Job Title: Climate Vulnerability Analyst
Location: Remote
Clearance Required: Public Trust Eligible

Description
IBSS is seeking a **Full Time Climate Vulnerability Analyst** to to support NOAA's Northeast Fisheries Science Center (NEFSC). This position will involve collaborating with other scientists to reassess climate risk for up to 82 northeast marine species based on new methodology and regional climate change projections.

Since the publication of the NOAA's first marine fish and invertebrate climate vulnerability assessment (CVA) by Hare et al. 2016, many CVAs following have focused on highly migratory species, habitat, marine mammals, sea turtles, and fishing communities. The U.S. northeast has been pioneering CVAs and is now preparing to develop a CVA 2.0 for the 82 fish and invertebrate species assessed by Hare et al. 2016. Both the New England Fishery Management Council and the Mid-Atlantic Fishery Management Council have a strong interest in a CVA 2.0 for the U.S. northeast so they can better prepare their climate change risk policies with the best available science.

The CVA 2.0 will utilize new regional ocean model simulations based on NOAA's state-of-the-art Modular Ocean Model (MOM6). The MOM6 is a numerical representation of ocean circulation dynamics that covers a large coastwide domain stretching from the North Atlantic Basin to the Gulf of Mexico. This ocean model can be used to support living marine resource applications such as CVAs and sustainable fishery/protected species management by providing short-term (seasonal to annual) forecasts and long-term (decadal) projections to assess ecosystem function and changes to species distribution and abundance.

The CVA 2.0 will differ from the original CVA (Hare et al. 2016) in that it will utilize climate change projections from the new high-resolution MOM6 simulations that include both ocean physics and biogeochemistry. The CVA 2.0 will also incorporate a spatial component to marine fish and invertebrate climate change risk based on a new Climate Risk Index developed by Boyce et al. 2024. This new spatial component will take advantage of the high-resolution simulations of MOM6 that simulate climate change impacts to marine species habitat across their range with fine spatial detail.

Key Responsibilities:
- Lead and organize in-person workshops to reassess CVA methods and evaluate the best utilization of the regional MOM6 output
- Work with both Federal management councils and NOAA Fisheries scientists to identify key marine species and ocean variables to be part of the CVA 2.0
- Lead the analysis of the U.S. Northeast CVA 2.0 and publish the results in a peer-reviewed journal
- Present results to both Federal councils and other relevant stakeholders

- Work with Federal councils to incorporate CVA 2.0 results into New England climate risk policy and Mid-Atlantic risk assessment
- Work with NOAA Fisheries communication personnel to develop a CVA 2.0 webpage that hosts the CVA 2.0 results

Required Skills /Education/ Certifications & Qualifications:
- Masters or PhD in statistics, marine science, fisheries, quantitative ecology, oceanography, or similar, or a Bachelor's degree and 4+ years of demonstrated experience
- Knowledge and/or experience with statistical software, such as R, python, SAS, MATLAB, etc
- Experience in using oceanographic, ecological, economic, or climate models, including linking such models together
- Experience and understanding of code versioning software (e.g., Git)
- Demonstrated experience developing graphical user interfaces for scientific purposes with data analysis and familiarity with the design, development, and management of relational databases for scientific information
- Demonstrated proficiency for the following skill sets:
  - Coordinating and leading diverse scientific project teams
  - Communication both verbally and written (including visual presentations) with a diverse audience
  - Working independently
  - Adaptability to quickly changing priorities and strict timelines
  - Attention to detail
- **Must be able to obtain a US Citizen NOAA Public Trust Security Clearance**