

# Research Priorities and Recommendations to Support Interjurisdictional Fisheries Management

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### Fishery-Dependent Priorities

- Increase proportion of fish with biological data within MRIP sampling.
- Continue to develop methods to collect a higher degree of information on released fish (length, condition, etc.) in the recreational fishery.
- Require mandatory reporting for all charter boats state and federal.
- Continue development of electronic mandatory reporting for for-hire sector.
- Continue research efforts to incorporate/require logbook reporting from recreational anglers.
- Establish a review panel to evaluate methods for reconstructing historical landings (SWAS, FWS, etc.).
- Quantify historical fishing photos for use in reconstructing recreational historical landings.
- Narrow down the sampling universe. Identify angler preference and effort. Require a reef fish stamp for anglers targeting reef fish, pelagic stamp for migratory species, and deepwater complex stamp for deep-water species. The program would be similar to the federal duck stamp required of hunters. This would allow the managers to identify what anglers were fishing for.
- Continue and expand fishery-dependent at-sea-observer surveys to collect discard information, which would provide for a more accurate index of abundance.
- Implement observer coverage for the fisheries for Spanish mackerel (gillnets, castnets (FL), handlines, poundnets, and shrimp trawls for bycatch). Allocate 5-10% observer coverage by strata within states and collect maximum information from fish.
- Expand TIP sampling to better cover all statistical strata, predominantly from FL and by gillnet and castnet gears.
- Determine the tradeoff with length versus ages, need for more ages (i.e., hard parts).
- Consider the use of VMS to improve spatial resolution of data.
- Consider simplified logbook language in regard to discards (e.g., list them as dead or alive).<sup>1</sup>
- Develop uniform state and federal reporting systems/forms to improve the ease and efficiency of data compilation.
- Establish online reporting and use logbooks as a backup.
- Establish a mechanism for identifying age samples that were collected by length or market categories, so as to better address any potential bias in age compositions.

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<sup>1</sup> Current logbook categories for discards (all dead, majority dead, majority alive, all alive) are not useful for informing discard mortality.

- Continue improving “one-stop shopping” for commercial data from NMFS, ACCSP, and states.

### **Fishery-Independent Priorities**

- Collect and analyze fishery independent data for adult Spanish mackerel.

### **Modeling / Quantitative Priorities**

- Using simulation analysis, evaluate the utility of including interaction terms in the development of a standardized index and identify the potential effects these interaction terms have on stock assessments.
- Establish a fishery-independent survey meant to capture the population trends of coastal pelagic in the south Atlantic.
- Examine how schooling or migratory dynamics may influence the catchability of the species. In particular, research the assumption of the hyperstability of indices that sample the schooling portion of the stock.
- Determine whether it is important to model both sexes in the population for assessment purposes.
- Investigate steepness and alternative models for the stock recruit relationship. In particular, evaluate if there is newer data available on steepness from other analyses of S-R for pelagic stocks with similar reproductive strategies.<sup>2</sup>

### **Life History, Biological, and Habitat Priorities**

- Utilize recently developed genetic techniques to investigate the stock structure of Spanish mackerel. Microsatellite information should be explored to consider both stock identity and internal population structure.
- Collect Spanish mackerel maturity data from both regions and both sexes from specimens approximately 275 mm FL and lower to be staged via histological methods.

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<sup>2</sup> The Review Panel for the 2012 SEDAR was uncertain as to how much the analysis would further inform the model or management at present