

## Direct Fisheries Marketing and Co-ops

The extent to which climate change will affect the fisheries in Rhode Island is highly uncertain, with policies and regulations generally at the forefront of the economic discussion. Nonetheless, interesting economic opportunities regarding climate change are being discussed.

An economic approach currently being implemented in Rhode Island is a movement toward direct-marketing initiatives, such as a Community Supported Fishery or a fishery co-op. The Community Supported Fishery is a business model that involves purchasing shares of the catch at the beginning of the season, and then allocating the rights to and benefits of the catch through weekly distributions. While Rhode Island has yet to fully enjoy such a community-based operation, neighboring Massachusetts has similar initiatives in place.

Direct-market models, such as dockside sales of lobster or shellfish, and larger co-op structures, such as the proposed Narragansett Bay Seafood Co-op or a start-up company that is selling directly to local restaurants, are possibilities for RI fisheries to strengthen their economy and adapt to increased variability within the fishery. By strengthening the local market opportunities for fishermen, their capacity for climate change adaptation will likely increase through their ability to invest in new methods. However, these methods may well require additional investments.

### Already in Decline

Certain fishing industries in RI are already in trouble. Declines in the Rhode Island lobster fishery have been viewed as potentially related to climate change due to warming waters.

Lobstermen typically fish almost exclusively for lobster. With the predicted northern movement of

the species and increasing incidence of shell disease, both associated with higher water temperature, lobster fishing is likely to decline. That's a big "uh-oh" you hear from captains, restaurateurs, caterers, and lobster-vore locals in Rhode Island.

The theory that warming waters is behind devastating lobster shell disease was a chief reason behind the idea of implementing a five-year moratorium on lobster



Fishing boats at sunset, in the Port of Galilee, Rhode Island

fishing in Southern New England which was floated in 2010. One researcher pointed out that the adaptive response to increasingly smaller profits in the RI lobster fishery can go one of three ways: "fish harder, fish for something else, or get a land job." Not exactly what already over-burdened fishermen want to hear.

### The Tuna Tale

Another affected fishery may be the tuna anglers. A URI scientist involved in tuna fishing research on the eastern seaboard in the summer of 2010 noted, "In the two months I helped work on this (project), I found not a single fisherman who had fished for offshore tuna

species. My territory was eastern Connecticut. All of the would-be tuna anglers gave the same two reasons for not fishing: (a) the high price of fuel, and (b) the fact that the tuna hadn't come in closer to shore this year due to warm waters, which meant the boats would have had to go out further than usual to catch them—meaning they spent even more on fuel. So that seems like a good example of adaptation to climate change: the water's warm, so we'll stay in."

While speculation about the shifting of fisheries and impacts on the economy is complicated, research on this topic is beginning at URI's Regional Earth System Center (RESC). The director of URI's RESC, Dr. Lew Rothstein, states, "One of the fundamental objectives of the Center is to provide actionable science for informing potential policy decisions to better mitigate, adapt to, and remediate climate change."

With the RESC there will be opportunities for RI fisheries to seek outside advice regarding climate change adaptation in the future. The RI Coastal Resources Management Council's aquaculture coordinator, Dave Beutel, mentioned the location of Rhode Island fisheries as an advantage regarding climate change adaptation in the future: "Rhode Island fisherman fish from Cape May to the Hague Line in Canada. Yes, they are fishing new species, but they are just traveling farther distances for them. If species shift, Rhode Island fisheries can take advantage of their location."

If rising fuel costs do not keep the boats from traveling these distances, then this may be a common adaptation strategy, however undesirable.

## A New Angle on Aquaculture

A future opportunity in Rhode Island fisheries may present itself with the development of offshore wind farms, such as those being proposed for both state and federal waters off the Rhode Island coast.

International research has shown that offshore wind can be integrated with aquaculture to mitigate the effects of climate change through renewable energy while using the structures as a site for diverse aquaculture production. If hundreds of wind turbines are erected for the generation of electricity, the opportunity exists for Rhode Island to piggyback on the already installed facilities to encourage the cultivation of shellfish and seaweed for local and export markets.

The possibility of integrated offshore wind and aquaculture systems in Rhode Island in the future is speculative.

However, there is interest at the RI Economic Development Commission in wind power, and the state agency hosted a two-day summit in November 2010 that focused on "the economic impact of the region's growing offshore wind industry and explored new partnerships and workforce development tools so the Northeast can capitalize on its 'first mover' leadership advantage."

The purpose of the summit was to highlight

the offshore wind opportunities in RI and the greater New England region, and illustrate possible supply chains for companies. The summit also included a brief discussion of fisheries opportunities, displaying the increased awareness of integrated climate change mitigation and aquaculture systems.

See also the [Ocean SAMP \(Special Area Management Plan\)](#).

Adaptability has been and remains the signature of the fisheries industry. Whether it is the creation of a Community Supported Fishery (CSF) or a co-op similar to the proposed Narragansett Bay Seafood Co-op, having to fish new species or go further distances to find a profitable catch, or find a way to integrate new types of aquaculture with offshore energy projects, ways to cope with the ever-changing and unknown challenges of climate change will—and must—be found.



Seafood dinner in Newport, Rhode Island

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