

Date: October 21, 2022

Time: 10-11am

Facilitators: Kate Tagai, Island Institute and Kendra Chubbock, Isle au Haut

In Attendance

MIC Members: Co-chair Kendra Chubbock, Isle au Haut

Swan's Island – Donna Wiegler; Long Island - Mark Greene and Elizabeth Marchak; Peaks Island - Ellen Mahoney and Faith York; Chebeague Island - Bob Earnest; Vinalhaven – George Kendrick; North Haven – Gabe McPhail; Cliff Island - Cheryl Crowley Cranberry Isles- Ingrid Gaither

Great Lakes Island Alliance: Beaver Island – Bob Anderson

Maine Seacoast Mission: Douglas Cornman

Maine Legislative Staff: Sen. Collins – Kelly Cotiaux; Rep. Pingree – Lisa Pahel and Sheron Luk; Rep. Golden – Zach Schmesser;

Island Institute: Kate Tagai, Nick Battista, Susie Arnold, Sam Belknap, Brenna Cohen, Lisa Millette, Alex Zipparo, Abby Roche

Island Fellows: Paige Atkinson (Eastport) Melanie Nash (Long Island)

Updates

Legislative

Senator Collins (Kelly): Senator has spoken out in favor of lobstermen. Service academy nominations for graduating seniors has 10/28 application deadline. <https://www.collins.senate.gov/services/service-academy-nominations>. Questions? Contact Kelly_Cotiaux@collins.senate.gov or 207.945.0417.

Representative Pingree (Sheron): We're working closely with congressional delegation to help lobster fishery and meeting weekly with Maine Department of Marine Resources to ensure active communication with stakeholders. Sheron is Pingree's Marine Fellow

Maine Seacoast Mission

Island Health Program provided flu shot and covid booster to 6 outer island communities. Sunbeam returns to service 11/1. She has been at Billings Boat yard in Stonington since mid-October for her annual refresh and maintenance. Island teachers in small remote schools are facing challenges and Mission and Island Institute support these incredible teachers and kids. Isle au Haut hosted the Inter-Island Event and the schools met at Tanglewood in Lincolnville for the TLC fall field trip, which were both very successful. The Mission's Islands of Grace Island Church Fund increased its grant amount to \$1000. Island faith communities are invited to apply for the annual grant which helps churches with unexpected and unplanned expenses. Sharon hosts Eldercare Conference, contact her at sdaley@seacoastmission.org if you have questions or interest. Sharon and Douglas are available to talk and/or listen. Contact Sharon: sdaley@seacoastmission.org or Douglas: dcornman@seacoastmission.org with thoughts, questions, or concerns.

[Great Lakes Island Alliance \(GLIA\)](#) Bob Anderson thanked MIC and II for sending Brenna and Kendra to the GLIA summit. “Nothing compares to personal interactions with people to see what’s happening on our islands.”

Main Topic: Climate change, lobster regulations and other changes to our coast

Impacts of climate change on the Gulf of Maine and whales and lobster *Susie Arnold, Senior Ocean Scientist, Island Institute*

The **root of the issues** stems from changes in currents: The Atlantic Ocean current, [Atlantic Meridional Overturning Circulation](#) (AMOC) is weakening, the gulf stream migrates closer to the grand banks and warmer water enters the stream channel. *From the Island Institute*, “These trends are associated with a warmer Gulf of Maine, the arrival of warm-water marine species, the northward shift of cold-water species, and storm intensification.” ([Weakening ocean currents impact New England climate - Island Institute](#))

These interactions enable scientists to predict future warming and drastic impacts on marine species. We track annual average temps back to 1880’s and the historical average is 48.6 degrees F. In 2020, the average annual sea temperature was 4 degrees above the average temperature. 2021 saw the hottest temperature on record in the Gulf of Maine. We’re looking at projections to the year 2100 based on three different scenarios. Such as temperatures of around 55 degrees, like Southern Maine temps today, which are and will be problematic for species. See these facts and more on [Maine Climate Science Dashboard | Maine Climate Council](#).

Impact on marine species: Climate change is a major stressor for marine species. They have higher sensitivity to warming waters and species distributions and predator/prey dynamics are changing. In 2013, the shrimp fishery closed in part because of an [influx of squid](#). The green crab explosion is another example. Warming waters correlated with shifts in **lobster** red areas, spots where scientific tows catch high numbers of lobsters, from south to north of Cape Cod around 2019. Scientists from Bigelow Labs predict the following changes within the next thirty years in Maine waters: declines in cod and herring, increases in black sea bass and squid, and future shifts in migration patterns.

Right whales: Warm waters entered the Gulf of Maine and changed the [ocean regime](#), or ocean circulation, and shifted right whales’ migration patterns. From 2000-2009 or pre-regime shift, right whales showed higher calving and lower mortality rates. Post-regime shift, 2010-2019, saw warmer temps in the Gulf of Maine and right whales with less calving and higher mortality rates as they found less prey, meandered, and summered in different grounds, the Gulf of St. Lawrence. Whales are at the edge.

Climate change makes it harder for marine species to access their preferred prey. We’ve all had a hand in the demise of the right whale and other species and in climate change. We all have a hand in addressing it.

How regulatory processes adapt to these shifts and what it means for the coast *Nick Battista, Chief Policy Officer, Island Institute*

A federal court ruled that the National Marine Fisheries Service needed to protect right whales to better comply with the Endangered Species Act and requires a 90% risk reduction for the species. It's big, moving fast through the courts and results from the way that regulatory process adapts to scientific findings. Multiple pathways are possible to achieve this 90% risk reduction and all include trap reductions and extensive seasonal or year round closures of fishing grounds.

The lobster fleet supports 12,000 jobs directly and at least 5,000 more. We know that DMR, fishermen and others are deep in conversations about the regulations and compliance of the fishery and that the whales are headed to Canada. All of these entities are trying to keep the fishery operating. At the Island Institute, we know that the changes are happening on the coast and disruptions are coming even without the whale regulations. Fishermen are well positioned to talk about the impact on fisheries and name these disruptions.

At II, we're talking about the potential impacts on the social structure of our communities such as with schools, town council members, and volunteer firefighters and EMTs. We're preserving working waterfront infrastructure so that people can continue to access and make a living off the water. Some communities will feel these impacts harder than others. Downeast is particularly vulnerable as whales aggregate there, it's a rapidly emerging and evolving issue.

Q & A and MIC members' and their communities' concerns

This will affect the whole community in Frenchboro and other neighboring towns in Downeast. How will regulations affect not just lobstermen's incomes but others? Who has the money to make the changes needed?

What's the science behind ship strikes from large vessels such as cruise ships? Regulatory impact is negligible. More data on other industries could mean trap reductions and closures are less severe. It's unclear how new data is incorporated into the models, understanding what's known and what's not. How do we adapt with regulations still coming?

Where do you see different opportunities for economic diversification on islands? Where should we put in our time and attention? How can we shift the conversation in community economic development?

Timescale matters. The magnitude of the impact depends on whether it's a couple of years or a rapid time frame. Broadband, aquaculture, workforce development...

Your communities built and funded broadband projects such as the National Telecommunications funded one that will bring world class connectivity soon to Blue Hill/Stonington/Isle au Haut. Broadband is huge to give communities a chance.

We're identifying workforce development pipelines in and around the marine sector to provide pressure release valves. As you identify challenges and opportunities let us know so that we can better deliver programmatic opportunities.

Aquaculture provides an alternative to make a living on the water.

This is overwhelming. I'm worried about my island's infrastructure, more potential disruptions regarding lobster, climate change, and impacts on islands. How do we get young people out here? How do we survive?

The magnitude and uncertainty is huge and hard to deal with, it's incredibly overwhelming. DMR, MLA, zone councils, fishermen, people every day are trying to find ways for people to keep fishing. I have great faith for Maine fishermen to adapt to changing circumstances. We've seen incredible resilience in our fishery. As long as people can keep fishing we'll be ok.

I know we can do this, we'll figure it out, every day it's a struggle.

Are there lessons to be learned from the forestry industry or the white fish fishery in the Great Lakes which have also gone through massive shifts and transitions?

I spent a month in Newfoundland to look at how they've responded to and come back from the collapse of the cod fishery. Watch this [60 Minutes segment on Fogo Island](#). When cod fishing was banned, the island's population dwindled by half. But over the years they shifted to the snow crab fishery, developed artisanal cod product which is a high revenue niche, and embraced tourism. It took 20-30 years and the cod fishery is slowly coming back. After my visit there, I felt different, came back positive about their accomplishments. Regardless of what happens here, there's lots of opportunities.

When we talk about issues in relationship to infrastructure, could we name what those are? Specifics that might fly under the radar?

Actions in the courts feel reactive and that's alarming. Empathy exists and we want solutions that don't decimate our communities. Stiving to that middle place is really hard, acknowledging our reality is now. 300 islands on the coast of Maine were actively fishing in the 20th century. We've been here before, what are the solutions? I'm a mother and a grandmother of people on Peaks, North Haven, and Islesboro. My niece/granddaughter (@Kate: Ellen's ____?) is doing her college capstone project on these impacts on real people.

We'd love to talk with her along the way or when she finishes it. This is a huge issue and the speed matters...when it comes and what we know, identifying business plans and investments to keep going, changing business models. There's flexibility in the system to make these adaptations. We're an incredibly resilient coast and we're thinking more forward.

Susie: I start my talks with the Science of Hope. Climate anxiety is real and when something like this comes down in our community, it reminds us that it's important

Closing:

Thank you for bringing your feelings and thoughts to this intense topic. One of the tenets of our leadership work is to think creatively, innovatively, and look to the future. How do we bring people along? MIC is a group of leaders who think about how to support their communities to thrive. Thank you for engaging.

Next Meeting

November 18 10-11am, Zoom

We'll invite the Island Fellows. Please bring your winter survival tips.