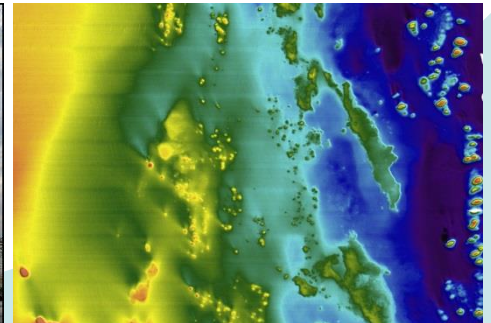




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# South Atlantic Climate Vulnerability Assessment

- National Climate Science Strategy and South Atlantic Climate Science Regional Action Plan
- Determine which stocks/species will respond with a shift in abundance or productivity to a changing climate.





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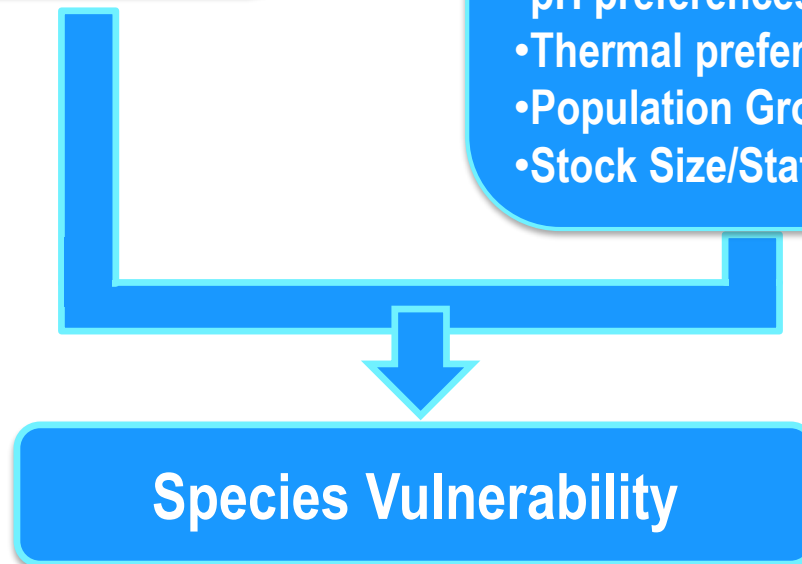
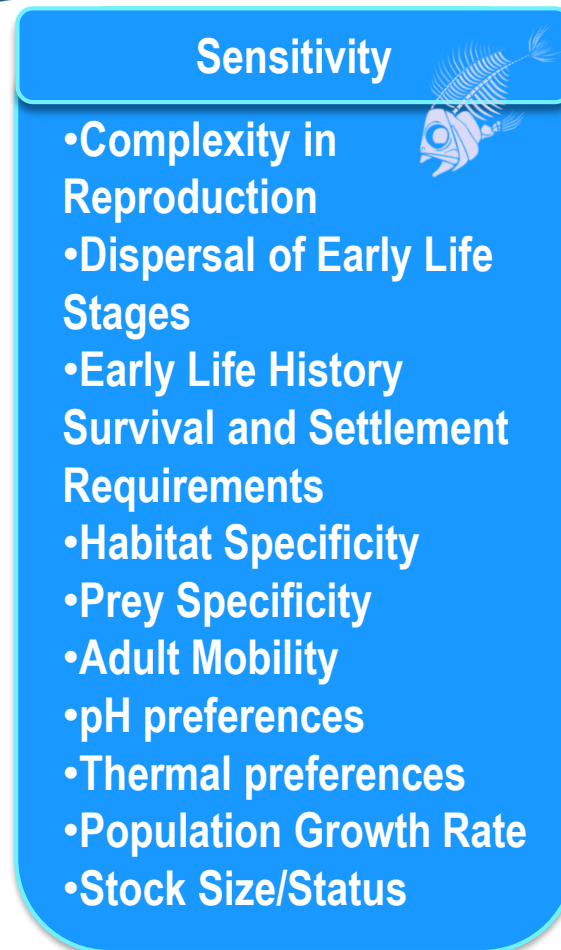
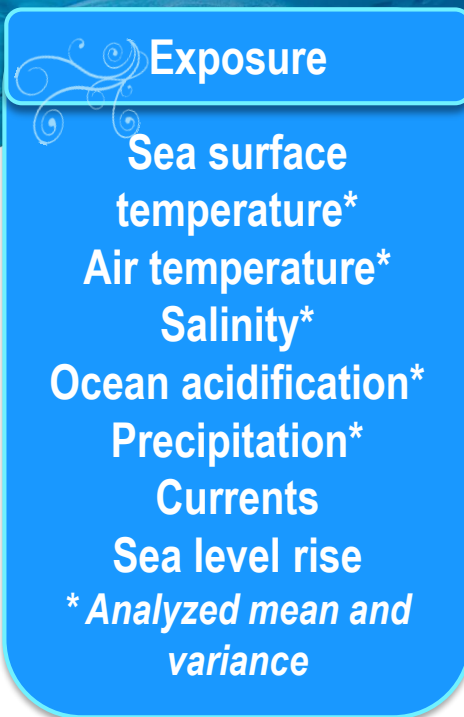
# Why conduct CVA?

1. Understand climate models projections for the region.
2. Identify gaps in ecological knowledge to guide research agendas.
3. Establish which stocks might decline or expand to guide management, monitoring, and research decisions.
4. Identify communities dependent on vulnerable stocks to build greater economic resilience.



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**How?**

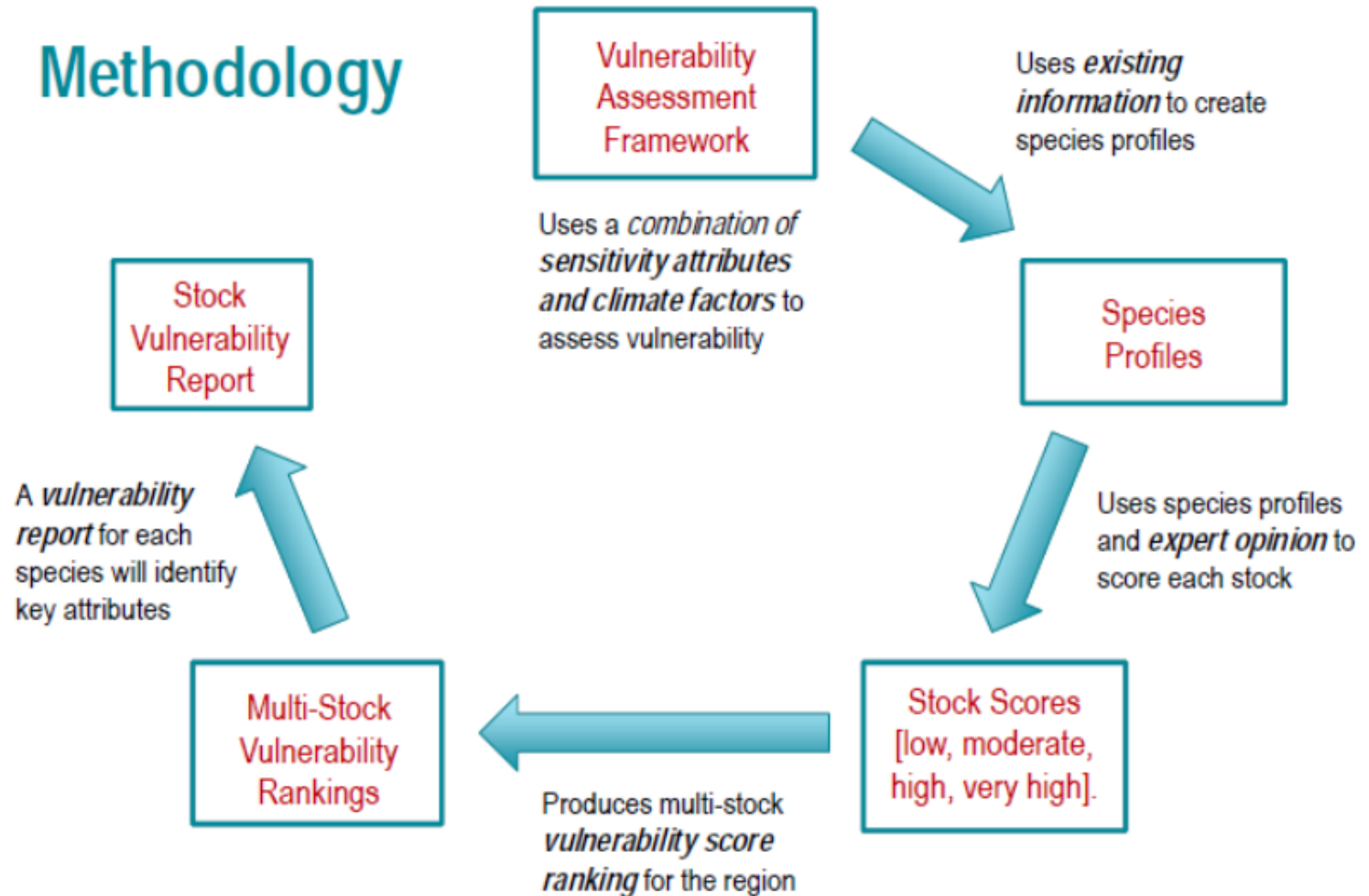


**Species Vulnerability**



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## Methodology







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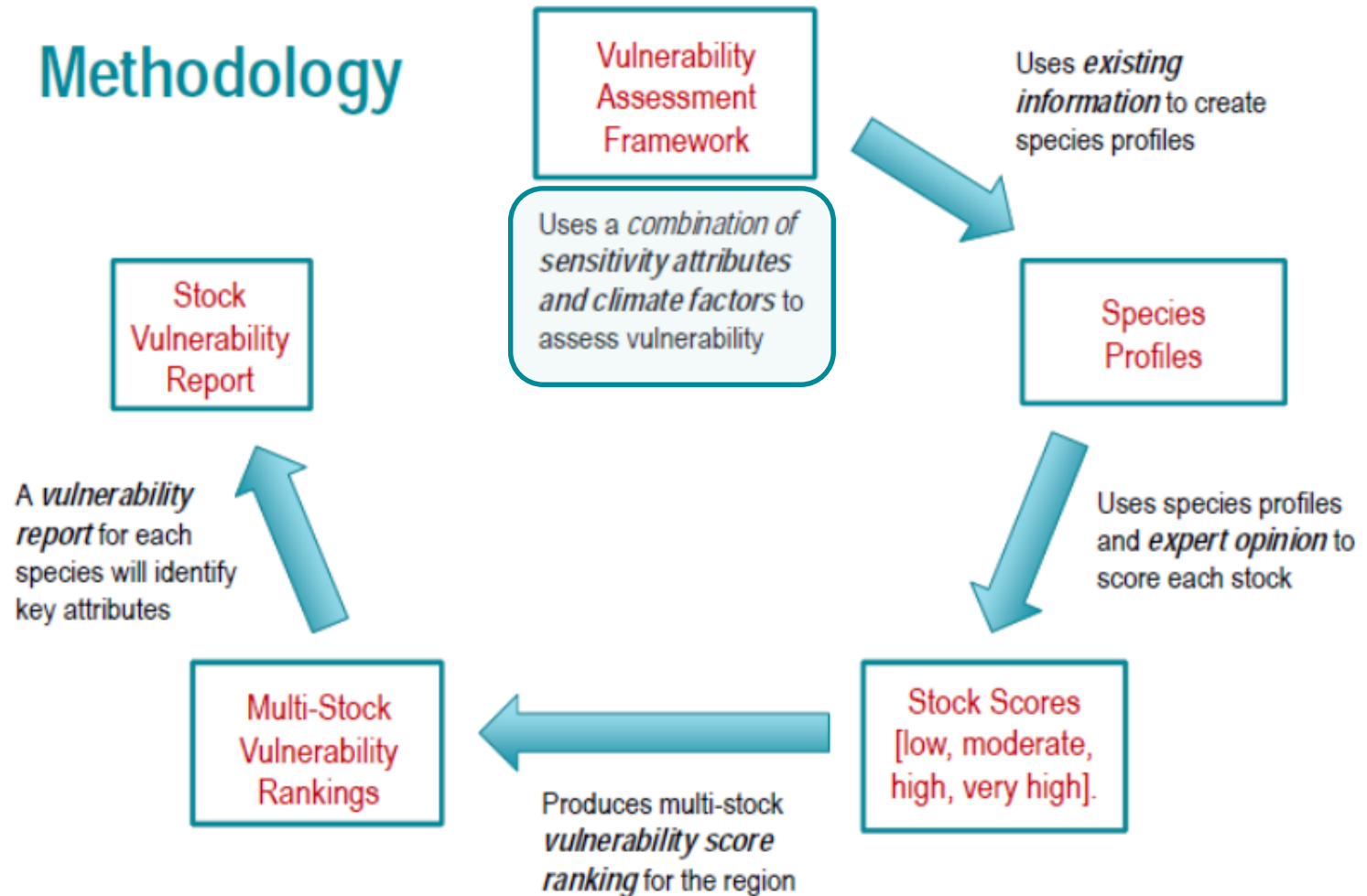
**Example Sensitivity Attributes:**

Complexity in Reproduction,  
Habitat Specificity, Etc.

**Example Climate Factors:**

SST, Air temperature, Salinity,  
Ocean acidification, Etc.

## Methodology



# Rubric to aid scoring for sensitivities



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How?

**Goal:** To determine if the stock is a prey generalist or a prey specialist.

**Relationship to climate change:** Understanding how reliant a stock is on specific prey species could predict its ability to persist as the climate changes.

**Background:** Impacts extend beyond the stock in question to include species within its food web.

**How to use expert opinion:** Please account for ontogenetic shifts in diet; however, limit your response to the juvenile and adult life stages as larvae are considered elsewhere.

## **Prey Specificity Bins:**

**Low:** The stock eats a large variety of prey.

**Moderate:** The stock eats a limited number (~3) of prey types (copepods, krill, forage fish, etc).

**High:** The stock is partial to a single prey type. It is able to switch to a different prey type, but this may negatively impact fitness.

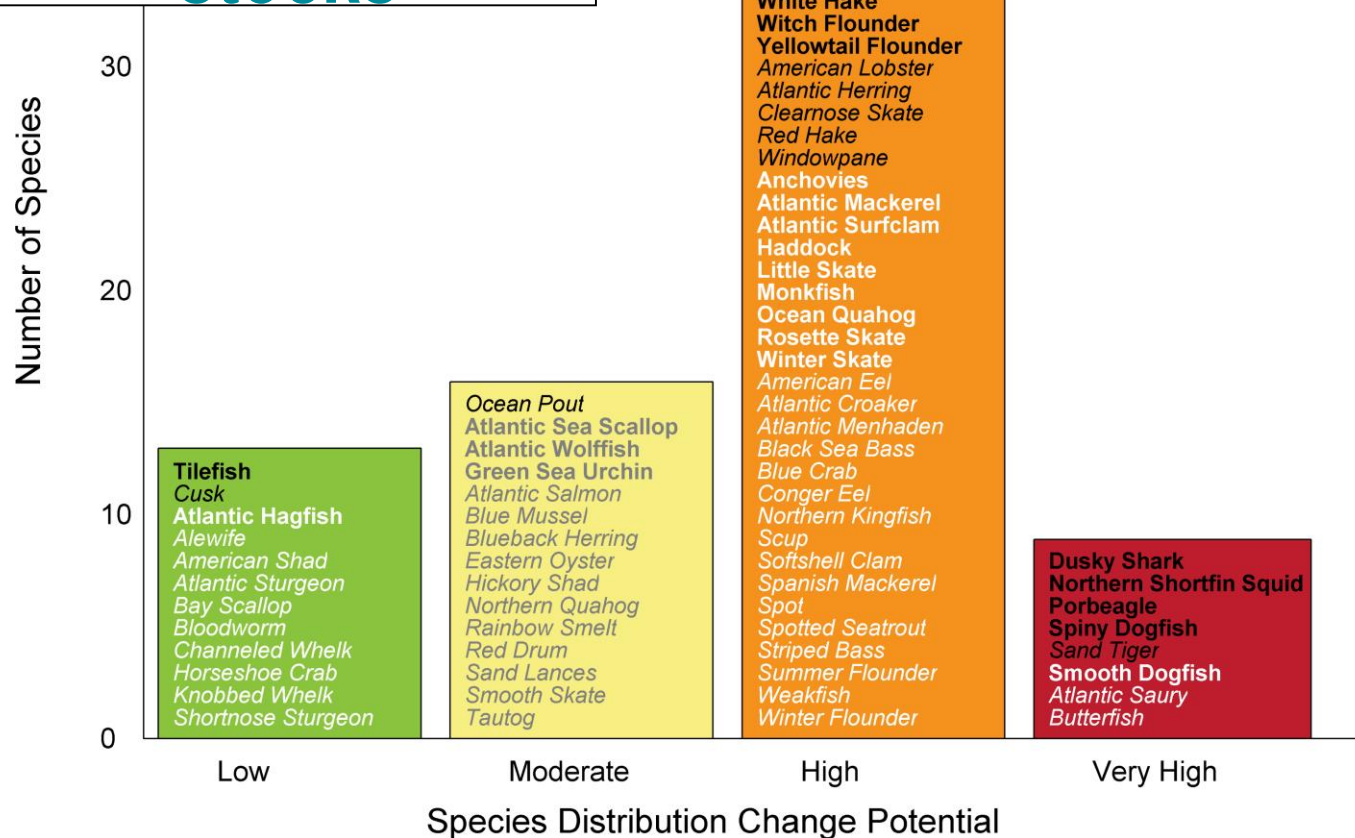
**Very High:** The stock is a specialist, and is unable to switch to alternative prey.



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Products?

## Example: Potential for distribution shift for Northeast stocks







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# Planning for the South Atlantic...

Council input can help us to:

- Prioritize species/stocks to assess
- Identify important regional climate processes
- Identify life history data
- Suggest tangible products that could aid end users such as Council and other stakeholders .
  - What materials would best support management? EIAs? BiOps? etc..
  - What is the best way to communicate assessment results?







# Planning for the South Atlantic...

Currently assessing:

- Funding and Staffing needed to support the SA-CVA
- Management structure to recruit and retain participants from the region (please contact us if interested in helping)
- Repositioning some software tools to streamline climate data assessment for the South Atlantic.
- Updating the NMFS Office of Science and Technology on needs.





# Questions and comments...

Additional Divider Information



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