

Research Priorities and Recommendations to Support Interjurisdictional Fisheries Management

SPINY DOGFISH

(Full Citation: Atlantic States Marine Fisheries Commission. 2013. Research Priorities and Recommendations to Support Interjurisdictional Fisheries Management. Special Report # 89. ASMFC, Arlington, VA. 58pp.)

Fishery-Dependent Priorities

High

- Determine area, season, and gear specific discard mortality estimates coastwide in the recreational, commercial, and non-directed (bycatch) fisheries.¹
- Characterize and quantify bycatch of spiny dogfish in other fisheries.

Moderate

- Increase the biological sampling of dogfish in the commercial fishery and on research trawl surveys.

Low

- Further analyses of the commercial fishery is also warranted, especially with respect to the effects of gear types, mesh sizes, and market acceptability on the mean size of landed spiny dogfish.

Fishery-Independent Priorities

Moderate

- Conduct experimental work on NEFSC trawl survey gear performance, with focus on video work to study the fish herding properties of the gear for species like dogfish and other demersal roundfish.
- Investigate the distribution of spiny dogfish beyond the depth range of current NEFSC trawl surveys, possibly using experimental research or supplemental surveys.

Low

- Continue to analyze the effects of environmental conditions on survey catch rates.

Modeling / Quantitative Priorities

High

- Continue work on the change-in-ratio estimators for mortality rates and suggest several options for analyses.

Moderate

- Examine observer data to calculate a weighted average discard mortality rate based on an assumption that the rate increased with catch size.

¹ Multiple studies have evaluated discard mortality rates of commercial and recreational gears (Rulifson 2007, Mandelman and Farrington 2007a, Mandelman and Farrington 2007b, & Tallack and Slifka 2007).

Life History, Biological, and Habitat Priorities

High

- Conduct a coastwide tagging study to explore stock structure, migration, and mixing rates.
- Standardize age determination along the entire East Coast. Conduct an ageing workshop for spiny dogfish, encouraging participation by NEFSC, NCDMF, Canada DFO, other interested agencies, academia, and other international investigators with an interest in dogfish ageing.

Moderate

- Identify how spiny dogfish abundance and movement affect other organisms.

Management, Law Enforcement, and Socioeconomic Priorities

Moderate

- Monitor the changes to the foreign export markets for spiny dogfish, and evaluate the potential to recover lost markets or expand existing ones.

Low

- Update on a regular basis the characterization of fishing communities involved in the spiny dogfish fishery, including the processing and harvesting sectors, based upon Hall-Arber et al. (2001) and McCay and Cieri (2000).
- Characterize the value and demand for spiny dogfish in the biomedical industry on a state by state basis.
- Characterize the spiny dogfish processing sector