

Climate Variability and Fisheries Workshop: Setting Science Priorities for the Gulf of Mexico, South Atlantic, and Caribbean Regions

BREAKOUT GROUP QUESTIONS

Breakout 1: Research and Monitoring/Observing Needs to Track, Understand and Project Climate-related Changes in Fish Populations

Topic: Given that fish populations (including all marine resources and habitat) are going to respond to climate variability and change, what is the critical information we need to address climate-related impacts related to productivity, recruitment, migration, behavior and physiology, as well as spatio-temporal changes?

Q1a. What do we already know about how fish populations (includes marine mammals and corals) are already responding or will respond to climate variability and change? (10 min)

Q1b. What ongoing and new observations and monitoring are needed to document and track climate-related changes in fish populations? Please consider information needed for good stock assessments. (25 min)

Q1c. What are critical gaps in our knowledge of why things are changing and how they may change in the future, i.e. research, modeling and forecast/projection needs related to productivity, recruitment, migration, behavior and physiology, as well as spatio-temporal changes? (25 min)

Breakout 2: Research and Monitoring/Observing Needs to Track, Understand and Project Climate-related Changes in the Fisheries

Topic: How will the fisheries respond to climate change? This addresses information needed to track, understand and project climate-related changes in fisheries including fishermen behaviors, responses, socio-economic effects with climate-related effects on fish stock availability, vulnerability, catchability and selectivity.

Q2a. What changes do we see or expect to see related to how the fishery (e.g., fishermen's behaviors, responses, socio-economic effects) will respond to climate variability and change? (15 min)

Q2b. What ongoing and new observations and monitoring are needed to track/observe how the fishery is responding to climate variability and change? (25 min)

Q2c. What are critical gaps in our knowledge of why fisheries are changing and how they may change in the future with climate-related changes, i.e. research needs? (25 min)

Breakout 3: Other Information and Decision-Support Needs to Support Climate-Informed Fisheries Management

Topic: Based on anticipated changes in fish populations and fisheries, effective resource management in a changing climate will be challenging.

Q3a. Are there additional climate-related data needs (physical, biological, socio-economic) that have not been identified already? (20 min)

Q3b. Are there new science-based management tools or approaches needed, e.g. models, assessments, observation tools, management frameworks, or adaptive strategies? (40 min)

Regional Breakout 1:

1. Given all the research and monitoring/observing needs identified in previous sessions, and your knowledge of your region and the science information needs of management in your region, what are three top research needs, and three top monitoring/ observing needs, to track, understand and project climate-related impacts on fisheries and resource-users in this region?

[Priorities will be grouped into common categories or bins.]

2. For each "bin," has this need been adequately characterized by earlier discussion, or is there more detail we should add about what exactly is needed in this region?
3. How do we tackle these priorities? What do you see as opportunities to start addressing these needs in your region? Are there key efforts to build on? What's possible and how do we get there?

Regional Breakout 2:

1. Did any additional needs specific to this region occur to you overnight? Or additional detail you'd like to add to one of the needs discussed yesterday?
2. Who are the key partners who need to be involved in this region (including key partners who might not be at this meeting), and how can they collaborate to fill the needs we've identified?
3. As we implement the research and monitoring we've identified as needs, how do we get that information applied? How do we connect to management?