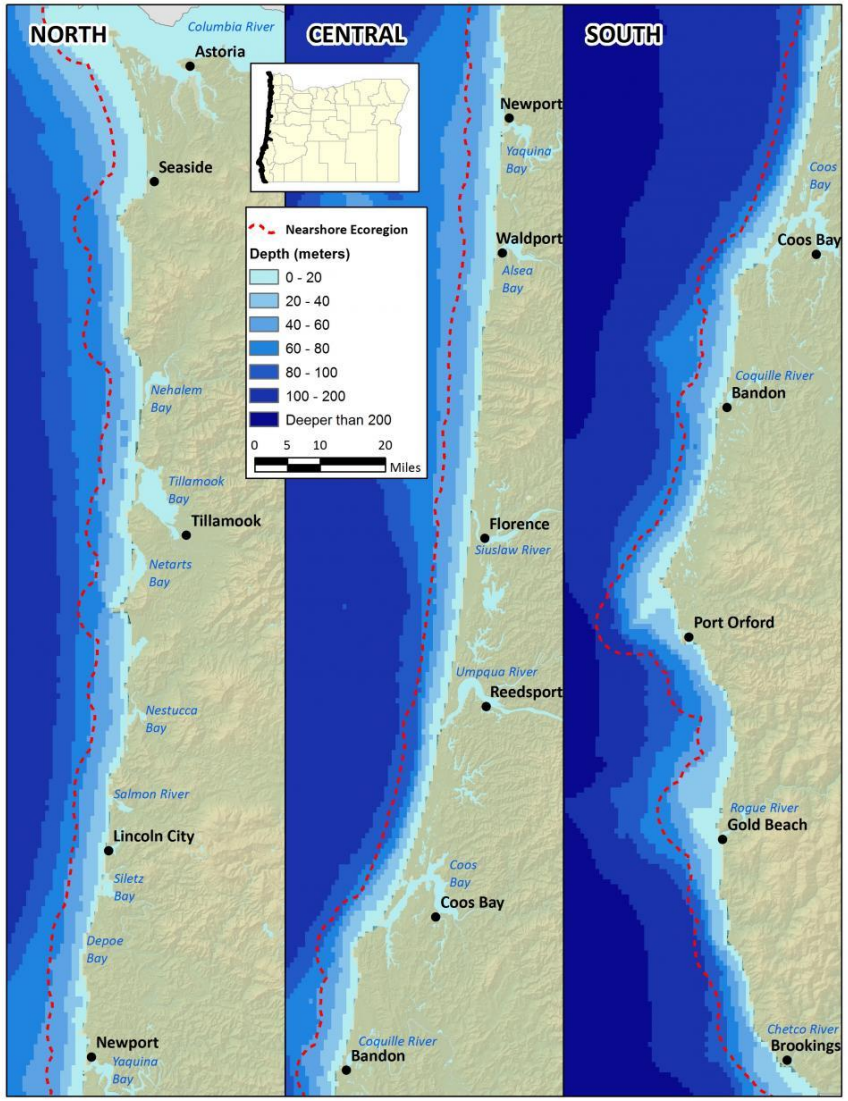
Why the nearshore?

- These are our waters!!



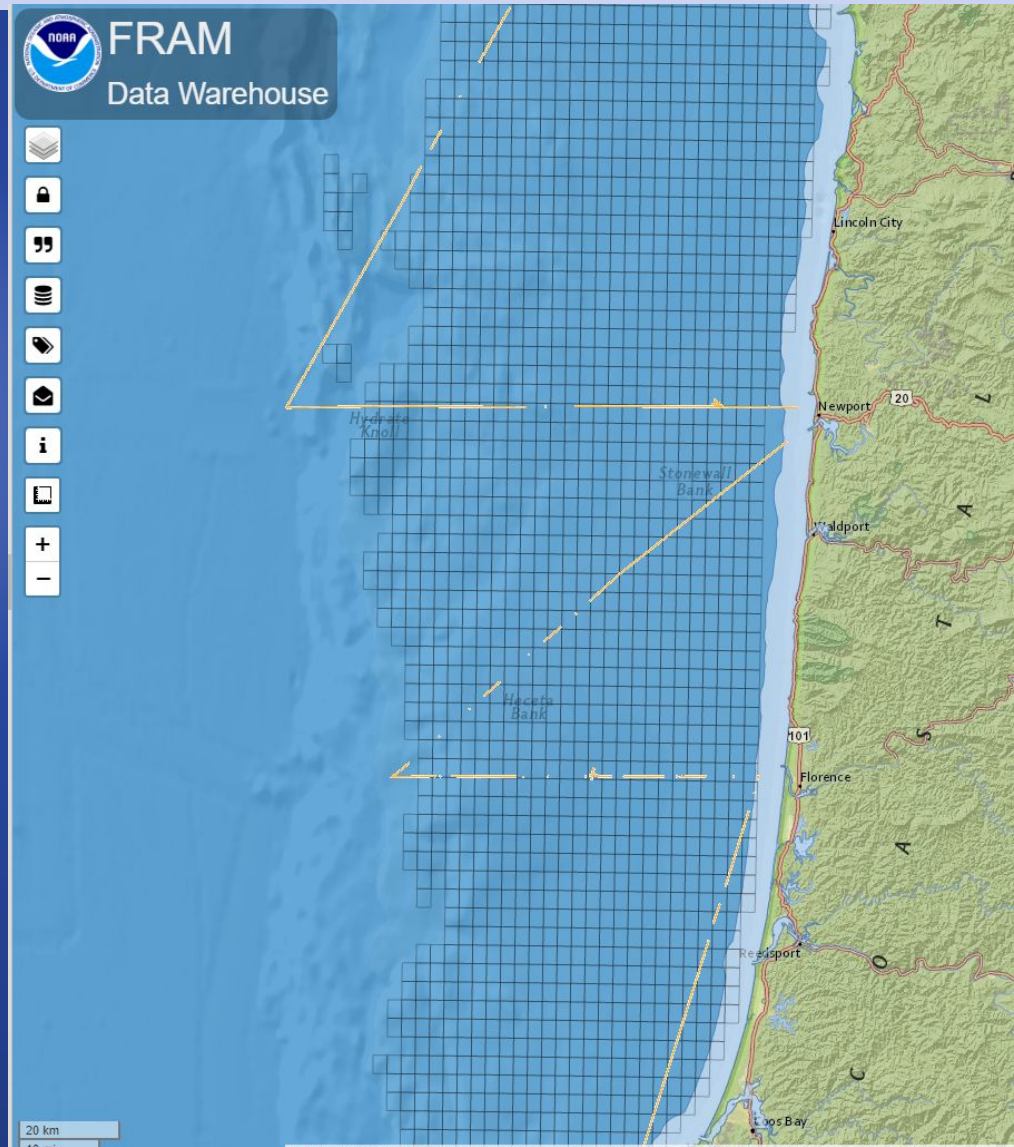
- For this talk will treat state waters ≈ nearshore



Fisheries surveys.

- Many great surveys but nearshore is missing.

INTERNATIONAL PACIFIC HALIBUT COMMISSION



A tale of two stock assessments.

Kelp Greenling

- 2015 assessment
- Early runs suggest population is at low numbers
- Intrepid ODFW scientist traps small fish and adds to assessment
- Stock size increases 3 fold

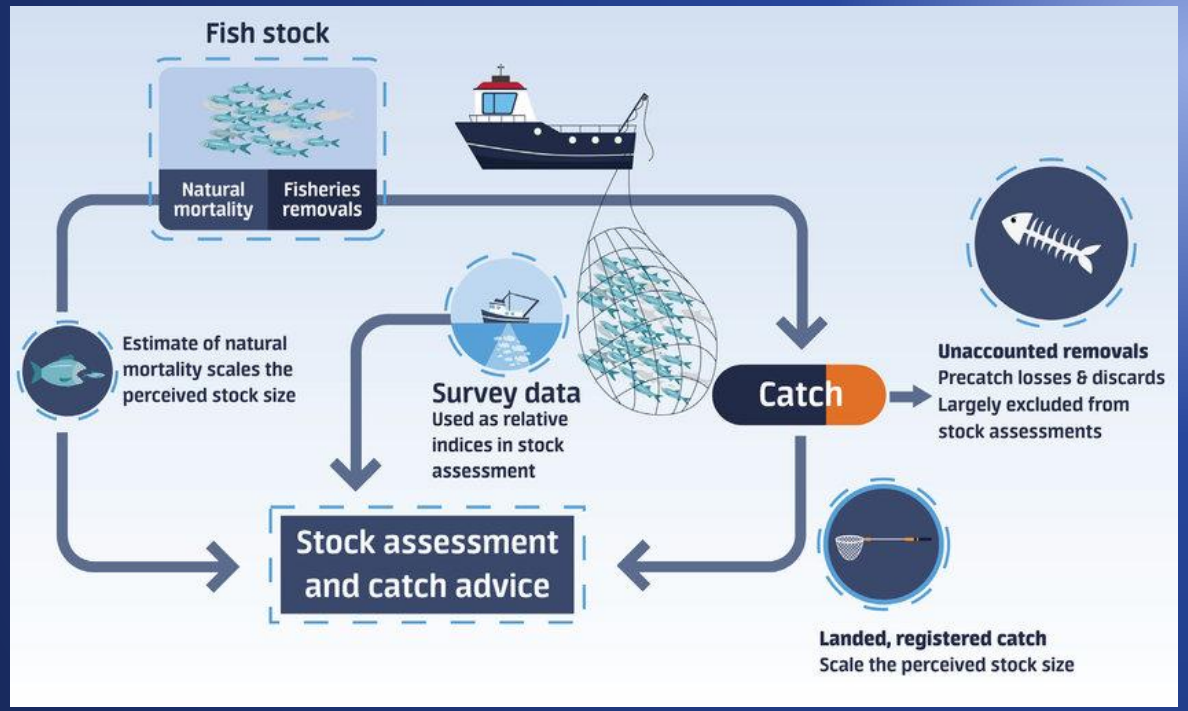
A tale of two stock assessments.

Blue & Deacon Rockfish

- 2017 assessment
- Early run suggest low stock size
- Suggestion to use count data in development to inform abundance
- Model says equal probability of any size population!

What do we learn?

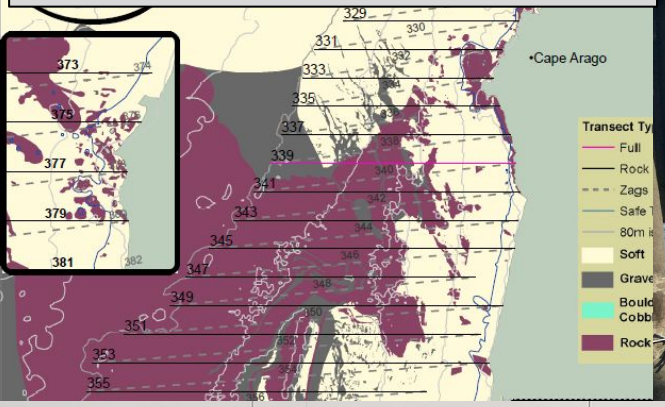
- **Including scientific data lets us do a better job**
- **Most nearshore stocks don't have these data**
- **#1 request is for survey data for nearshore**



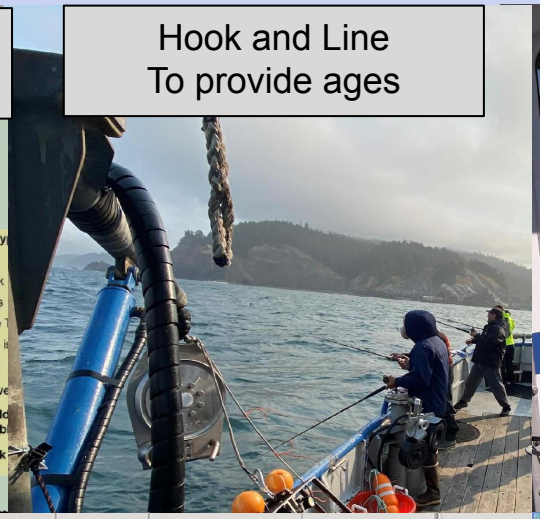
- "A fisheries-independent nearshore survey should be supported to improve estimates of abundance trends" (Blue/Deacon Rockfish assessment by Dick et al. 2017)
- "A survey in untrawlable habitat and/or a near shore survey would improve this stock assessment." (Lingcod assessment by Haltuch et al. 2017)
- "Develop and implement a comprehensive visual survey, as currently available bottom trawl surveys do not encounter Yelloweye" (Yelloweye Rockfish assessment by Gertseva and Cope 2017)
- "An independent nearshore survey should be supported in all states to avoid the reliance on fishery-based CPUE indices." (Black Rockfish assessment by Cope et al. 2016)
- "Consider the development of a fishery-independent survey for nearshore stocks." (China Rockfish assessment by Dick et al. 2016)
- "Fishery-independent surveys of abundance for nearshore species, including Kelp Greenling, would provide information about population" (Kelp Greenling assessment by Berger et al. 2015)
- "A fishery-independent nearshore survey should be supported to improve estimates of abundance trends" (Cabezon assessment by Cope et al. 2019)

Testing the hypothesis: 2021 Black rockfish survey

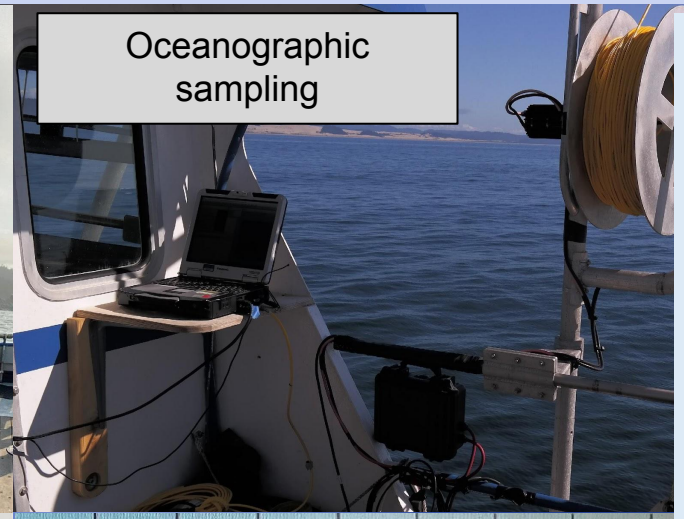
Transects:
WA to CA mostly on rock

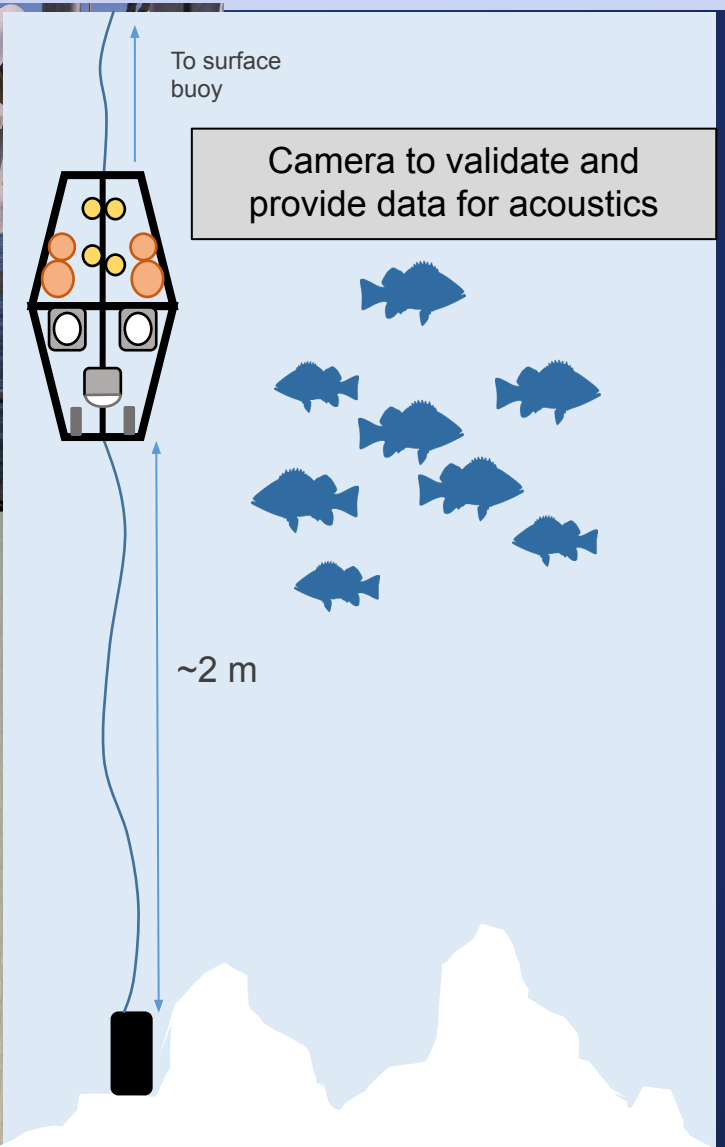


Hook and Line
To provide ages



Oceanographic sampling



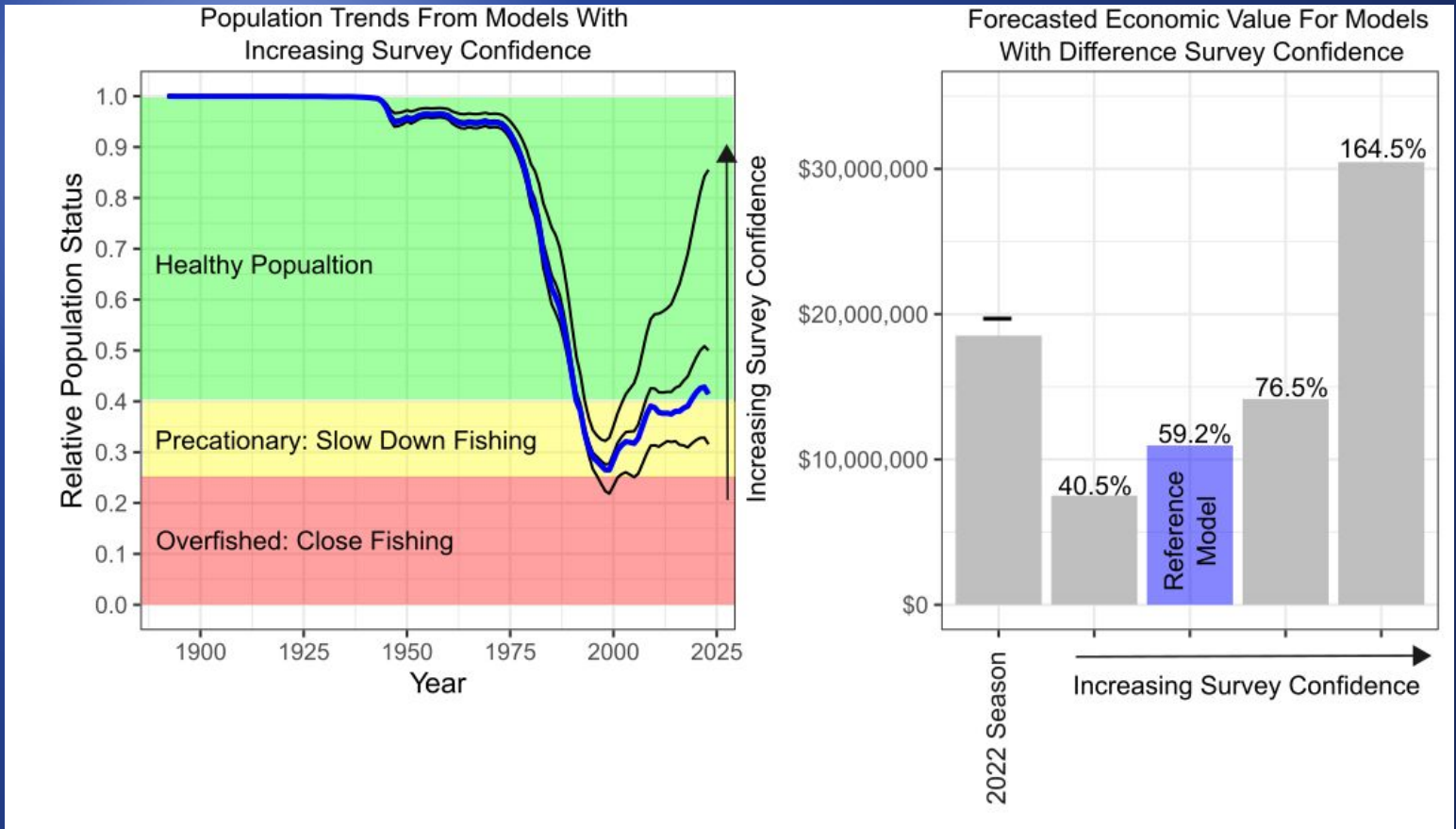


Survey Vessels

What did the data teach us

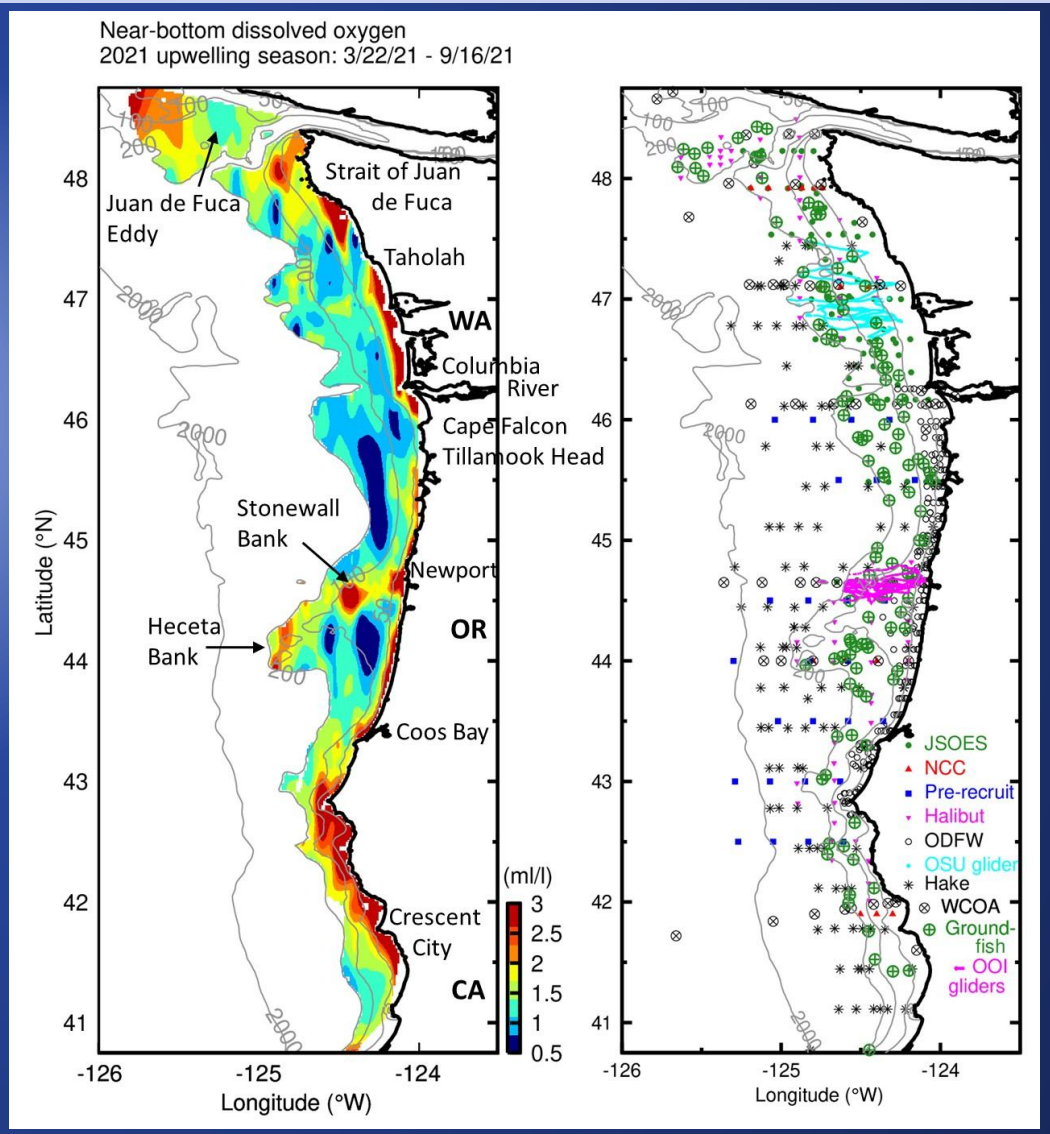
- Developed prediction of number of fish in Oregon
- Used in current stock assessment
- Kept us above precautionary

Region	Number of Fish
North	3,295,261
Central	101,550
South	9,598,649
Combined Regions	12,995,459



The lessons

- Surveys give us critical data
- Give us insight into the ocean
- Other species e.g. black rockfish have data on forage fish.



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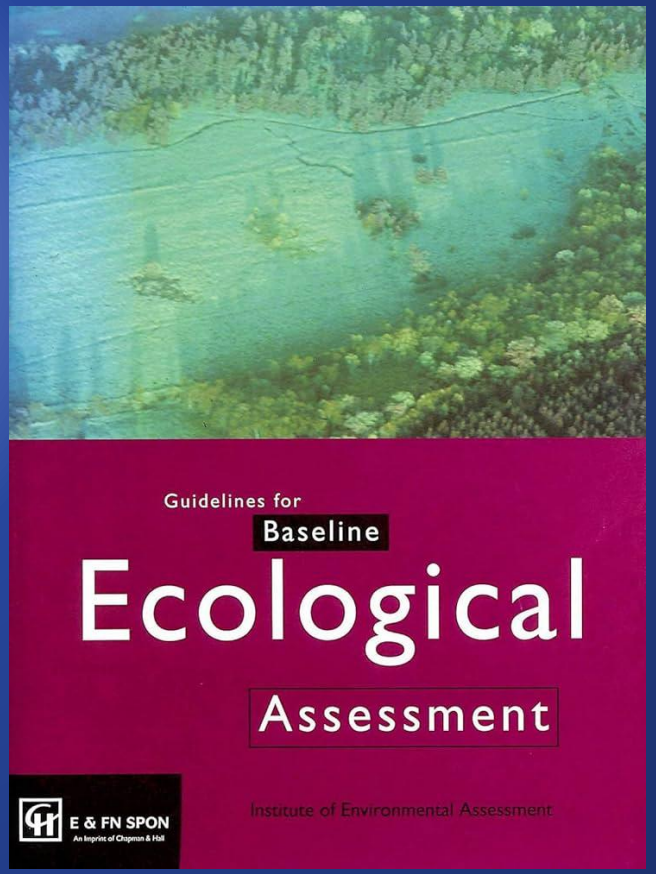
The present and the need:

Reduce Uncertainty:

(Promote Consistency)

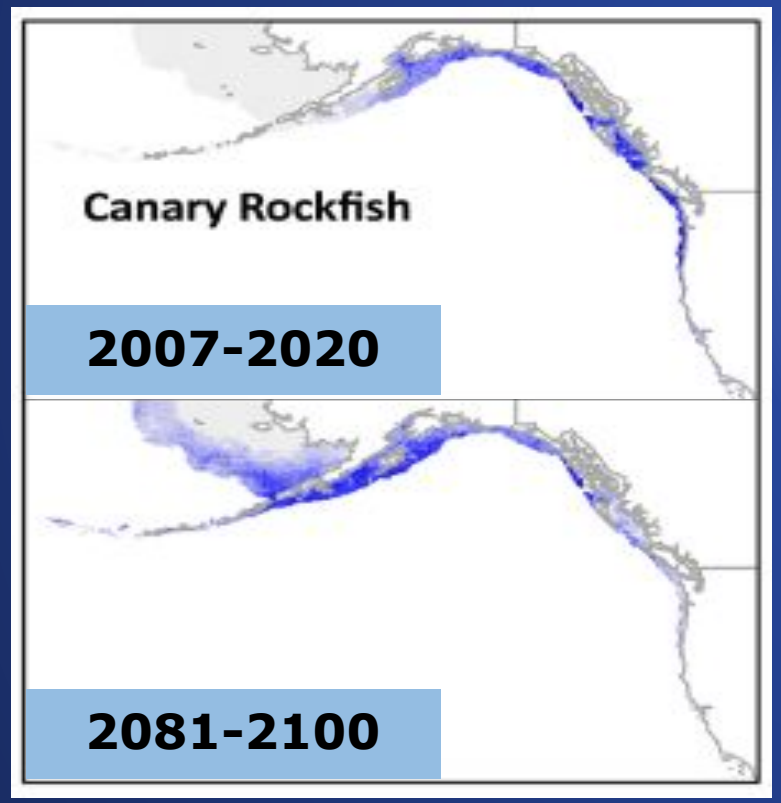
SUSTAINABLE FISHERIES

Baselines



The future and the need: Moving stocks

Loss of stocks



Morley et al. 2018

New stocks

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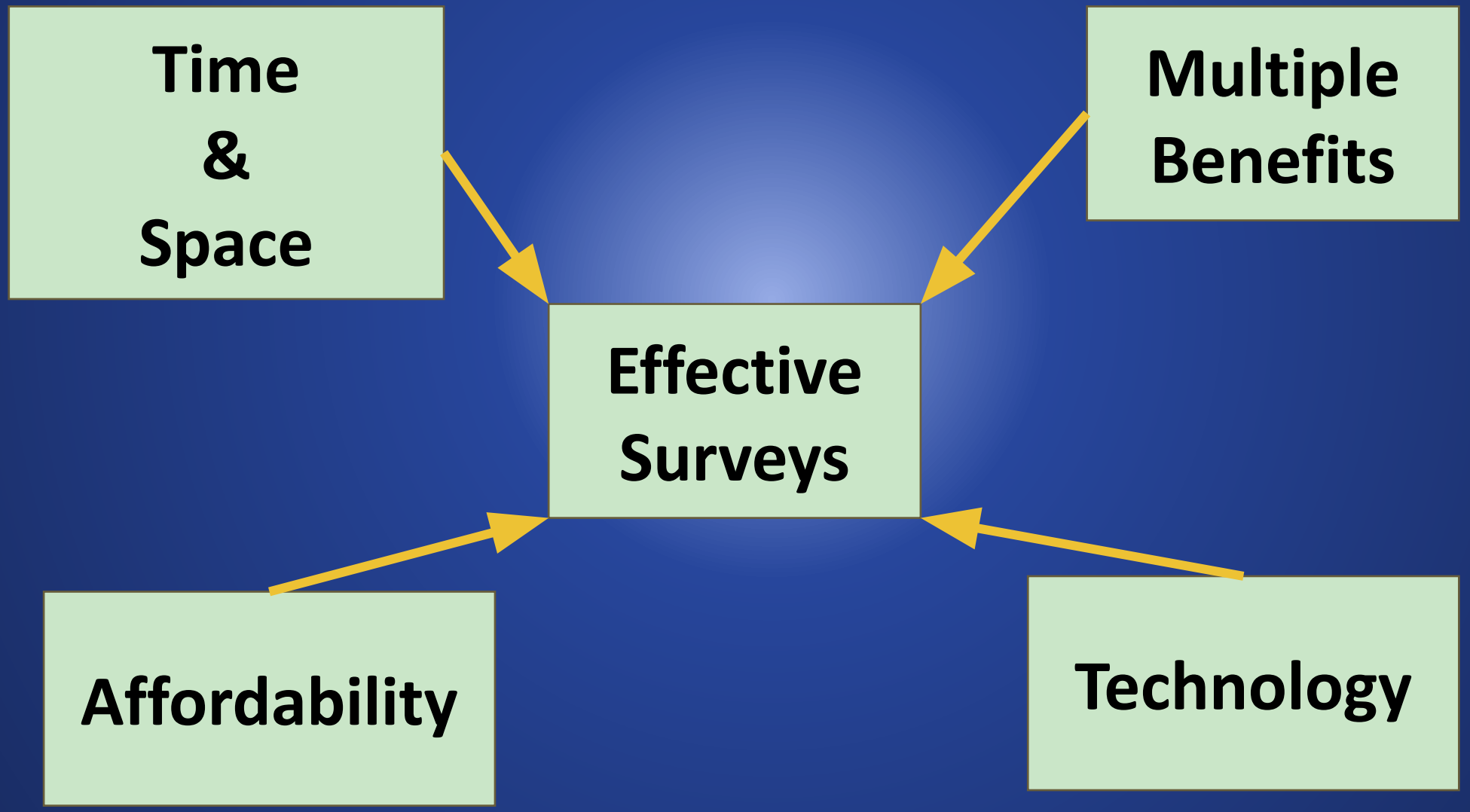
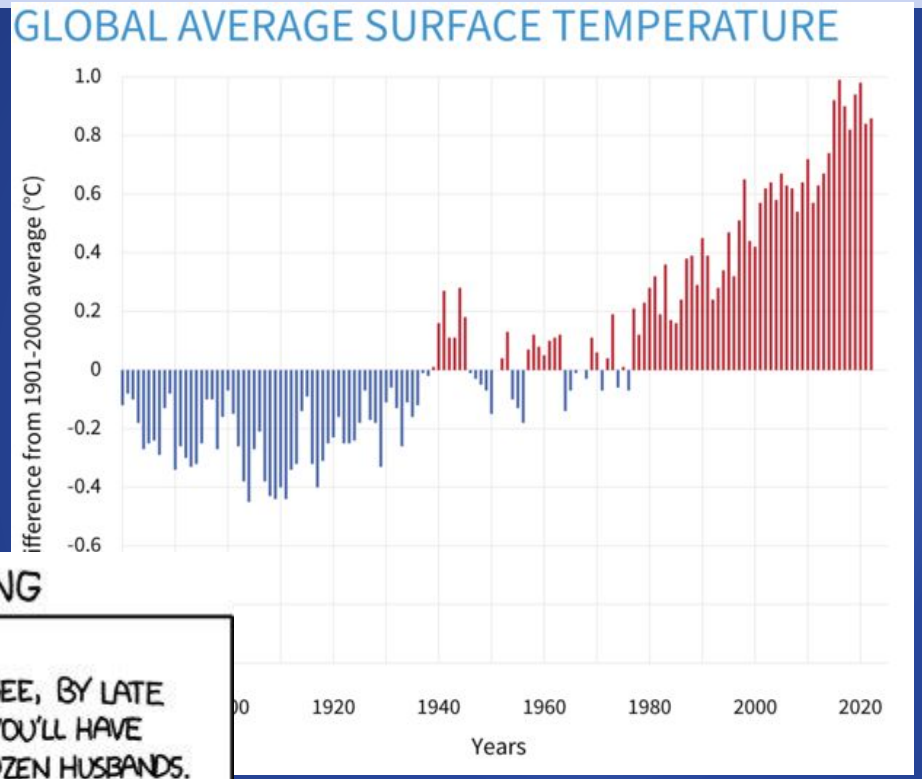
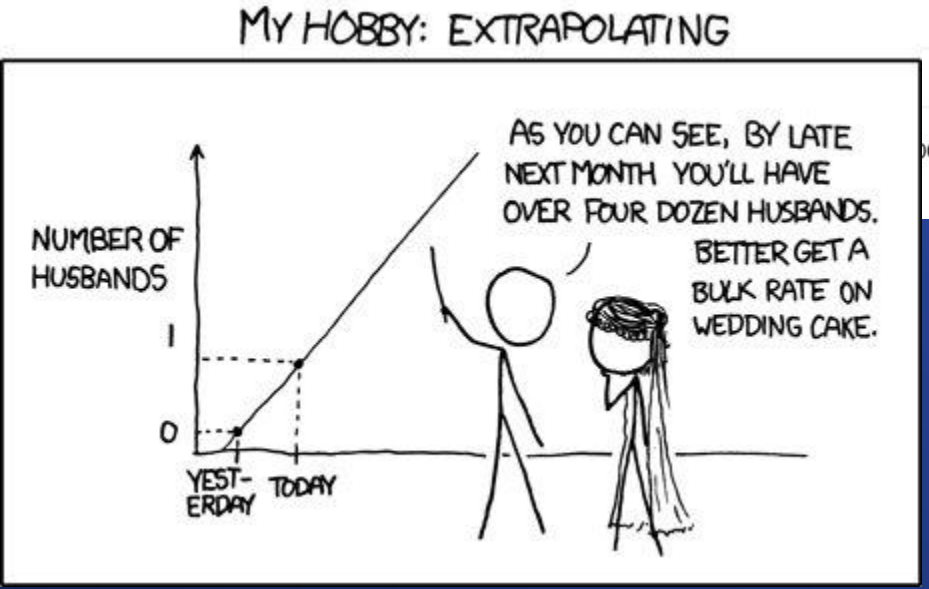
How do we achieve this?



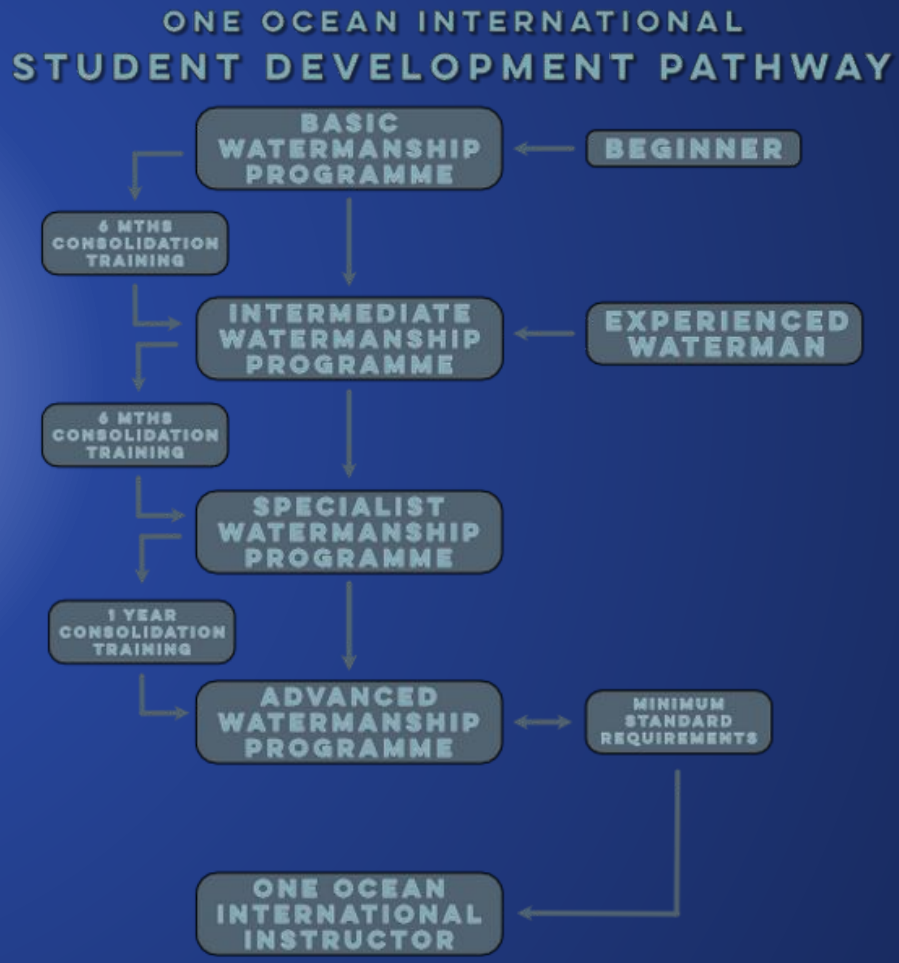
How do we achieve this: Time and Space



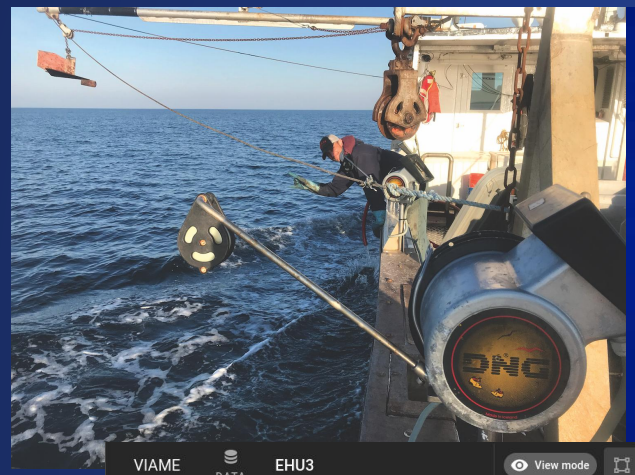


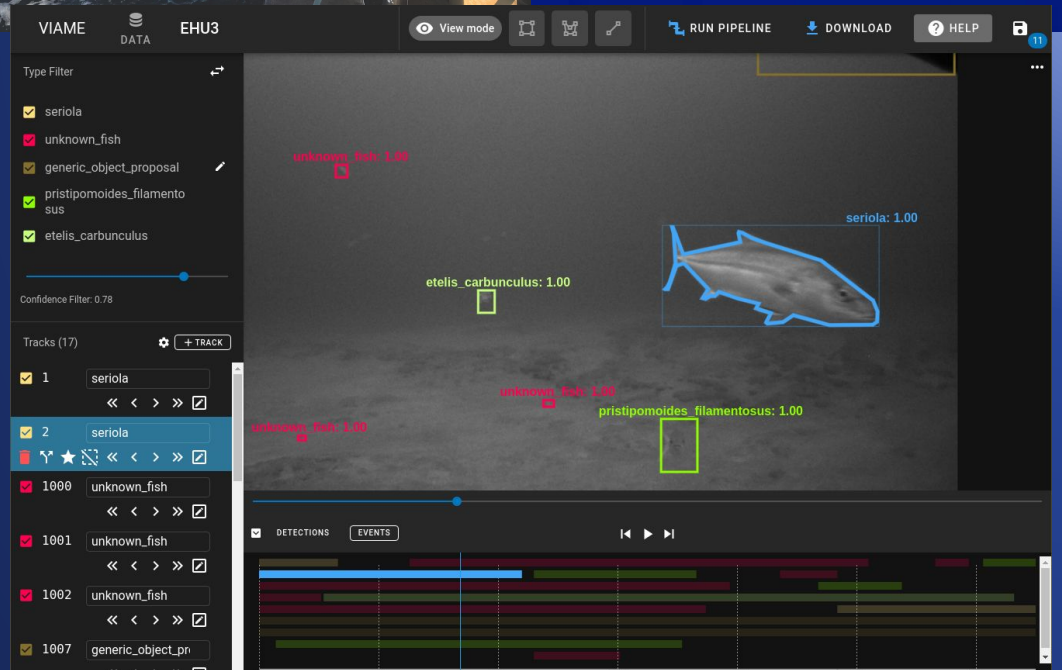
How do we achieve this: Affordability

- Boats contracted 24 hrs
  - Work all day
- Provide opportunities

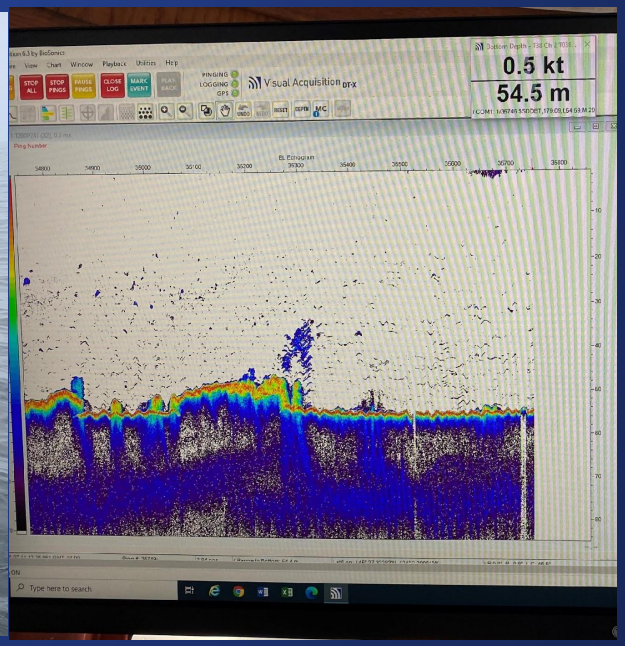


How do we achieve this: Technology



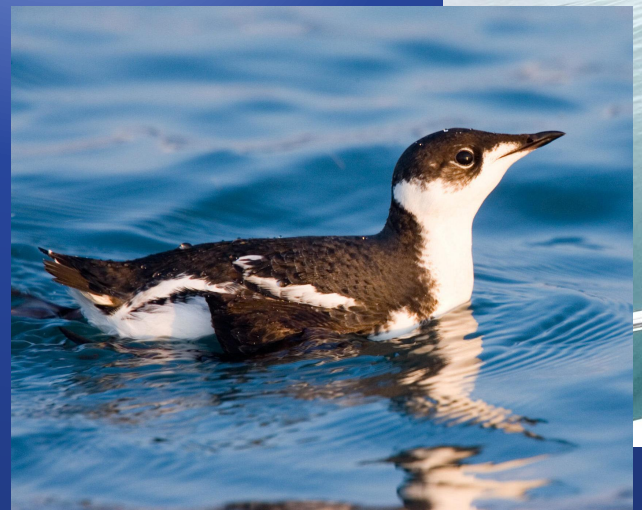


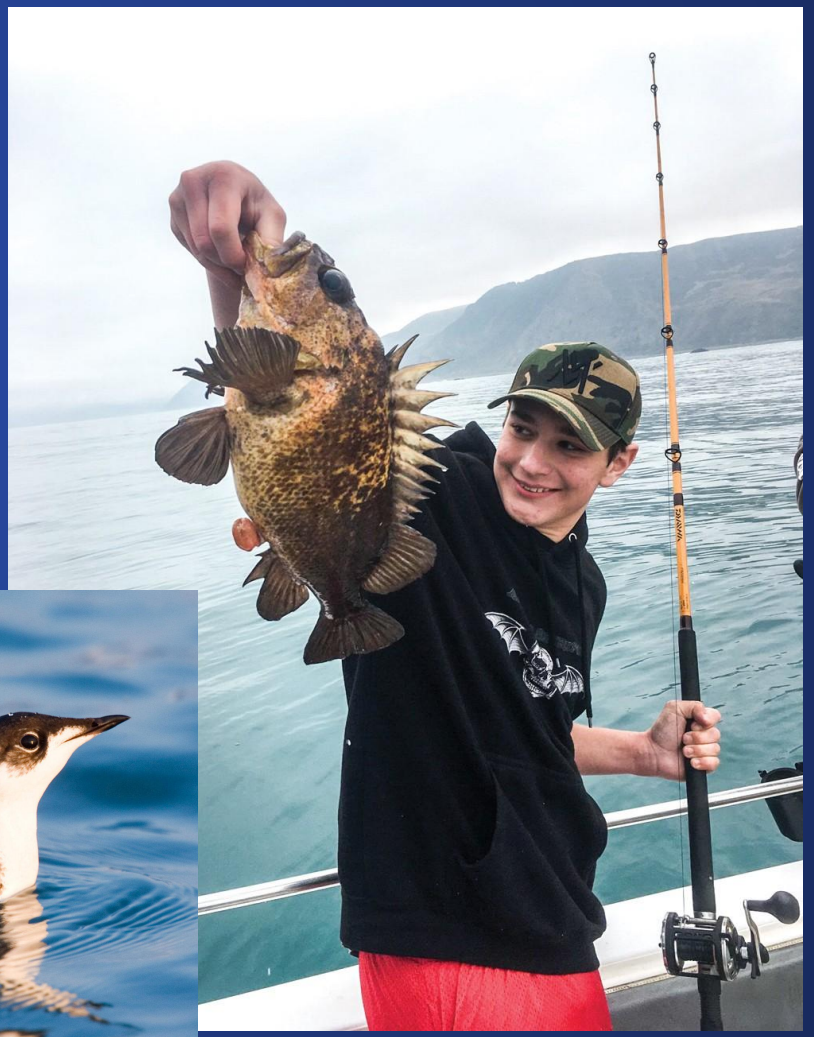
- Reduce impacts
- Reduce staff at sea
- Reduce staff time processing



How do we achieve this: Multiple Benefits

- What other species can you learn about
- Add other equipment?
- Take samples for people?





Wrap up

Surveys for now

- Use technology to make them efficient
- Run boats 24 hours
- Surveys can promote sustainability
- Provide baselines

Surveys for the future

- Important need to allow for adaptive management

Thank you!

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