

## **Fishing Community Vulnerability Profile: Rockland, Maine**

Teresa R. Johnson, Anna Henry & Cameron Thompson

August 2013 | Orono, ME: Maine Sea Grant College Program

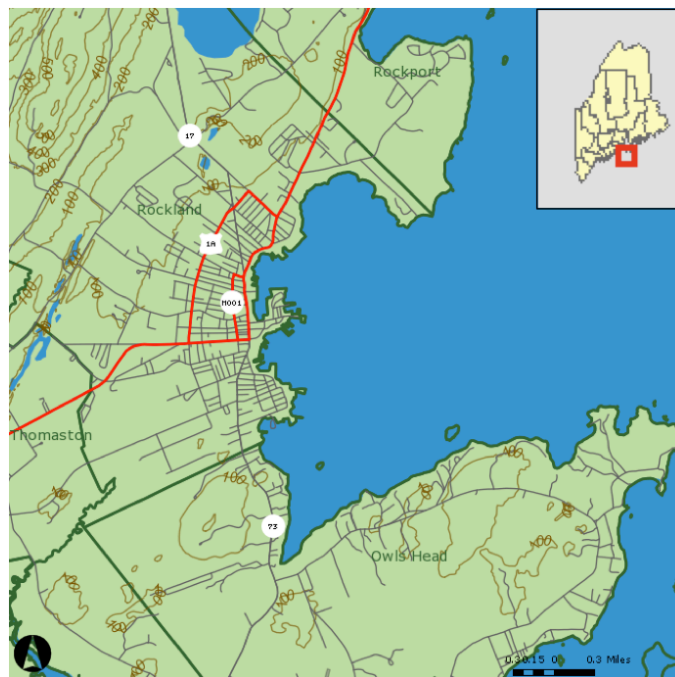
### **Introduction**

Commercial fishing is an important economic and cultural element of Maine's coastal communities. Maine fishing communities are suffering from loss of access to fisheries and infrastructure, regulatory impacts and changing resource abundance. Although fisheries managers are required to assess impacts of fisheries regulations on fishing communities, this has proven difficult due to the lack of information regarding the current and historical importance of fishing in these communities and an understanding of how communities respond to change. Vulnerability profiles are a useful tool to gather the comprehensive information necessary to determine cumulative impacts of management decisions on specific communities.

We conducted five semi-structured (Bernard 2005) and five oral history interviews (Ritchie 2003) with fishermen, other community members and government officials in Rockland, Maine from October 2010 to December 2011. In addition, we conducted seven interviews with business owners and households in the area. These interviews focused on threats contributing to resilience and vulnerability in the fishing community of Rockland and the ways in which fishermen have responded to these threats. Initial interview informants were selected with the help of Maine Sea Grant Marine Extension Team members and community leaders. Subsequent informants were selected using a snowball sampling approach (Bernard 2005). All interviews were recorded and all oral histories and a majority of semi-structured interviews were transcribed. Detailed notes were taken from other semi-structured interviews. All data were analyzed with multiple iterations of coding following a modified grounded theory approach (Glaser and Strauss 1967, Strauss and Corbin 1990) using QSR NVivo 9 data analysis software. This profile focuses on common themes from these interviews as well as information compiled from secondary research and analysis of quantitative socioeconomic indicators. Quotes from interviewees are contained throughout this report.

## Geography and History

Rockland is centrally located in Knox County in the Midcoast region and is one of Maine's 77 regional hubs or "service centers." Its central location on the western side of Penobscot Bay has been important to its development. Rockland has a natural harbor with land on three sides, and is protected by a long breakwater. Vinalhaven and North Haven islands are about 10 miles across the bay and are accessible by ferry. Port Clyde, Owls Head, and Spruce Head are important nearby fishing ports with ties to Rockland. Camden is a popular tourist destination about 10 miles north on U.S. Route 1, the major coastal highway intersecting Rockland. Freight and seasonal passenger rail service connects the city to Brunswick and other midcoast towns to the south. The Knox County Regional Airport lies just to the south in the adjacent town of Owl's Head.



**Map of Rockland, western Penobscot Bay, Maine**

When neighboring Thomaston was incorporated by European settlers in 1777, Rockland was included as Shore Village. It was renamed Rockland in 1854, when the Maine Legislature recognized its status as the fifth largest city in Maine with approximately 6,000 people (Bird 2011). Rockland became the county seat in 1860 with a population of 7,309. Never a boomtown, Rockland experienced modest population growth; in 1900 the population was 8,150 (Bird 2011).

The harbor has been the center of economic development in Rockland throughout its history. Although fishing has always been important to Rockland's economy, its main early industries were shipbuilding and lime production (Bird 2011). The town is named for

extensive granite quarries: in the mid-1800s, there were 12 quarries and more than 125 kilns, plus 300 ships transporting minerals. Lime grew to be the main industry by 1880 (City of Rockland 2011), supporting at least three shipyards, numerous shipping companies, and a harbor railroad. These two industries declined after the 1920s, when shipbuilding turned more to steel and away from wood, and then again in the 1930s, when the lime industry declined (NOAA 2009). The Knox and Lincoln Railroad arrived in 1871, marking the beginning of the tourist industry. The Bay Point Hotel, renamed the Samoset, was the largest resort, built in 1889 (City of Rockland 2011).

The first fish processing plants opened in the 1880s (NOAA 2009). Fishing increased in importance in the twentieth century. World War I led to the rise of the sardine canning industry in Rockland, which lasted for nearly three-quarters of a century (Bird 2011). By 1920, lobstering emerged as an important industry, and Rockland became a center for market distribution, and the city soon became known as “the lobster capital of the world.” The F. J. O’Hara Company, which is still active in Rockland, started making frozen fish products in the 1940s, in part using their own fleet.

“When I was a kid, it was like real commercial. It was places you didn’t walk down around unless you were fairly confident in your abilities to defend yourself. And it was kinda a dumpy, nasty – that’s the way this place was. It was all commercial. There were plants all along the shore. But now it’s turning into more galleries, eateries – it’s just gonna keep going in that direction.”

In recent decades Rockland has undergone a significant transformation, losing much of its working town character, and revitalizing itself with a burgeoning service sector economy. According to Pandolfi (2011), in an article in *This Old House*, Rockland has “shaken its image as an insular commercial fishing community by redefining itself as a popular tourist destination that’s also attracting full-time residents.” While small and medium-sized industries continue to be important, Rockland has also taken on the title of “Schooner Capital of Maine.” The city is dedicated to a balanced approach as outlined in its Comprehensive Plan, recognizing the growing dependence on the service sector, and continuing importance of its working waterfront.

## Economic and Demographic Profile<sup>1</sup>

A comparison to Maine shows that Rockland is poorer than the state average. In contrast to the below-average incomes is a slightly higher employment rate. Meanwhile, Rockland has a relatively large and young population that has been fairly stable throughout its history.

Median household income in Rockland was \$29,592 in 2010 and median per capita income was \$19,779, compared to the state averages of \$46,933 and \$25,386, respectively. Rockland features more households with incomes from Social Security compared to Maine and the nation (Table 1). In 2010, 12.3% of families and 21.4% of individuals fell below the poverty threshold, which is up from 2000 levels of 10.4% and 14.7% respectively (U.S. Census Bureau 2010). The current rate is higher than the state's, where 8.4% of families and 12.6% of individuals lived in poverty. The percent of households depending on food stamps is nearly double the state average and triple the national average (SNAPS, Table 1). Elderly poverty rates are also high in Rockland, with 11.4% of all persons older than 65 falling below the poverty line (U.S. Census Bureau 2010). While many of these statistics are taken during the decadal census, the data relating to the economic profile of Rockland come from the American Community Survey, which has a standard error of a few percentage points.

Household income (%)	Earnings	Social Security	Retirement	SNAP
United States	79.7	27.5	17.5	9.3
Maine	76.5	31.6	18.8	13.6
Rockland	70	37.6	18.7	26.4

**Table 1: Percent of households with income from earning, social security, retirement and SNAP. Source: ACS 2010.**

According to the U.S. Census 2010, 60.8% of the total population 16 years of age and older was in the labor force. Of the civilian labor force, 5.7% were unemployed, compared to 6.5% in the state. Top occupations were sales and office (27.7%), management, business, science, and arts (24.3%), and service (23.8%). Self-employed workers, another category where fishermen could be found, accounted for 12.2% of all workers. As an industry sector providing employment, agriculture, forestry, fishing, hunting, and mining occupations accounted for 3.6% of all jobs, which is similar to the state average and up slightly from the 2000 rate of 3.3%. The relative contribution of each industry sector has been fairly steady over the past decade, with education, health care and social assistance growing the most

<sup>1</sup> Economic and demographic data were obtained from the American Factfinder ([factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml](http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml)). Population and housing data are from the 2010 U.S. Census and economic data are from the 2006-2010 American Community Survey 5-Year Estimates.

at 5.4 additional percentage points (Table 2). As a regional hub, Rockland is a significant source of employment for those living in neighboring towns; this may also be true for fishermen and cannot be accounted for with census data.

<b>Employment (%)</b>	<b>Agriculture, forestry, fishing, hunting, and mining</b>	<b>Retail trade</b>	<b>Arts, entertainment, recreation, accommodation and food services</b>	<b>Education, health care and social assistance</b>
United States	1.9	11.5	8.9	22.1
Maine	2.5	13.9	8.1	26.1
Rockland	3.6	14.7	11.6	24.3

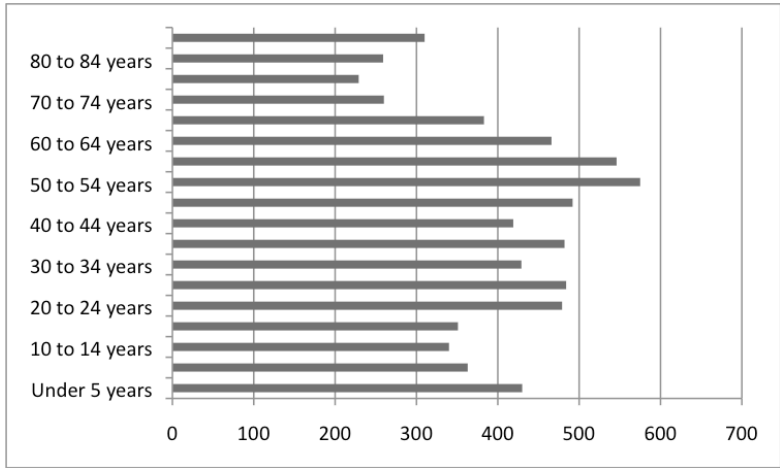
**Table 2: Percentage of occupations in Rockland from agriculture, forestry, hunting, and mining; retail trade; arts, entertainment, recreation, accommodation and food services; and education, health care, and social assistance. Source: ACS 2010.**

Although Maine has a high rate of seasonally vacant housing, Rockland does not; its rate is much lower and closer to the national average. Compared to the rest of Maine, Rockland's renter-occupied tenure is much higher, and more closely aligned with the United States as a whole (Table 3). Among owner-occupied houses, the median value of \$175,100 is comparable to the state (\$176,200) and national (\$179,900) medians. Considering that waterfront property makes up a smaller percentage of the housing stock in Rockland than in other communities, this modest median value is not surprising. However, according to study participants, shorefront remains a highly prized commodity where it is available. While there is a high degree of seasonality in Rockland due to its status as a service center for the surrounding towns, respondents did not readily report that the local population fluctuated. “People from away” and tourists who occupy the adjacent communities disperse during the winter, leading to the closure and reduced hours of many businesses in Rockland.

<b>Housing Occupancy (%)</b>	<b>Seasonally Vacant</b>	<b>Renter Occupied</b>
United States	3.5	34.9
Maine	16.4	26.9
Rockland	3.4	46.0

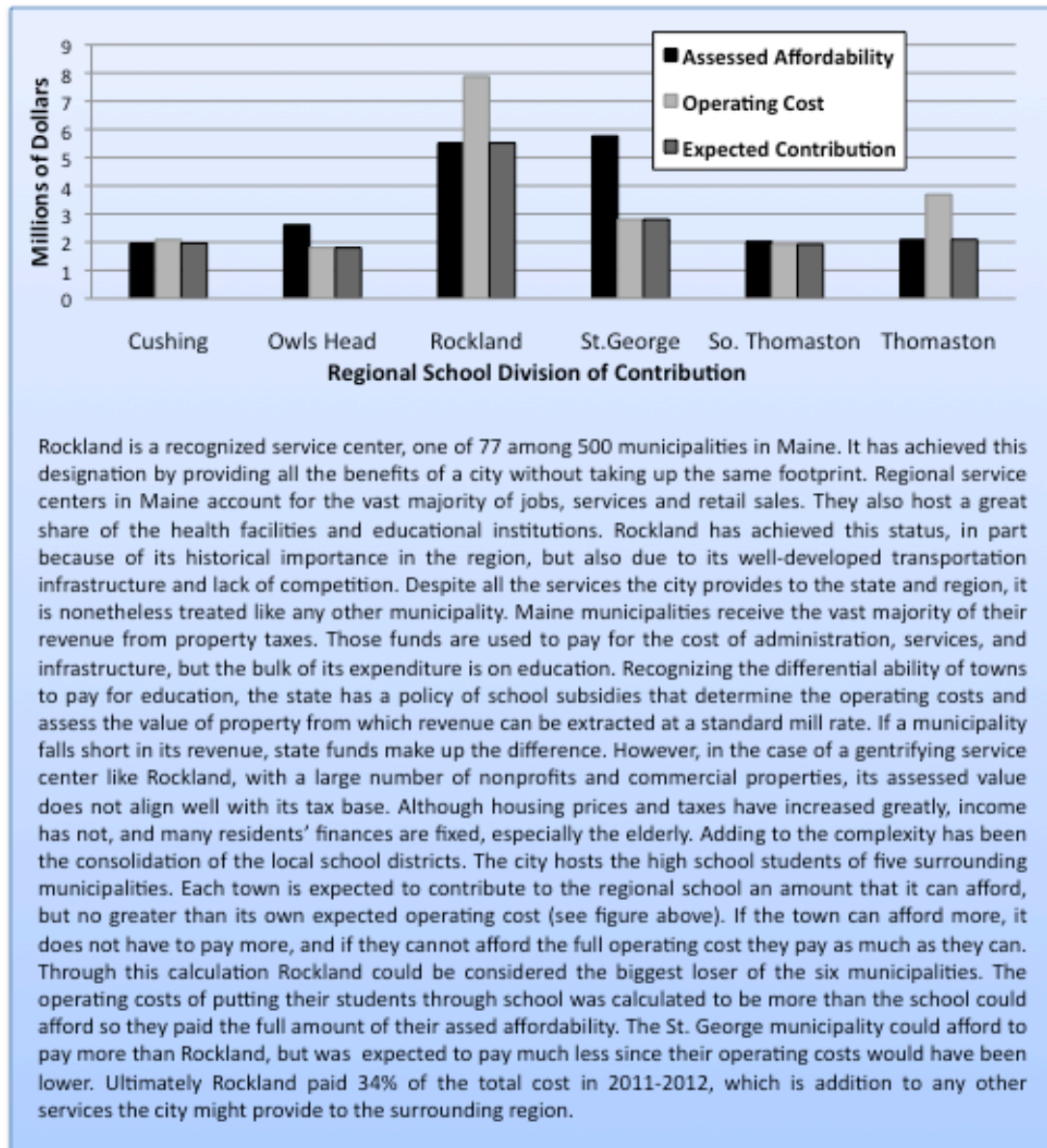
**Table 3: Housing occupancy rates.**

Population has been declining slowly, from a peak of 9,234 in 1950 to just over 7,000 in 2010. The population is relatively homogenous; in 2010, 97.8% identified themselves as white. Rockland’s population is younger than the state as a whole. The median age in 2010 was 40.3, compared to 47.2 in Maine, and 37.2 in the U.S. About 20% of the population were over 65, compared to 15.9% in Maine (U.S. Census Bureau 2010).



Rockland population by age in 2010. Data source: U.S. Census.

## Box 1: Regional Service Center and School District





## Tourism

Rockland, which has undergone multiple transformations in its history, shifted away from much of its manufacturing- and fisheries-based economy in the 1990s, growing tourism and establishing a reputation as a destination for visitors, a trend that continues today. The city is an integral part of the tourism industry for the entire Midcoast region, as a highly visible regional hub along U.S. Route 1 it serves as an epicenter for much of the activity. The downtown strip of Rockland has been revitalized and now hosts gift shops, galleries, antique dealers and restaurants. Multiple historical and cultural institutions have chosen the city as their home, including the Farnsworth Museum, which showcases Maine's role in the development of fine arts. Large crowds of tourists and residents are drawn to Rockland during festivals, including the Lobster Festival which celebrates the city's connection to fishermen and the seafood they harvest, the North Atlantic Blues Festival, and the Maine Boats, Homes & Harbors festival. It is during these events that the harbor area opens up and becomes more accessible to tourists, otherwise it is mostly separated from the downtown, although there are few public access points. The Harbor Park is closest to downtown and adjacent to the Rockland Public landing, which connects to a boardwalk that continues along the shore to the south. At the north end of the city is the popular Marie Reed Park, from which visitors can reach the breakwater and lighthouse.



**Rockland Breakwater Lighthouse.**

Much of the tourism draw of Rockland is for recreational boating and sailing, which has increased greatly in the past few decades, from 47 moorings and one marina, Knight's Marine, in 1985 to 402 moorings and three new marinas in 1999 (Rockland 2002). More marinas and moorings have been established since then, along with several businesses that primarily service and repair recreational boats. The O'Hara group, which operates a fishing fleet formerly very active in Rockland, now runs a marina out of Journey's End Marine. Part of the success of the sailing fleet in Rockland can be attributed to the accessibility of the harbor and location on the coast. As expressed by one business owner: "We have a beautiful asset here, we are the gateway to the Penobscot [Bay],



people come from all over the world to sail here." The nearby airport simplifies the logistics of changing crews and reaching boats, while the many yachting-oriented businesses offer conveniently located services. The continued growth of tourism, expansion on the waterfront, and increased activity on the water pose potential benefits and problems for the city. As Rockland becomes more dependent on tourism, its economy becomes less diversified and more seasonal. Furthermore, this expansion could marginalize and conflict with current commercial fishing operations.

## Gentrification

"Downtown Rockland is like any small town, it had a big heyday and then it kind of died, and now it's had a big renewal of a lot of nice restaurants, a nice, diverse mix of art galleries."

The cyclical rise and fall of different industries has been a driving force of change in Rockland, but the recent growth of tourism represents a shift away from a productive economy. The move away from resource extraction and manufacturing is a common trend throughout the coast of Maine, and much of the United States. In its place a new service-sector economy is taking hold, for many communities this has been considered a rural restructuring (Nelson 2002). However, the stable, high-paying employment found in the service sector is not surviving in Rockland, as exemplified by the loss of MBNA (Box 2). Although the economy is diversified, much of it depends on the tourism industry, which can have lower-paying jobs. Limited economic opportunity of the labor pool has been a long-standing characteristic of Rockland. In the past this aspect has stimulated demand for affordable housing. Although house values in the city are rising, they are not increasing to the same extent as in adjacent coastal communities. Meanwhile there is a large stock of rental property available, which is more affordable than owning. Housing prices in neighboring communities have been rising due to demand by amenity migrants seeking coastal landscapes and a rural idyll, which are not abundantly available in the city. These features help explain why Rockland has not experienced a widespread displacement of its inhabitants, but instead has a relatively stable population.

Displacement of people is a defining characteristic of gentrified neighborhoods, but in Rockland the displacement occurring is of a productive economy with one based on the service sector and tourism. The revitalized downtown and the shift of the marine businesses towards recreational and luxury boats, are indicators of gentrification. As the fishing industry declined and many of the processing plants closed down, it allowed the waterfront to be repurposed for other uses. Tourism and the service sector grew and took hold in many of those underutilized properties. It is debatable whether this transition constituted a cyclical replacement (Box 2) or an actual displacement of productive enterprises. The growth of one sector in the economy won't necessarily lead

to displacement, but there are some indications that conflicts are occurring. Fishermen are being increasingly marginalized, and depend on less wharfage and fewer buying stations than in the past. Meanwhile increased use of the harbor by recreational boaters, primarily in the summer months, presents an avenue of conflict, with lobstermen losing gear to the propellers of passing vessels. The waterfront infrastructure in Rockland is not only important to the fishermen in the harbor, but also vital to the entire fishing industry of the region. While a burgeoning tourism and yachting industry could pose a threat to fishing, it is not antithetical, because as one respondent expressed: "Plenty of space. There's plenty of space."

## Box 2: 'Best Use' of Waterfront Property<sup>2</sup>



The City of Rockland has long been focused on the economic activity of its harbor. Its history is marked by multiple transitions of property usage, coinciding with changing technology and markets. The "best use" of a property is that which produces the highest possible value. This has long been a driving force in Rockland. Examining a specific portion of this waterfront and following it through time exemplifies how the city has managed to readily convert property to its best use. In the early days, when the city was coming into its own, much of the waterfront was associated with the processing and shipping of lime, and the subject property was either a location for building ships or kilning lime. Later, that industry diminished with the advent of concrete, and concurrent opening up of markets to Maine fisheries. These economic forces drove Rockland towards fish processing, leading this property to become a sardine factory. This too declined, and eventually the building caught fire and burned to the ground. What was left was demolished and a new industrial park was developed that was operated by Fisher Engineering (Douglas Dynamics). Although on the water, this company was not marine related, instead it built snowplows. In the late 1990s the property was sold to the banking institution MBNA and completely redeveloped. Again, the facility was not marine related, but a calling center for the credit card lender. In 2005, despite increasing profit margins the company decided to consolidate its operations and close the Rockland facility. At the time MBNA provided 300 jobs and was the single greatest financial contributor to the city, paying more than \$315,000 in property tax. Maine Investment Properties purchased the property from MBNA and the land is undergoing another conversion to its best use. The former call center now hosts a restaurant, while the shorefront has plans of becoming a high-end marina for pleasure boats and mega yachts.

Groening, T. 2005. MBNA to Sell Land to Baltimore Firm. Bangor Daily News, June 16, 2005.

Curtis, A. 2009. Marina gets on board with 'clean' program. Bangor Daily News, Sept. 1, 2009.

## Non-fishing maritime industries

Although many of the fish processing plants that once lined the waterfront no longer exist, strong links to the maritime economy continue in Rockland. According to the city's comprehensive plan, "the driving forces behind the regional and local economies are marine-related industries." Particularly important are boat-building and repair companies. Rockland has no less than nine businesses that specialize in building and repairing boats of various sizes and materials, each employing anywhere from 10 to 100 people. Additionally, Rockland is home to a majority of the Maine Windjammer fleet as well as the Apprenticeshop, a marine education facility that teaches traditional boat-building skills, sailing and maritime arts to local youth and adults.



**The Apprenticeshop, marine education facility.**

Rockland houses four U.S. Coast Guard units responsible for maintaining Aids to Navigation, Search and Rescue, Recreational Boating Safety, Commercial Vessel Safety, Protecting Living Marine Resources, Homeland Security, and Ice Breaking. The Maine Department of Transportation provides ferry service to Vinalhaven, North Haven and Matinicus islands from the state ferry terminal in Rockland.

One of the town's largest employers, FMC Biopolymer, has been in Rockland (although under different names) since 1936, processing seaweeds for food ingredients, biochemical and medical markets.

## Fisheries

Rockland is the third-largest fishing port in Maine in landed value, landing \$23.5 million in 2011. Key fisheries in Rockland are lobsters and herring, although the city has a long history as a diversified port. Today, Rockland still considers itself the lobster capital of the world. Nevertheless, most of the lobster fishermen in Rockland are part-time. Rockland emerged as the center for herring landings and bait sales in Maine in the 1990s (NOAA 2009).

Rockland was once known for its redfish fleet and processing centers from the 1940s to 1960s. By the 1980s, the redfish industry had declined significantly due to reduced catch rates and the loss of large government contracts resulting from a mislabeling scandal, and in the mid 1990s it was finished.<sup>3,4</sup> Groundfish fishing declined in the 1980s and was mostly gone by 1990. Both O’Hara and National Sea Products fished in Canadian waters until 1984. The impact of this was somewhat mitigated by herring and lobster fisheries. By the 2000s, Port Clyde and Stonington were more important groundfish ports, and Friendship and Spruce Head were more important nearby lobster ports (NOAA 2009). Today, there are no multispecies groundfish permits held by those listing Rockland residences.

In 2008, NOAA found no recreational fishing companies in Rockland (NOAA 2009). Today, the Captain Jack, a 30-foot lobster boat, takes passengers on a 75-minute cruise.<sup>5</sup> Additionally, mackerel fishing is allowed for an additional fee and the captain allows individuals to “Rent Your Own Lobster Trap.” A number of charter boats operate out of Rockland, fishing for striped bass, bluefish, mackerel, shark, tuna, and cod. Subsistence fishing for mackerel and striper can be seen on the breakwater, but otherwise there is little record on this activity.

## Participation in the fisheries sector

Estimating employment in fisheries is challenging in a place like Rockland, where few are full-time fishermen and many fishermen using the port may not live within the city limits (NOAA 2009).

One way of illustrating the importance of commercial fisheries in Rockland is to look at the number of marine resource harvesting licenses issued by the state of Maine (ME DMR 2009). In 2011, 110 individuals held a total of 130 state licenses in Rockland. The vast majority of licenses (nearly 70%) held were for lobster, followed by shellfish, commercial

---

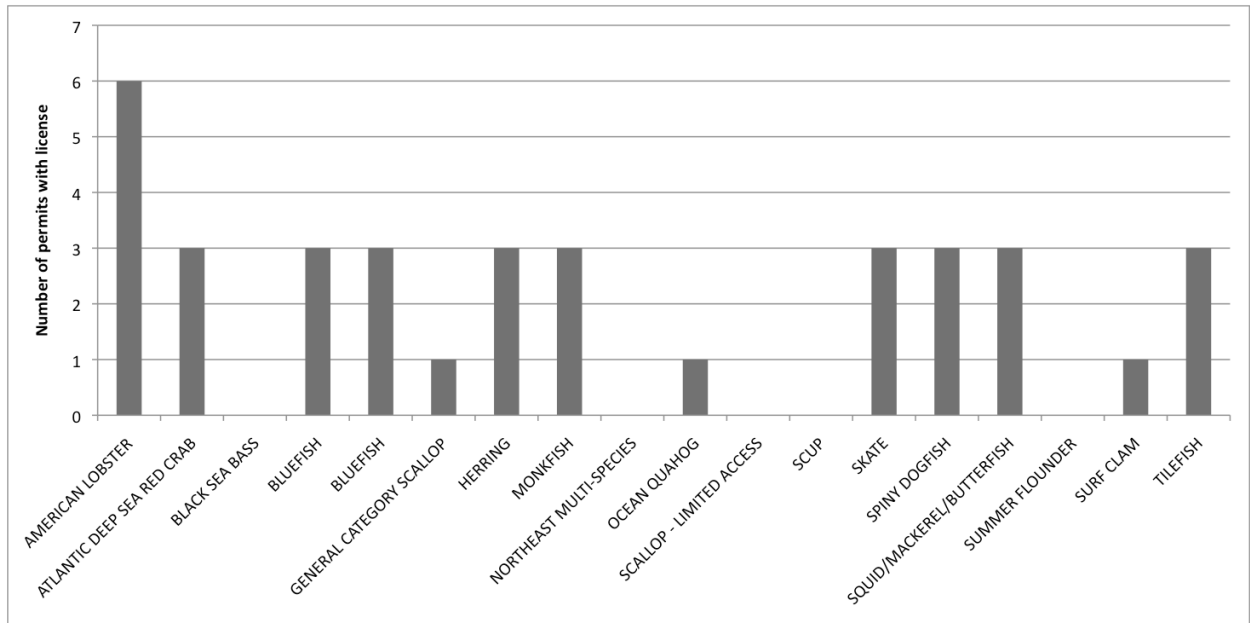
<sup>3</sup> [fish-news.com/cfn/editorial/editorial\\_3\\_08/Pollock\\_redfish-Can\\_NE\\_rebuild\\_demand.html](http://fish-news.com/cfn/editorial/editorial_3_08/Pollock_redfish-Can_NE_rebuild_demand.html)

<sup>4</sup> [nsgl.gso.uri.edu/nhu/nhunr11001.pdf](http://nsgl.gso.uri.edu/nhu/nhunr11001.pdf)

<sup>5</sup> [captainjacklobstertours.com/rentatrap.html](http://captainjacklobstertours.com/rentatrap.html)

fishing, shrimp, elver, and scallop. Additional licenses were held for seaweed, urchins, and pelagic/anadromous fish. This does not include municipal clam licenses.

Similarly, availability of federal licenses is another indicator of the fishing capacity in communities. The following data are reported in the Northeast Region Permit Database.<sup>6</sup> In 2011, 24 federal permits listed Rockland as the vessel owner’s address (9), homeport (12), or principal port (13). Five of the nine permits listing Rockland addresses listed other principal ports (Tenants Harbor, Great Pond Island, and Dutch Harbor, AK), while three listed other homeports (Criehaven, Falling Waters, WV, and Boston, MA). In addition to Rockland, those permits listing Rockland as their homeport listed addresses in Union, Boothbay, Milbridge, Birch Harbor, Swans Island, Steuben, and Spruce Head. In addition to Rockland, those listing Rockland as their principal port listed addresses in South Thomaston, Owls Head, Union, Gloucester, Stonington, West Rockport, and Eliot. Of those permits listing Rockland residences, most provided access to the federal American lobster fishery (Figure 9). There were no multispecies groundfish permits on these permits (Figure 9). The average length of the nine vessels with federal permits residing in Rockland was 64.2 feet (30 ft. minimum, 189 maximum).



Number of federal licenses with Rockland addresses in 2011. Source: NMFS Permit Data 2011.

<sup>6</sup> Northeast Region Permit Database. Available at [nero.noaa.gov/permits/data/](http://nero.noaa.gov/permits/data/)



## Fisheries infrastructure and support

A majority of both lobster and herring fishermen feel that the fisheries infrastructure in Rockland meets their needs. As one herring fishermen explained, “For me, all I need outta there is fuel and a place to tie up. That’s it. That’s what I get outta Rockland.” This is mainly due to the municipal fish pier. Built after the Magnuson Act during the Fish Pier Program as part of the larger effort to build capacity at this time, the fish pier provides important public docking, offloading and gear storage facilities. User fees cover the expenses of running the fish pier and some fishermen feel these fees are excessive, however the fish pier manager works actively to encourage other businesses to use the pier and cover more of the costs as well as seeking out government grants and matching funds. Despite these efforts, there is concern that as costs continue to rise, fishermen will not be able to afford the fees necessary to cover these expenses and keep the pier going. This process has already begun to occur as some fishermen have complained about the current state of the fish pier:

“Well the fish pier needs dredging. That's probably the biggest thing. Dredging; we need more dredging. Dredging just seems to be so expensive and not much dredging's being done any more like they used to...”



Rockland Fish Pier.

Rockland’s marine infrastructure has variety of other important features. The breakwater and lighthouse are chief among these. There is also a ferry terminal and several public boat landings. In addition to the public fish pier, many private companies provide much needed services for the fishermen in Rockland. Multiple commercial boat builders and boatyards in the area provide space for fishermen to haul their boats or get repair work done, including

Journey's End Marina and Knight's Marine. Fishermen can purchase gear and supplies at Hamilton Marine in Rockland. O'Hara's corporation has been in business in Rockland since 1939 and supplies ice and bait to fishermen as well as operating Journey's End Marina.



**Journey's End Marina.**

There are two large lobster buyers in Rockland as well as multiple seafood markets including Jess's Market and Fox Island Seafood. One lobsterman explains the benefit of having multiple buyers in the area:

“I guess we're more fortunate here because we...have quite a few different places in town where you can sell your lobsters and it kind of drives the price up. Rockland prices have always been higher than most everywhere else. But it's kind of leveled off more now.”

Rockland is also home to the state's third-largest lobster processing plant, Linda Bean's Maine Lobster, which handles around four to six million pounds of lobster per year.

Additionally, numerous boats in Rockland provide dealer services to the surrounding island communities, bringing bait and purchasing lobsters directly from the island to bring back to Rockland.

### **Fishing industry support institutions**

The Maine Lobstermen's Association was founded in 1954. It represents 1,200 lobster fishers, and is the largest commercial fishing group on the East Coast (NOAA 2009). The MLA works with its members, politicians, government officials, the public and conservation



organizations with the mission to “advocate for a sustainable lobster resource and the fishermen and communities that depend on it.”

The Maine Fishermen’s Forum, founded in 1976, is an annual three-day event held at the Samoset Resort that provides an opportunity for discussion and education on a wide variety of fishery issues. The largest event of its kind in New England, the forum brings together fisheries managers, representatives of state and federal government, scientists, and the fishing industry in seminars and discussion panels focusing on current marine resource issues.

The University of Maine Sea Grant and Cooperative Extension has an office in Waldoboro. The local Marine Extension Team member provides local support to fishermen and other community members.

The Island Institute, a nonprofit located in downtown Rockland, promotes cultural and ecological conservation of Maine’s island communities. They conduct research on fisheries issues affecting these communities, ranging from lobsters to wind power (Island Institute 2011). Most of the Institute’s work involves communities other than Rockland.

### **Cultural attributes related to fisheries and the sea**

Rockland is home to the annual Maine Lobster Festival. Since 1947 the festival has included a parade and lobster cookout, but in the late 1970s it expanded to include carnival rides. The event brings in almost \$1 million in “outside” money to the local economy. Many of the proceeds are donated to charities and have been responsible for funding the paving of the Rockland Public Landing and repairing decking on the middle pier, and many other local projects.<sup>7</sup>

For the last 10 years, the Rockland Harbor has hosted the Maine Boats, Homes and Harbors Show the second weekend in August. The show gathers artists, architects, boatbuilders and marine gear vendors from around the state, as well as providing live music, fair food, and entertainment events.

The Maine Lighthouse Museum is located in Rockland and houses the largest collection of lighthouse and lifesaving artifacts in the nation. Through the conservation and interpretation of these artifacts as well as guest speakers and events, the museum helps to “educate the public regarding the long standing traditions, heroism and progress of America’s Lighthouse and Lifesaving services and the United States Coast Guard.”<sup>8</sup>

---

<sup>7</sup> [mainelobsterfestival.com/](http://mainelobsterfestival.com/)

<sup>8</sup> [mainelighthousemuseum.org/](http://mainelighthousemuseum.org/)

There is also a memorial to fishermen lost at sea at Mildred B. Miller City Park adjacent to the Rockland Harbor. An annual event at Rockland’s Festival of Lights, held over Thanksgiving Weekend, is the lighting of a Christmas tree built out of green lobster traps above the memorial.



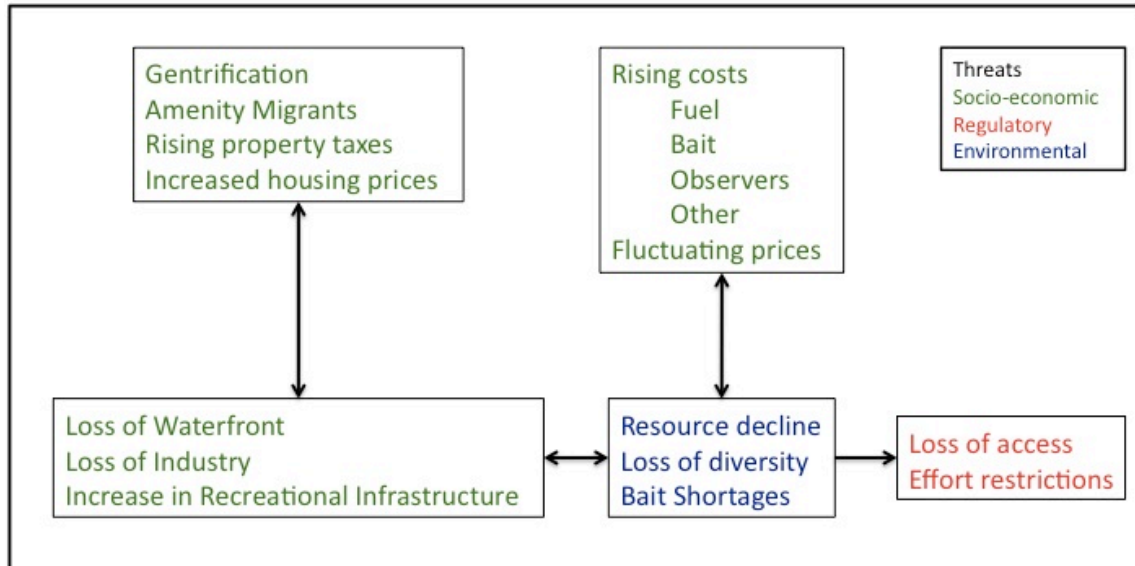
Building the lobster trap Christmas tree at the Rockland Fishermen’s Memorial.

### Vulnerability analysis

The level of vulnerability, defined as “susceptibility to harm from exposure to stresses associated with environmental and social change” (Adger 2006), of the fishing community in Rockland is **moderate** due to many contributing factors and their cumulative effects. Here we report on two interrelated components of vulnerability: threats “to humans and the things they value” and responses “incidental or purposeful that occur after experience(ing) a threat” (Tuler et al. 2008).

### Threats

The fishing community of Rockland faces a variety of interrelated socioeconomic, environmental, and regulatory changes. Below we describe those sources of change (threats) most relevant to Rockland as expressed in our interviews.



Socio-economic, regulatory and environmental threats facing Rockland.

### Socio-Economic

Multiple people mentioned increasing expenses as the most imminent threat. One lobsterman stated, “The biggest threat I would say would be the high cost of doing business, the high cost of bait and fuel and maintenance and access to the water.” Other respondents pointed to the cost of trucking things to Rockland, which although it is becoming a commercial hub for the Midcoast area, is still 50 miles from the nearest Interstate Highway.

Rockland’s diversified economy, while seen by many as an asset, is also seen to create tensions and threaten the commercial fishing industry. One respondent stated that the future of Rockland would depend upon “a constant struggle between all the different directions people think the town should go.” Many fishermen are concerned that if the transition to tourism and service related economy continues, it will push them out.

“What Rockland has turned into because of O’Hara has changed the wharf of the waterfront around from – it’s a marina-type waterfront now rather than fishing. We still have the fishing here. I don’t know how long that will stay there.”

As the structure of the waterfront area changes to cater to the increased recreational boat traffic, many lobster fishermen are worried about the affect this could have on the sea floor space available for their traps, as well as how the lobster may react to the increase in activity: “We could be hurting if more moorings come into the harbor and that’s what people want.”

This influx of people from out of state who have moved to Rockland to take advantage of the newly emerging recreation opportunities and creative economy have also created an increase in the cost of living that has many fishermen wondering how they will stay in the area.

“Over the years, it's gotten bad, because it used to be, I mean you could go get a house cheap, you could live in it, you could raise your family here, but about ten years ago it started going the other way, and you couldn't. That's why all the houses went to the out-of-staters. The local people couldn't afford to buy them, couldn't afford to keep the houses. Taxes kill us, property taxes. They're horrible.”

### Regulatory

The most common threat cited by herring fishermen involved concern regarding regulations in the industry. Many were concerned that the regulations that dictated which days they could fish made fishing less safe, because decisions were based less on weather and more on if it was a day they were allowed to fish. “Used to be we'd go seven days a week, barring storms, but now that they've got us in that little box of 48 hours, we have to go—even if it's a storm we still have to go out now.”

Additionally, many of the herring fishermen who use purse seine gear complained about the allowance of the use of midwater trawl gear. “[Trawling]’s a bad fishery. I’ve tried it. You catch groundfish, you catch tuna, you catch whales, porpoises, seals, and you kill all this stuff and you don’t want it. With the purse seining I can catch it and let it go.” Many felt that trawling should be eliminated and that protections should be placed on spawning herring.

### Environmental

The lobster fishery in Maine has seen unmatched growth in recent years, with record-breaking landings in pounds the last three years and general increases in both landed pounds and value since the mid-1990s. This abundance has been a source of resilience for lobster fishermen in Rockland in recent years and many see this continuing barring some unknown environmental change. “I don’t truthfully see the lobstering ever having a problem. Not unless something kills them, some disease.” Others see this increasing dependence on a single species as a major source of vulnerability for the fishing community.

“We’re becoming more and more of monoculture for fishing. You know yes we have lobstering and yes we have bait but that’s it. All of the other fishing industries have come and go[ne], whether its sea urchins, or groundfish, or one thing that we had for a short time, the kelp industry, they’ve all gone away.”

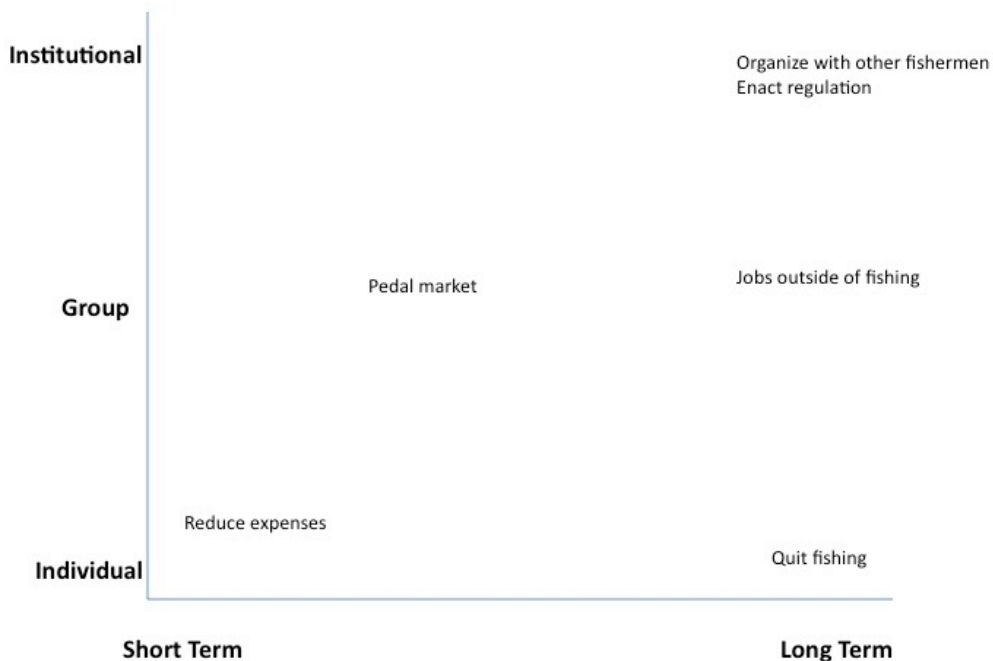
This lobster “monoculture” relies heavily on the ability to obtain bait, and many in Rockland feel that the future of the bait supply could lead to the eventual downfall of the lobster industry. “When the herring is gone, the industry will be gone. Yeah, because there's not enough other kinds of bait.” This threat is perceived by herring fishermen as well who have seen changes in the resource’s abundance and their ability to catch herring.

“Their spawning habits and their patterns have all changed—their migratory patterns. Twenty years ago, I could tell you pretty much on any given week of the year where the herring would be but that’s all gone now...”

### Responses

“[Fishermen] have had a lot of changes over the years, the price of fuel going up astronomically, the price of bait going up astronomically, but not the price of their catch going up astronomically and they’re still in business, some have been weeded out, but others have survived.”

The ability of fishermen to respond to threats varies, as some are simply beyond their control. For those that are within their ability to respond, many use the following strategies:



Short and long-term responses to threats.

### Alternative Bait Sources

In response to increasing bait prices, fishermen have begun to use more frozen bait, or try species other than herring such as mackerel or purchasing bait from Canada. The ability to get bait from farther away is a strategy used not only by fishermen, but by the O'Hara Corporation as well. The company has been trying to get frozen bait shipped by rail from the West Coast of the United States to Rockland, however the logistics have proven difficult and at this point the closest successful rail transport destination is Montreal, Canada. One fishermen is hopeful of the project, "that will probably see a reduction in price over time, if that's successful."

### Organizing

Some herring fishermen who use purse seine gear joined lawsuits that have been successful in creating new rules that apply to midwater trawl gear types. The new rules require trawlers to carry onboard observers and entail specific protocol for sampling and reporting catch so that fisheries scientists will have more accurate details regarding catch and bycatch from the fishery.

The lobster industry in the state of Maine has been heralded for a level of organization that led to many conservation rules in the fishery. Many respondents point to this as a strength, particularly the need to continue this level of organization now that the conservation rules are in place and people may not see the need as imminently as they once did. "You just have to stay involved in your community I believe, and the process of being involved in your local Harbor Committees and Management Commissions and all that kind of stuff."

### Jobs outside of fishing

Much of the resilience in Rockland seems to come from the fact that Rockland is much more than just a fishing community. While this economic diversity is also seen as a threat to the fishing community, it provides many other economic opportunities that are available to fishermen as a response. Many of the fishermen in Rockland do not rely on fishing as their sole source of income. Some fishermen have owned tourist gift shops or restaurants and others take advantage of whatever becomes available:

"I always seem to think that there's plenty of stuff to do and there's plenty of money to be made if you just want to get out there and do it. You've just kind of got to set your ego aside and get in there and do whatever it takes. Today my thing is I do everything that nobody else wants to do."

## Quit Fishing

“Getting out completely...a couple a year, every year for the last five years. So that tells me that the pressures are getting harder.”

There are some threats that, when considered cumulatively, fishermen have been unable to cope with or adapt to and as a result they have been forced out of the fishing industry completely. This is obviously, for most fishermen, a decision only made as a last resort. Some of these people are older and have retired, others got jobs outside of fishing and others have moved away from the town.

## Summary

“Tourism...I mean Rockland has changed...their culture has changed, obviously. The plants have closed, and, like I said before, we've added the museums, and the museum has grown. The main street is a lot different than it was, say, when I grew up here, you know, with all the different types of culture, you know, a lot of nice, upscale restaurants and boutiques.”

Rockland is a town struggling to find its identity. Gone are the days of multiple fish processors on the waterfront and large industrial fleets, yet fishing still plays an important role in the community. Striking that balance between the new diversified economy that emphasizes non-commercial uses of the waterfront, while supporting the fishing community as it exists today is an important challenge for Rockland. One resident stated this goal as follows: “We have to capitalize on the use of the harbor to benefit everybody—the commercial fishermen, the commercial lobstermen, and the summer tourists.”

Currently, Rockland appears to be achieving this goal as there is still significant infrastructure for the commercial fishing industry. The more imperative concern for the future of the industry seems to be related to resource abundance.

“I think that’s what you mean about a resiliency is we’re here and we’re ready, we have a fish pier and we’re ready if the industry ever picks up again, to be something else, it’s not gonna be because the city doesn’t want to support fishing that they’re pushed out, it’s gonna be because there are no fish.”

Some sectors of the community view the future of the fishing industry in Rockland very optimistically: “I think fishing will always play a role here. I think we're situated in the middle of, like I say, on the western side, but the middle of Penobscot Bay, and I think that we have enough infrastructure to handle it. Hopefully, there'll always be a sustainable future for the fishermen.”



While others have a much more pessimistic view of the future of the fishing industry:

“The resilience is there and a town like Rockland with so many other industries is in a great place to support itself until fishing comes back but fishing will never come back the way it used to be on the Maine coast.”

Regardless of what the future holds, most people believe Rockland is in a good position and the community is not 100% dependent on fishing as a viable sector.

“It’s a model for other communities as well, Nova Scotia just came down and visited...to see what we’re doing right why are you thriving, why is your downtown so vibrant why are your people so positive. It’s a mixture of all those things, people who grew up here people who moved here from out of state, because they have a passion, their heart is in it they want to be here. They’re not here because of business they’re here because they want to be here. They’re gonna make it work even if it means reinventing themselves five or six times they’re gonna make it happen. There’s no doubt, they are definitely resilient.”

## Recommendations

- Promote tourism and creative economy to create economic opportunities while maintaining traditional aspects of the fishing community.
- Preserve working waterfront: maintain/upkeep existing infrastructure.

## References

- Adger, W.N. 2006. Vulnerability. *Global Environmental Change* 16(3):268-281.
- Bird, J. 2011. *Rockland, Maine's Tidal Turn: Stories of Local Heroes Who Helped Renew a Coastal Community*. Rockland, ME: Maine Author's Publishing.
- Brookings Institution. 2006. *Charting Maine's Future: An Action Plan for Promoting Sustainable Prosperity and Quality Places*. Washington, DC: Brookings Institution Metropolitan Policy Program.
- City of Rockland. *2002 Comprehensive Plan*. Updated February 2012. Available at: [ci.rockland.me.us/index.asp?Type=B\\_BASIC&SEC=%7BE1B60FD4-B70F-4D3A-9C1A-442072D9A897%7D](http://ci.rockland.me.us/index.asp?Type=B_BASIC&SEC=%7BE1B60FD4-B70F-4D3A-9C1A-442072D9A897%7D)
- Hall-Arber, M., C. Dyer, J. Poggie, J. McNally, and R. Gagne. 2001. *New England's Fishing Communities*. MITSG 01-15. Cambridge, MA: MIT Sea Grant. Available at: [seagrant.mit.edu/cmss/marfin/index.html](http://seagrant.mit.edu/cmss/marfin/index.html)
- Island Institute. 2011 Annual Report. Available at: [islandinstitute.org/publications/Island-Institute-2011-Annual-Report/14837/](http://islandinstitute.org/publications/Island-Institute-2011-Annual-Report/14837/).
- Maine Department of Education. 2012. *Subsidy Allocations by School Administrative Unit*.
- Maine Department of Marine Resources (ME DMR). 2011. *Marine Resources Licensing & Enforcement (MRLLEN) database*. Retrieved by Keith Fougere, November 2010 and May 2012.
- Maine Municipal Association. 2004. *Homeowner's Guide to Property Tax in Maine*.
- Maine State Planning Office. 1998. *Reviving Service Centers: Report of the Task Force on Service Center Communities*.
- Melrose, J. 2003. Revitalizing Maine's Serviv Centers. *Maine Policy Review* Winter 2003:48-55.
- Nelson, P. 2001. Rural restructuring in the American West: land use, family and class discourses. *Journal of Rural Studies* 17:395-407.
- Northeast Region Permit Database. Available at: [nero.noaa.gov/permits/data/](http://nero.noaa.gov/permits/data/).

NOAA. 2009. *Community Profile of Rockland, ME*. Prepared under the auspices of the National Marine Fisheries Service, Northeast Fisheries Science Center. Available at: [nefsc.noaa.gov/read/socialsci/community\\_profiles/ME/eastport-me.pdf](http://nefsc.noaa.gov/read/socialsci/community_profiles/ME/eastport-me.pdf).

Tuler, S., J. Agyeman, P. Pinto da Silva, K. LoRusso, and R. Kay. 2008. Assessing vulnerabilities: integration information about driving forces that affect risk and resilience in fishing communities. *Human Ecology Review* 15(2):171-183.