Science to Support Aquaculture Opportunity Areas

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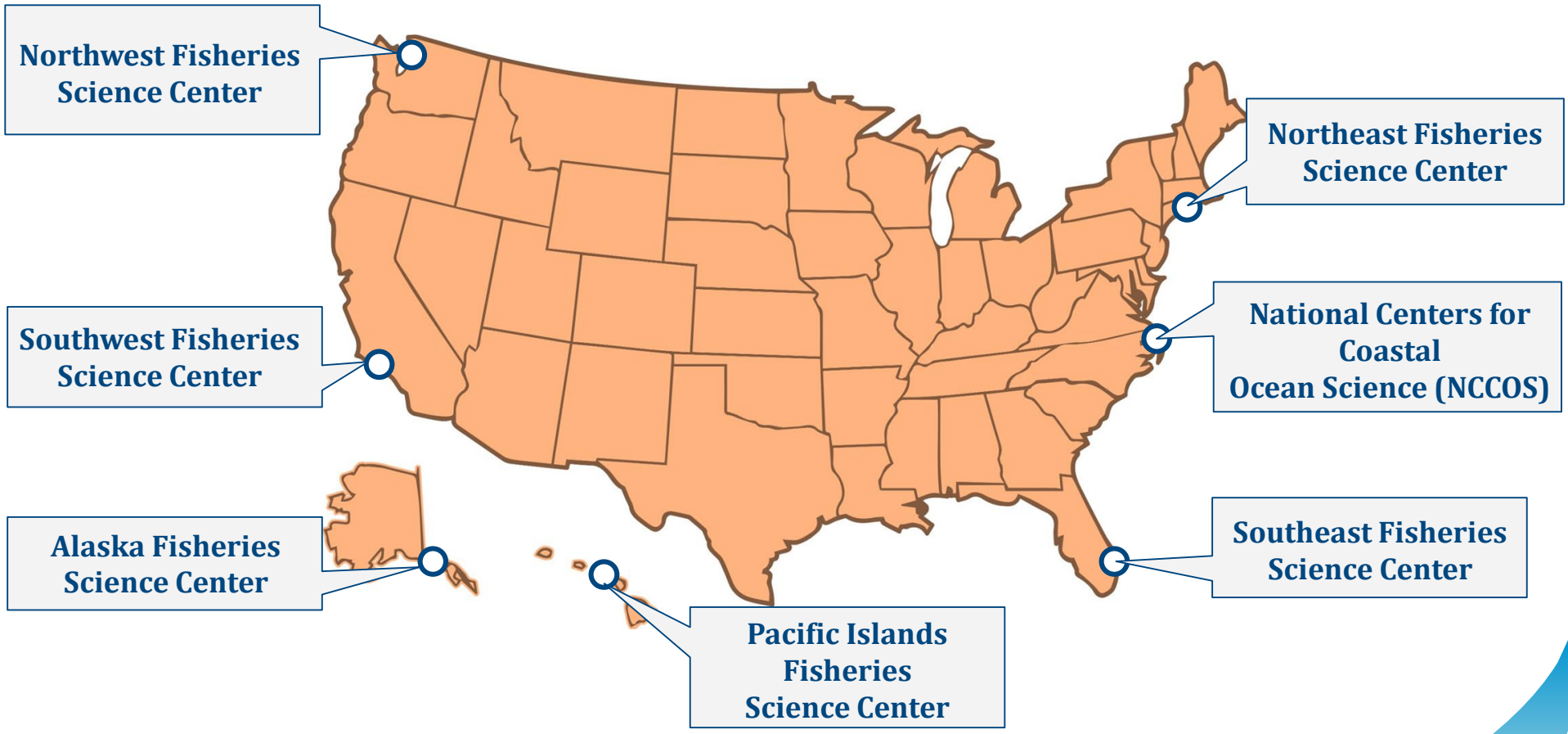
NOAA Aquaculture Science Assets



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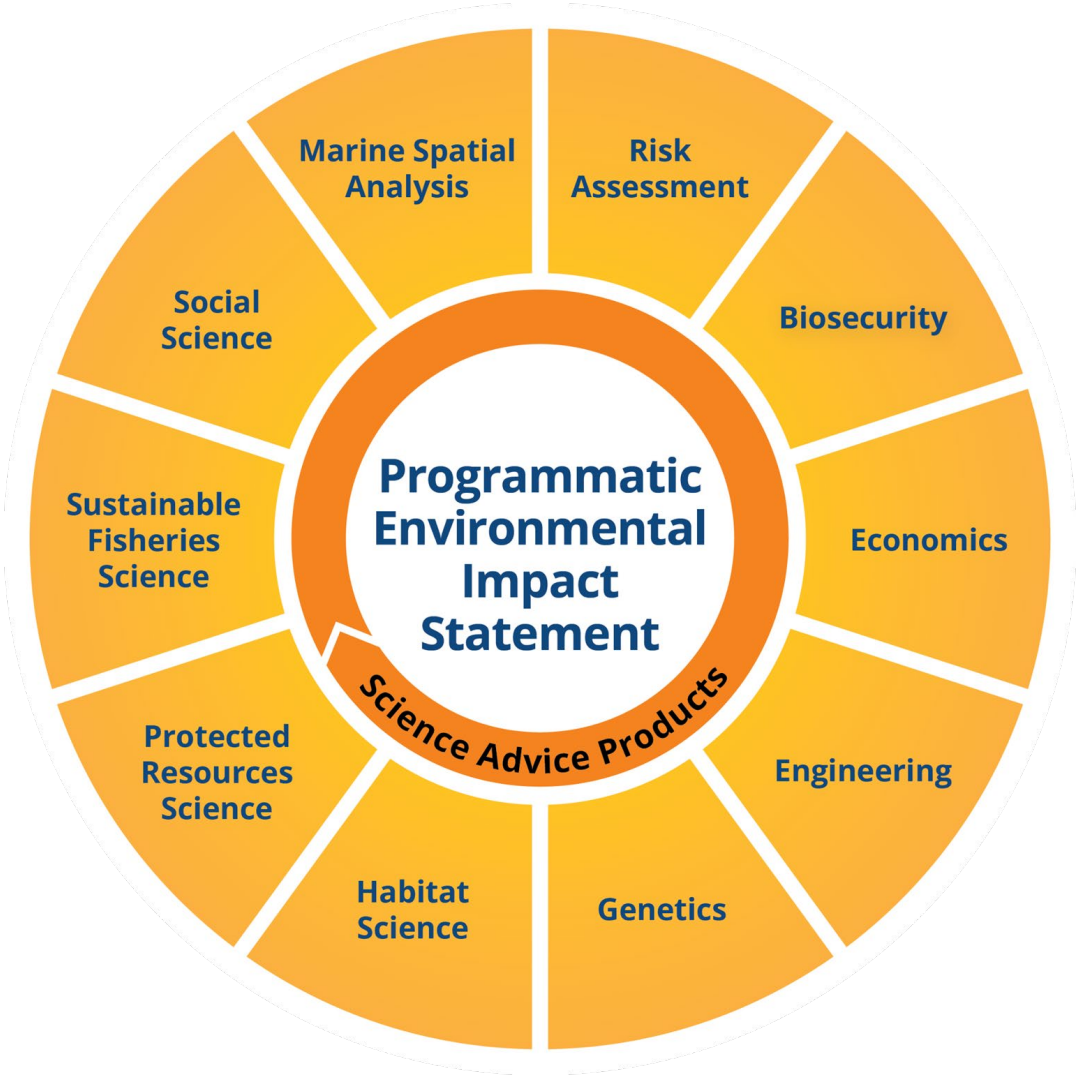
Science for AOAs Capabilities



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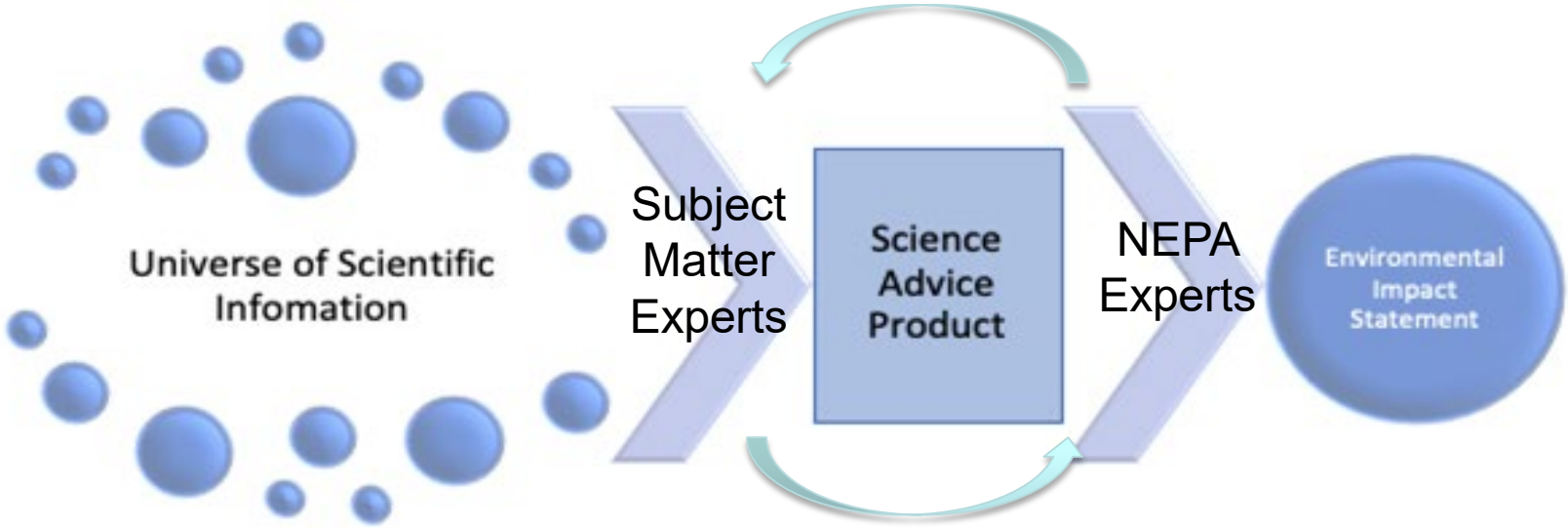
A collaborative 'Science Advice' model



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What is ‘science advice’?

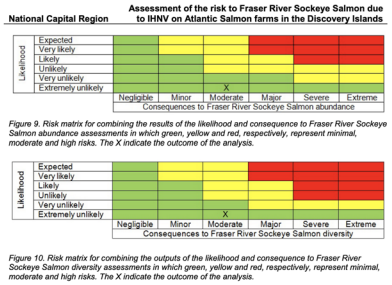
Subject Matter Expert Consultation | **Annotated Bibliography** | **Model Runs** | **BMP Guidance** | **Models** | **Risk Assessments**

Nimble Response

Less Depth of Information

Lengthier Development

Greater Depth of Information



National Capital Region — Assessment of the risk to Fraser River Sockeye Salmon due to IHNV on Atlantic Salmon farms in the Discovery Islands

Likelihood	Negligible	Minor	Moderate	Major	Severe	Extreme
Expected						
Very likely						
Likely						
Unlikely						
Very unlikely						
Extremely unlikely			X			

Consequences to Fraser River Sockeye Salmon abundance

Figure 9. Risk matrix for combining the results of the likelihood and consequence to Fraser River Sockeye Salmon abundance assessments in which green, yellow and red, respectively, represent minimal, moderate and high risks. The X indicate the outcome of the analysis.

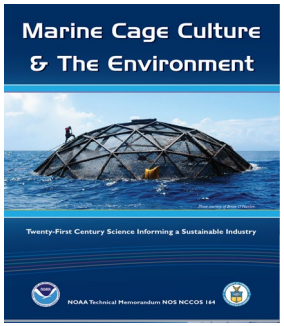
Likelihood	Negligible	Minor	Moderate	Major	Severe	Extreme
Expected						
Very likely						
Likely						
Unlikely						
Very unlikely						
Extremely unlikely			X			

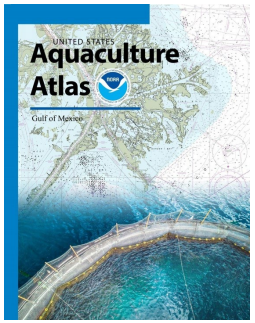
Consequences to Fraser River Sockeye Salmon diversity

Figure 10. Risk matrix for combining the outputs of the likelihood and consequence to Fraser River Sockeye Salmon diversity assessments in which green, yellow and red, respectively, represent minimal, moderate and high risks. The X indicate the outcome of the analysis.

Aquaculture

Bivalve aquaculture and eelgrass: A global meta-analysis





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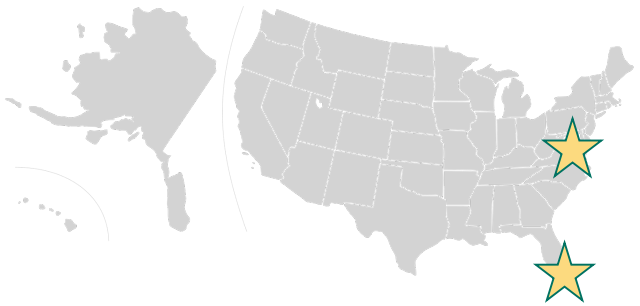
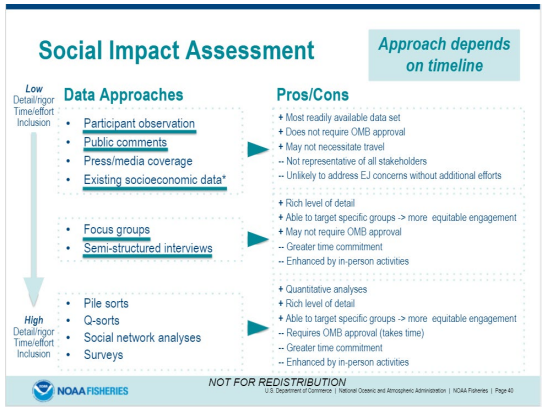
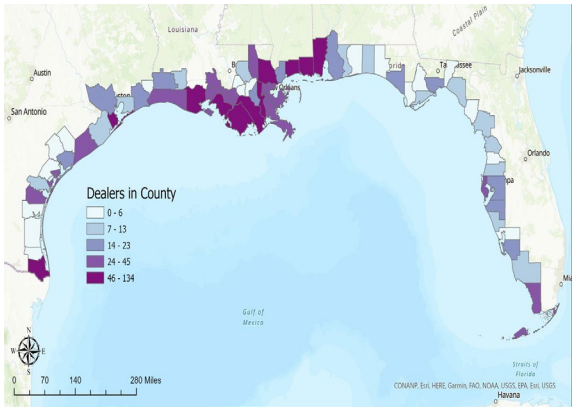
Social Science



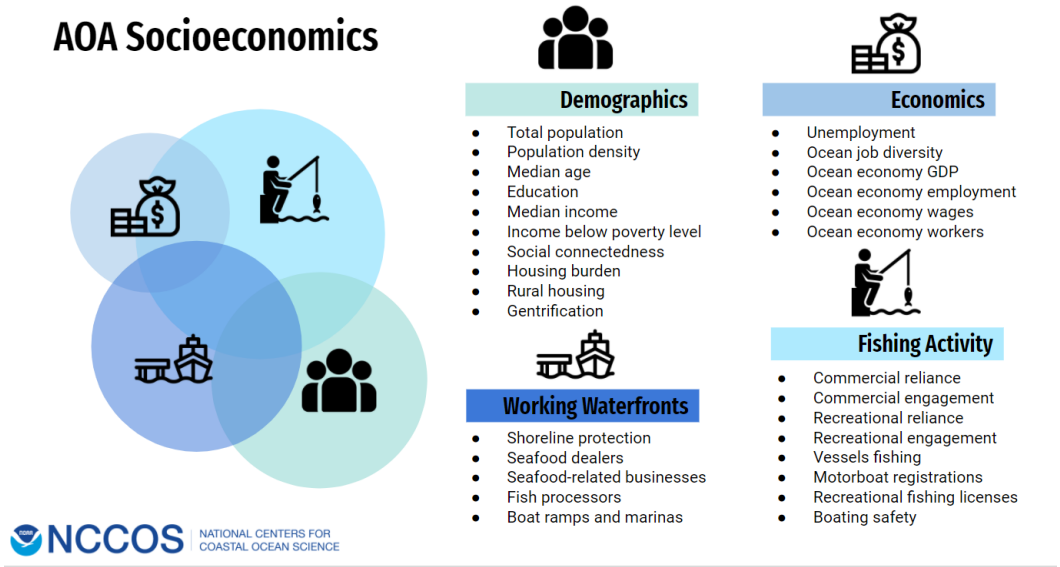


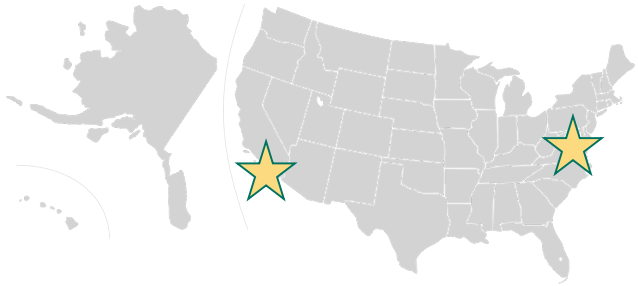


Position: Aquaculture Social Scientist (Contractor)
Location: Social Science Research Group, Southeast Fisheries Science Center
Objectives: Strengthen aquaculture social science analytical capacity

Project: Advancing socioeconomic indicators for aquaculture in the Gulf
Location: National Centers for Coastal Ocean Science Oxford Lab
Objectives: Apply meaningful socioeconomic spatial indicators to support AOA identification and characterization

Economics



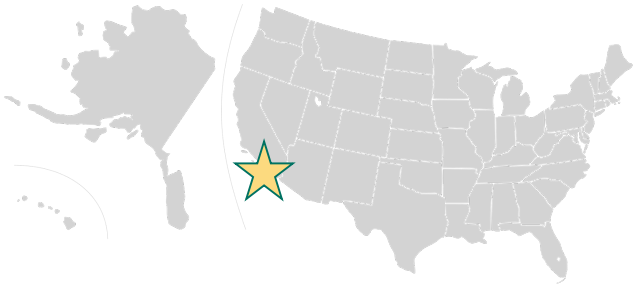


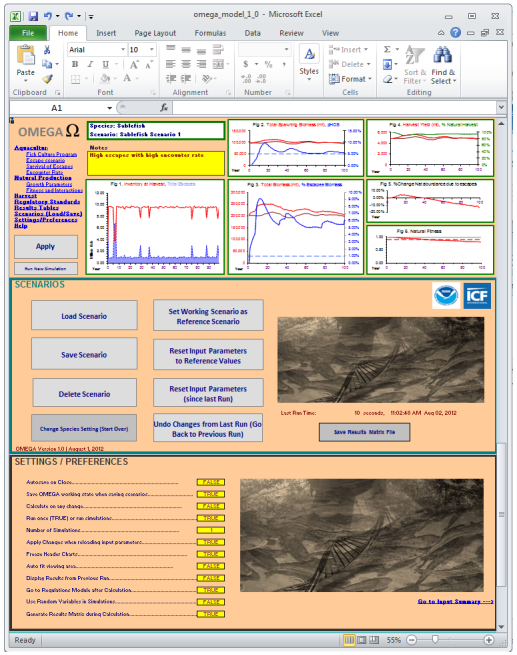
Position: Aquaculture Economist (Contractor)
Location: Economics and Social Science Program, Southwest Fisheries Science Center
Objectives: Strengthen aquaculture economic analysis capacity

Project: A framework to improve socioeconomic impact modeling in the Gulf of Mexico
Location: Social Science Research Group, Southeast Fisheries Science Center
Objectives: Strengthen socioeconomic modeling capacity

Genetic Risks

Position: Genetic Risks Expertise (Contractor)
Location: Southwest Fisheries Science Center
Objective: Strengthen genetic risks capacity





Project: Advancing and applying the Offshore Aquaculture Escapes Genetics Assessment (OMEGA) model
Location: Southwest Fisheries Science Center
Objectives:

- Expand ability to estimate escape risks,
- Extend model to include other species of cultivation interest (i.e., seaweeds)

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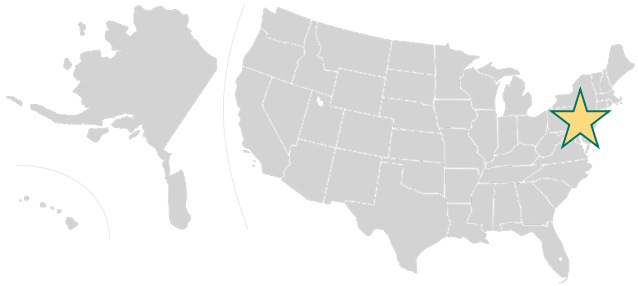
Engineering



Position: Aquaculture Engineer (Contractor)
Location: Northeast Fisheries Science Center
Objective: Strengthen aquaculture engineering capacity

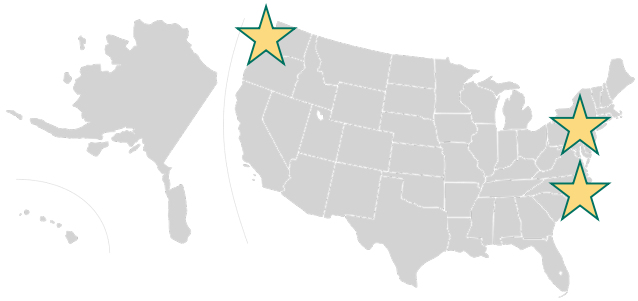
Project/Team: Aquaculture Engineering Guidelines
Location: Northeast Fisheries Science Center + Nationally
Objectives:

- Establish advisory team
- Develop guidelines framework
- Map path forward for guidelines development
- Operationalize guidelines

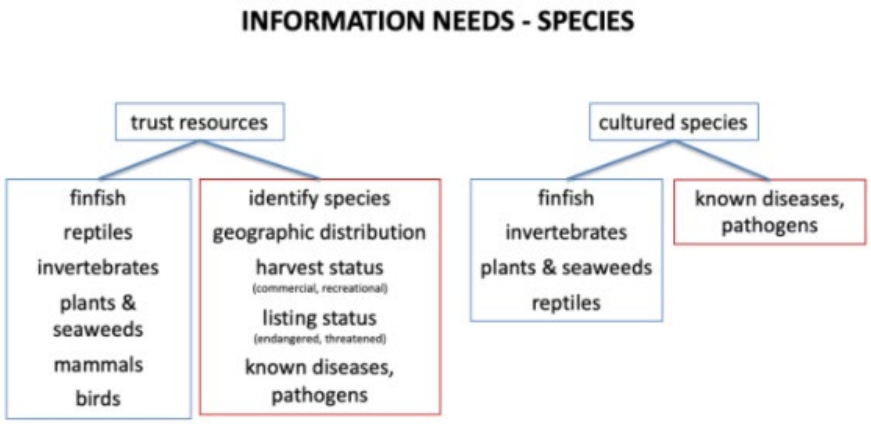
Disease and Biosecurity

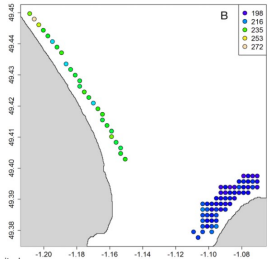
Team: Disease and Biosecurity 'Distributed Team'
Location: NWFSC/NEFSC/IASI
Objectives:

- Assess potential disease impacts
- Identify biosecurity practices
- Evaluate seafood safety considerations



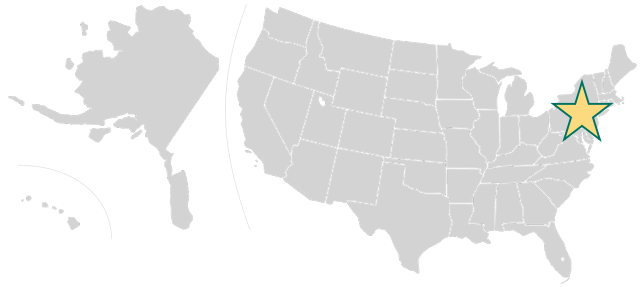
Project: Advancing aquaculture disease modeling
Location: NEFSC, NCCOS and other partners
Objectives: Build 'ocean epidemiology' capacity



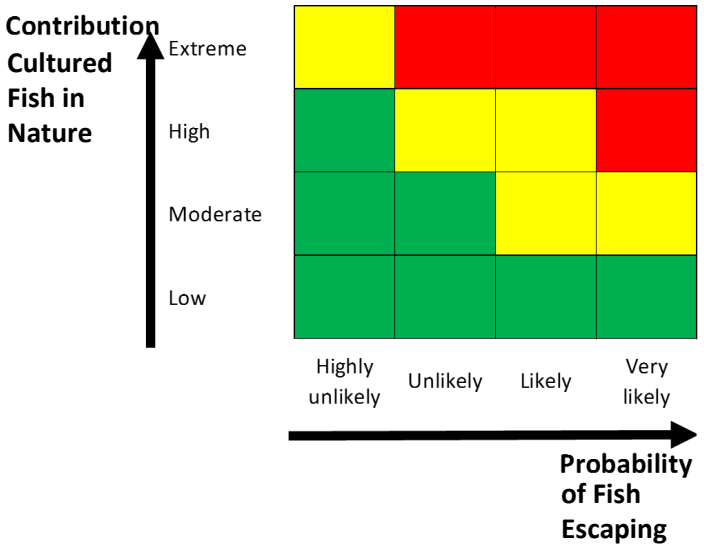


Risk Assessment

Position: Risk Assessment Specialist (Contractor)
Location: Northeast Fisheries Science Center
Objectives*:* Provide a consistent risk-based framework for science advice teams



Example of an Risk Matrix



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