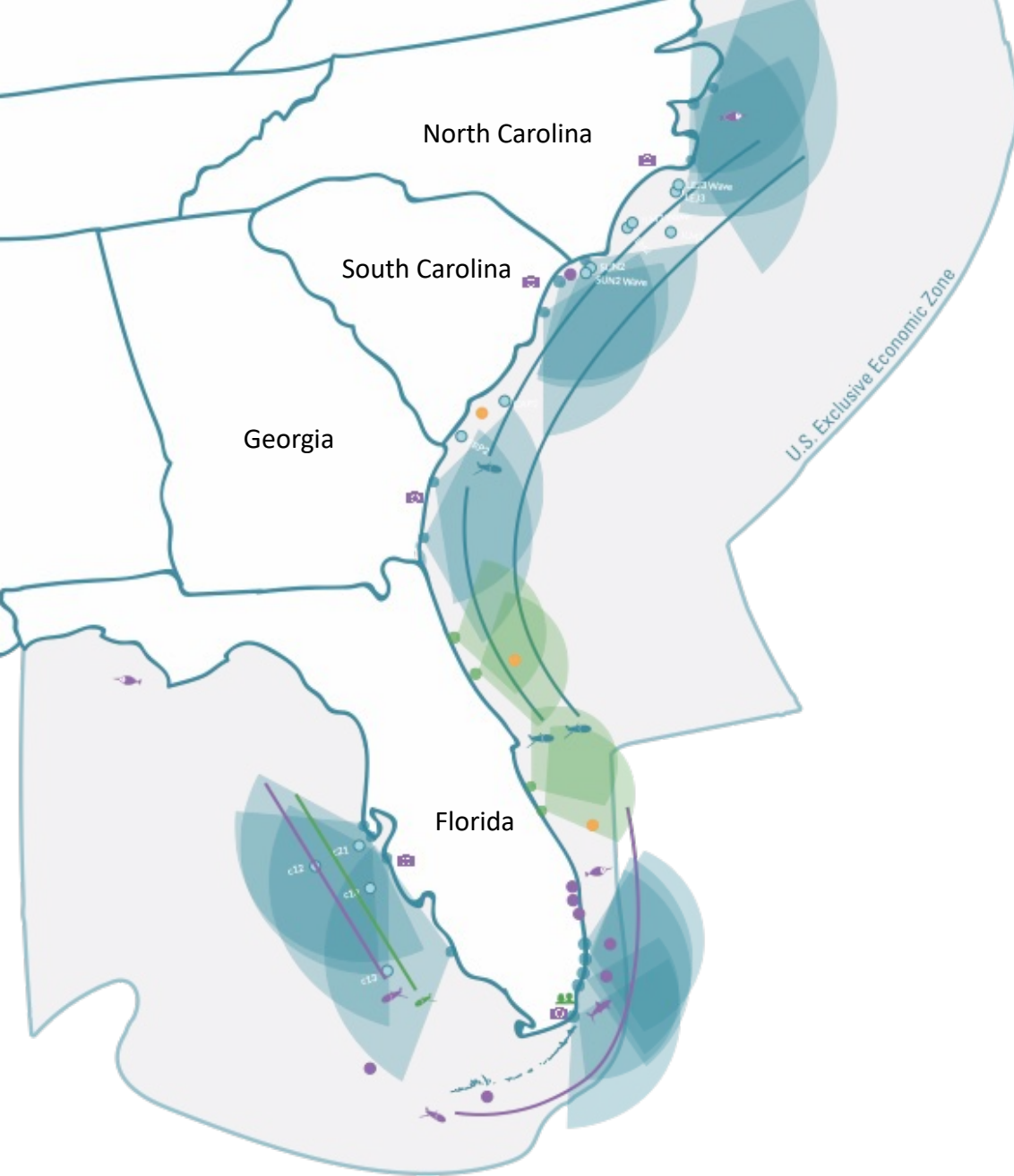


# Climate Change Indicators Across the National Marine Sanctuaries System

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# Overview

- Three-year project funded by NOAA OAR Climate Program Office
- Partners: USF (lead institution), SECOORA, GCOOS, NOAA AOML, Florida Keys NMS, Flower Garden Banks NMS, NOAA CoastWatch, NOAA Sea Grant
- Overarching Goal: Identify essential ocean variables needed by National Marine Sanctuaries for their Condition Reports and overall Sanctuary management. Provide these data to sanctuary personnel as needed (daily, monthly, seasonally) in the formats they require.



# Year 1 Workplan

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- Goal 1: *Host 3 Virtual Workshops targeting 3 southeastern NMS and their stakeholders to determine EOVs needed for management support*
- The SECOORA and GCOOS project team conducted semi-structured phone interviews with four NMS to identify management concerns within their sanctuary, data needs/gaps, indicator species and taxonomic groups that are currently monitored, stressor thresholds for these groups (e.g., water temperature)
  - Monitor NMS, March 16, 2023
  - Gray's Reef NMS, March 24, 2023
  - Florida Keys NMS, April 7, 2023
  - Flower Garden Banks NMS, April 12, 2023



# Challenges and Looking Ahead

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- Based on the initial phone interviews, the following data and data products needs were highlighted:
  - Training in available products, such as SeaScapes
  - Turbidity products based on remote sensing (seasonal and event driven products)
  - Ship/vessel traffic within Sanctuaries
  - Other topics: Marine debris tracking, contaminants tracking/tracing, creating products based on passive acoustic monitoring and fish tagging data, OA and temperature products for shallow and deepwater corals
- The first virtual workshop will be scheduled for summer 2023 (June/July timeframe) where wire frame products will be used for initial feedback

