

Recommendations to the State of Rhode Island Special Legislative Commission on the Reduced Catch of Quahogs

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Introduction

- Marine and coastal ecosystems are extremely complex, and changes in the abundance of species are driven by a multitude of factors.
- Rhode Island's coastal waters have been slowly but significantly changing for many decades, as evidenced by long term monitoring efforts. These changes include a steady decrease in populations of species once considered emblematic of state waters (oysters, clams, bay scallops, lobsters, menhaden, anchovies, etc.), a decline that has been more evident since the 1990s. This changes also include an increase in populations of other species, many of them considered invasive (including new pathogens and predators).
- The factors driving those population changes are most likely to be due to combination of environmental stressors and challenges. There are many threats to the health of our coastal waters, including, but not restricted to, climate variability, warming, increased frequency of storms, anthropogenic chemical pollution, reduced nutrients, invasive species and increased diseases and predation, and increased use of the coastal waters by a growing population.

Rationale for the recommendations

I highly encourage the Commission to develop a long-term, holistic, multipronged, ecosystem-based approach geared to increase the resilience of quahog populations, while preserving the health of other species, the livelihood of fishers and communities relying on those populations, and the ability of the State's citizens to enjoy coastal waters.

Goal and Objectives

The goal of this recommendations is to support the health of the coastal ecosystems in Rhode Island and the important services (cultural, ecological, economic, etc.) they provide to the State's citizens. Specific objectives include:

- (1) Identify key factors driving the decline of quahog populations, as well as the decline of other species important to Rhode Island's economy and cultural identity.
- (2) Use this information to develop a targeted approach to decrease pressures driving the decline of fish and shellfish populations.
- (3) Supplement and enhance existing populations through mitigation strategies and restoration projects that are informed and addressed major caused of population decline.

Recommendations

Recommendation #1: Expand State and Federally funded monitoring programs that provide the background data necessary to adequately manage our marine resources. These monitoring programs should evaluate key species abundance at all life stages (from larvae to reproductive adults) and disease monitoring, have adequate spatial and temporal coverage, and consider interactions between species and their environment (ecosystem-based approach). These monitoring programs should also be redundant, ensuring complementarity and communication between monitoring efforts from different constituents (fishers, farmers, state and federal agencies, non-governmental organizations).

Recommendation #2: Establish a fund that supports collaborative research (academia, fishing industry, non-profit environmental organizations, regulators, community members) geared to investigate the factors driving population declines, and to test the effectiveness of potential management tools and mitigation strategies. These funds will complement other sources of funding (federal, state, non-profits) and provide funding to locally relevant projects that cannot be funded through other means.

Recommendation #3: Identify and protect areas that would serve as spawning sanctuaries and support restoration projects. The location of spawning sanctuaries and restoration projects should be informed by science and fishers/farmers input on site selection to target sites with the most likelihood to enhance populations targeted by commercial and recreational fishing. The success of these restoration projects should be designed to target particular biological, ecological, and social (e.g., contributions to fishing and the local economy, tourism, etc.) benchmarks, and be assessed yearly through careful monitoring (see recommendation#1) to determine success in reaching those benchmarks.

Recommendation #4: Establish a permanent advisory commission or board composed of stakeholders that meets at least yearly and is charged with coordinating and evaluating the success of efforts derived from these and other recommendations. The composition of this board could mimic the structure of the Quahog Commission, but also include representatives from coastal communities, the RI Coastal Resources Management Council, and representatives from funding bodies and other members the Quahog Commission may deem relevant. This Commission would also be responsible for evaluating proposals for research projects to be supported by the fund proposed in Recommendation #2 (see the RICRMC Biosecurity Boards and the [PRESS Coordinating Committee](#) for examples).

Potential (complementary) mechanisms to fund these efforts:

- Dedicated line in State Budget to Rhode Island Department of Environmental Management.
- Strategic partnerships with Federal government (USDA NRCS, EPA, NMFS, etc.) and non-profit organizations (TNC, Save the Bay, Ocean Hour Farm, etc.)
- Bond issue to quick-start (seed funding) these efforts.
- Portion of commercial and recreational fishing licensing fees, aquaculture leases, beach passes, etc.