Scallop PDT 2022/2023 RSA Recommendations
Discussion Document
June 8, 2021

The PDT reviewed Scallop Research Set-Aside (RSA) priorities from the 2021/2022 cycle to inform discussion and recommendations around 2022/2023 Scallop RSA priorities.

- The PDT considered two questions while discussing recommendations for the upcoming cycle: 1) If the research is successful, what action will be taken based on the findings? 2) Is the research likely to be successful?
- The group noted that the RSA is a limited pool of funding, and that there may be other funding sources to support the research. For example, at this year's research share days, there were scallop related presentations that had been funded through the NOAA FATE program, the NOAA COCA program, and NOAA Ocean Acidification program.
- The PDT did not recommend changes to the research topics for the 2021/2022 cycle but did suggest modifications to the language within some topics and adjusted the rankings of non-survey priorities.
- The PDT had some broad discussion on long-term research ideas, such as the collection of oceanographic data to inform climate change, ocean acidification, the impacts of offshore wind development, and some aspects of sea turtle research. There was agreement that while aspects of these topics are of interest to the scallop industry, the Scallop RSA program may not be the appropriate funding source to support long-term monitoring and data collection efforts. It was pointed out that other funding sources and organizations are focused on this type of monitoring/research, such as RODA/ROSA, NERACOOS, and NOAA/NOS grants program.
- There was discussion around the scope of sea turtle research that would best inform management of the scallop fishery. There was acknowledgement that research on the impacts of the scallop fishery to sea turtles (i.e., interactions) and the impacts of sea turtles to the scallop fishery (e.g., spread of nematodes) are important topics to pursue. Given the on-going Biological Opinion for the scallop fishery, many on the PDT spoke in favor of keeping the turtle research priority on the list of 2022/2023 RSA priorities. It was noted that the RSA has supported important research related to turtles that was directly integrated into management, such as the development of gear modifications and spatial boundaries for turtle avoidance measures. The PDT recommended adding language to the turtle priority that linked the research to current management measures.
- Related to research priorities and the Scallop RSA priorities topic, there was a suggestion around considering mid-season surveys of the scallop resource in addition to annual surveys that occur in the late spring/early summer. Examples of when this would have been useful could be in areas where concentrated fishing occurs and the realized impact of fishing might be uncertain, such as the Nantucket Lightship West in 2019, or potentially in the Mid-Atlantic Access Area as biomass decreases. Many found the idea to be interesting, but questioned how it would be integrated into management given the limited amount of time available to synthesize annual survey data while developing specifications. It was suggested that the PDT continue looking at fishery data and observer data in-season to best inform decisions later in the year (i.e., in place of a mid-season survey). It was also suggested that this topic might be worthwhile to discuss at the Scallop Survey Working Group.

2022/2023 Scallop RSA Priorities – PDT Recommendations

From May 20, 2021 & May 27, 2021 Scallop PDT Calls

SURVEYS (Highest Priority)

1. Survey Related Research

Survey results must be available by early August of the year in which the survey is conducted (e.g., survey results that would inform 20223 fishing effort decisions must be available by mid-August 2021). The survey or surveys do not need to be carried out by a single grant recipient. Survey data will be used to develop estimates of total and exploitable biomass to be used for setting fishery catch limits and allocations. Successful projects may be asked to provide data in a standardized format. The primary objective of these surveys would be to provide ~~additional~~ length-frequencies, abundance and biomass estimates ~~in addition to the federal survey to improve the overall precision of the scallop biomass estimate produced~~ that are used by the Scallop Plan Development Team.

~~Due to the COVID-19 pandemic, some survey projects that were funded for the 2020 field season may be delayed for a year. Delays in previously funded 2020 survey work should be considered in the evaluation of proposed surveys for 2021.~~

1a. An intensive industry-based survey of each of the relevant scallop rotational areas (In rank order: Closed Area II, Elephant Trunk and Hudson Canyon, ~~Closed Area I,~~ Nantucket Lightship, ~~Elephant Trunk and Hudson Canyon,~~ Closed Area I) that will provide estimates of total and exploitable biomass to be used for setting fishery catch limits under the rotational area management program.

1b. an intensive industry-based survey of areas of importance (i.e., open areas with ~~high~~ scallop recruitment or areas of importance to the fishery). For 2021, the priority areas are where scallop recruitment was observed during ~~2020~~recent surveys, and areas of the Gulf of Maine that have recently been or are likely to be fished, specifically the closure area on Stellwagen Bank. ~~(e.g., Stellwagen Bank, outer Cape Cod).~~

1c. a resource wide industry-based survey of scallops within Georges Bank and/or Mid-Atlantic resource areas. The Georges Bank area includes areas east of Cape Cod, and the area of the Gulf of Maine south of the Northern Gulf of Maine management area.

Commented [JP3]: This description does not match the approach used in 2021 surveys. Federal surveys on GB only.

Commented [JP4]: CAII – Candidate for fishing in 2022. Also tracking YC to the east. SMAST dropcam in 2022.

Commented [JP5]: ET & HC: Keep, candidate for opening. VIMS Dredge funded for 2022.

Commented [JP6]: CAI – Not candidate for opening or fishing in 2022. SMAST dropcam survey in 2022. PDT recommended keeping on list, but ranking access areas and moving this to the lowest priority.

Commented [JP7]: NLS – S-Deep area may be a candidate for fishing in 2022. SMAST dropcam survey in N, W, and S-Deep in 2022.

Commented [JP8]: CAI – Not candidate for opening or fishing in 2022. SMAST dropcam survey in 2022.

Commented [JP9]: Such as LI, NYB. VIMS surveying in 2022.

Commented [JP10]: Areas outside along the backside of the Cape, and south of Stellwagen Bank (SMAST coverage in 2021) are part of 1c.

High Priority Non-survey research (in ranked order)

2. [Top non-survey ~~priority~~priority] Scallop Biology: Research on scallop biology, including studies aimed at understanding recruitment processes (e.g., reproduction, timing of spawning, larval and early post-settlement stages, age and growth, and yield), spatial population dynamics of the scallop resource, and examination of environmental stressors on reproduction and growth.h~~, and mass mortality event~~Ts~~, i.e. the disappearance of 50 million pounds of scallops in NLS-W~~. This priority also includes research on natural mortality processes, such as scallop predation (e.g., starfish, crab, snails~~, and dogfish~~), discard mortality, ~~and~~ juvenile mortality events, and disease and parasites.

General Research Needs (not in rank order)

3. [The PDT supports turtle research, not as urgent in the next cycle. Should be on the list. Move to general] Turtles: Research to support the investigation of turtle behavior in the Mid-Atlantic and Georges Bank (via satellite tagging or other means). This could include, but is not limited to, research to understand their seasonal movements, vertical habitat utilization, and the status and range of the population in response to climate change. This research could assist in the collection of data that may be required by current or future biological opinions ~~,~~ and could be used to evaluate ~~the appropriateness of~~ current turtle regulations (EX: timing and spatial extent of gear modifications).

~~General Research Needs (not in rank order)~~

4. Scallop Recruitment Supplementation: Research to develop the tools, such as spat collection, grow out of juvenile scallops, predator control, and offshore seeding, to supplement natural recruitment of scallops for the federally managed scallop fishery. Research could focus on the development of standards and best practices for using husbandry techniques to enhance the wild capture fishery, or could evaluate the economic feasibility of enhancement efforts.

5. Bycatch: Identification and evaluation of methods to reduce the impacts of the scallop fishery with respect to bycatch of small scallops and non-target species. This would include projects that determine seasonal bycatch rates of non-target species, characterize spatial and temporal distribution patterns, collect and analyze catch and bycatch data on a near-real time basis, as well as the associated discard mortality rates of key bycatch species. Research efforts focusing on non-target bycatch should provide results that would help the scallop industry avoid pending or potential implementation of accountability measures. Projects should consider the enforceability and feasibility of regulations in the commercial fishery.

6. Gear: Commercial dredge research to improve scallop catch efficiency, improve scallop size selectivity, reduce scallop damage (discard and incidental mortality), reduce non-target species bycatch, and to reduce fuel consumption.

Commented [JP11]: PDT support to move above turtles, keeping a HIGH priority.

Commented [JP12]: PDT looked into this in SSC report & don't need to be so specific in priorities.

Commented [JP13]: The PDT recommends keeping the same priority topics (biology, turtles, etc) from 2021, and moving turtles from HIGH priory to General Research Needs. There was acknowledgement that research on the impacts of the scallop fishery to sea turtles (i.e., interactions) and the impacts of sea turtles to the scallop fishery (e.g., spread of nematodes) are important topics to pursue, but the PDT felt that of all of the non-survey priorities, biology should be ranked highest.

Commented [JP14]: PDT recommends updating based on feedback received during update of 5-year research priorities and data needs.

Commented [JP15]: PDT input: this remains relevant.

2022/2023 Scallop RSA Priorities – PDT Recommendations

From May 20, 2021 & May 27, 2021 Scallop PDT Calls

SURVEYS (Highest Priority)

1. Survey Related Research

Survey results must be available by early August of the year in which the survey is conducted (e.g., survey results that would inform 2023 fishing effort decisions must be available by mid-August 2022). The survey or surveys do not need to be carried out by a single grant recipient. Survey data will be used to develop estimates of total and exploitable biomass to be used for setting fishery catch limits and allocations. Successful projects may be asked to provide data in a standardized format. The primary objective of these surveys would be to provide length-frequencies, abundance and biomass estimates that are used by the Scallop Plan Development Team.

1a. An intensive industry-based survey of each of the relevant scallop rotational areas (In rank order: Closed Area II, Elephant Trunk and Hudson Canyon, Nantucket Lightship, Closed Area I) that will provide estimates of total and exploitable biomass to be used for setting fishery catch limits under the rotational area management program.

1b. an intensive industry-based survey of areas of importance (i.e., open areas with scallop recruitment or areas of importance to the fishery). For 2022, the priority areas are where scallop recruitment was observed during recent surveys, and areas of the Gulf of Maine that have recently been or are likely to be fished, specifically the closure area on Stellwagen Bank.

1c. a resource wide industry-based survey of scallops within Georges Bank and/or Mid-Atlantic resource areas. The Georges Bank area includes areas east of Cape Cod, and the area of the Gulf of Maine south of the Northern Gulf of Maine management area.

High Priority Non-survey research (in ranked order)

2. Scallop Biology: Research on scallop biology, including studies aimed at understanding recruitment processes (e.g., reproduction, timing of spawning, larval and early post-settlement stages, age and growth, and yield), spatial population dynamics of the scallop resource, and examination of environmental stressors on reproduction and growth. This priority also includes research on natural mortality processes, such as scallop predation (e.g., starfish, crab, snails), discard mortality, juvenile mortality events, and disease and parasites.

General Research Needs (not in rank order)

3. Turtles: Research to support the investigation of turtle behavior in the Mid-Atlantic and Georges Bank (via satellite tagging or other means). This could include, but is not limited to, research to understand their seasonal movements, vertical habitat utilization, and the status and range of the population in response to climate change. This research could assist in the collection of data that may be required by current or future biological opinions and could be used to evaluate current turtle regulations (EX: timing and spatial extent of gear modifications).

4. Scallop Recruitment Supplementation: Research to develop the tools, such as spat collection, grow out of juvenile scallops, predator control, and offshore seeding, to supplement natural recruitment of scallops for the federally managed scallop fishery. Research could focus on the development of standards and best practices for using husbandry techniques to enhance the wild capture fishery or could evaluate the economic feasibility of enhancement efforts.

5. Bycatch: Identification and evaluation of methods to reduce the impacts of the scallop fishery with respect to bycatch of small scallops and non-target species. This would include projects that determine seasonal bycatch rates of non-target species, characterize spatial and temporal distribution patterns, collect and analyze catch and bycatch data on a near-real time basis, as well as the associated discard mortality rates of key bycatch species. Research efforts focusing on non-target bycatch should provide results that would help the scallop industry avoid pending or potential implementation of accountability measures. Projects should consider the enforceability and feasibility of regulations in the commercial fishery.

6. Gear: Commercial dredge research to improve scallop catch efficiency, improve scallop size selectivity, reduce scallop damage (discard and incidental mortality), reduce non-target species bycatch, and to reduce fuel consumption.