
Creating a Place for “Community” in New England Fisheries

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Abstract

Although the Sustainable Fisheries Act that amended the Magnuson-Stevens Fishery Conservation and Management Act in 1996 defined fishing communities to be places with significant harvesting and/or processing activities, a collaborative mapping project in the Northeast has made clear the limits of such a port-based definition by documenting the presence and nature of communities “at sea.” Using vessel trip report data, unique maps depicting community territories were created for a variety of communities dependent upon Gulf of Maine fisheries. Community-based researchers interviewed fishermen from the region and asked them to engage with the maps, discuss the nature of community within those “at sea” locations, and document the type of local environmental knowledge they maintained.

The participatory interviews made clear the varied ways that communities respond to and are changed by the recent history of regulatory and environmental change. While the dominant port-based vision of fishing communities sees communities as sites of impact and decline, a focus on relationships between fishermen and between fishermen and their environments reveals communities as ongoing and emerging processes. While the former produces doubt relative to the development of any community-based initiatives for fisheries management, the latter points to the resilience of “community” and the always-emerging potential for community-based approaches.

Keywords: GIS, participatory research, commercial fishing, communities

Introduction

Fisheries management regimes in the global north are typically silent relative to fishing communities (Jentoft 2000; McCay and Jentoft 1998). While fishing communities have

always been actors and/or referents within public dialogues and debates concerning fisheries’ resources and their utilization, they have not traditionally been objects of analysis, data collection, description, or documentation within the dominant discourse of fisheries science and management itself. Indeed, insofar as fishermen are present, they are seen as individually motivated bearers of an aggregate fishing effort originating from nowhere. Communities have no place within the equilibrium equations that balance aggregate fishing effort and fish populations on a species by species basis. As a result they are invisible within the space of stock calculation, the space of fishing itself (St. Martin 2001).

Despite decades of erasure and (dis)placement, “community” is, however, emerging within fisheries management as it is across a broad spectrum of resource management regimes (Berkes 2003; McCarthy 2006; Western and Wright 1994). Once the hallmark of pre-modern, traditional, and archaic forms of resource use and/or management, community-based initiatives are not only commonplace but hegemonic within participatory international development and conservation practice (Cooke and Kothari 2001; Kellert et al. 2000). Within the fisheries regime of the U.S. Northeast, however, communities are positioned primarily as sites for “impact analysis” rather than central to the dynamic of development or as agents of conservation; to the degree they are considered, they are locations subject to environmental change, economic decline, and, of course, management measures (Olson 2005). In addition, community is relegated to and seen in land based locations and activities but is absent at sea; the very sites of fisheries management are devoid of community (St. Martin 2006).

Therefore, to be effective themselves and to be participants in the management of fisheries’ resources, an alternative (counter) mapping of community and commons is needed, particularly in the global north where the absence of community has been most convincingly produced (McCarthy 2003; St. Martin 2005). The Atlas Project³ works by creating

locations/spaces at sea into which can be projected community processes, community identities and histories, and a community becoming (cf. Gibson-Graham 2006; Ratner and Rivera Gutierrez 2004). In so doing it creates the conditions for community-level participation, creative place-based initiatives, and a community resiliency (cf. Berkes et al. 2003). If communities are to be more than just sites of impact, if they are to be actors within the institutions that govern access and utilization of fisheries' resources, they and the resource areas upon which they depend must be made visible such that they can become sites of negotiation and experimentation.

This paper proceeds by first briefly reviewing the current U.S. federal mandate to incorporate "community" into fisheries science and management as well as its limitations relative to community participation. It then outlines the method of the Atlas Project, a participatory action research project where "community researchers" from several Northeast ports interviewed fishermen in an effort to solicit the nature of community processes as embedded within and constitutive of shared spaces at sea.⁴ Participants' responses are then discussed and interpreted. They clearly confirm the prevalence of community/commons processes. A host of such processes (e.g. sharing information, local ecological knowledge, de facto territorialization) have been documented and inscribed into particular places at sea. The conclusion points to the resiliency of community processes and commons spaces within the fisheries of the U.S. Northeast.

Containing "Community" and Limiting its Potential

In the U.S. Northeast, the category of "community" is emerging within the dominant discourse of fisheries science and management as a result of the federal mandate to consider the impacts of fisheries management plans (FMPs) upon fishing communities. FMPs for the major species targeted by commercial fishing fleets are written by the regional fishery management councils (government appointed industry, environmental, and scientific representatives) and approved or rejected by the National Marine Fisheries Service (NMFS). While the definition of community within natural resource management regimes varies (cf. Jakes and Anderson 2000), the federal government has provided a specific framework for its consideration. According to the federal Sustainable Fisheries Act (SFA) that amended the Magnuson-Stevens Fishery Conservation and Management Act in 1996,

Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing com-

munities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities (16 U.S.C. §1851 (1996), Pub.L.94-265, Sec.301, (a) (8)).

Consideration of communities is meant to *both* sustain the participation of fishing communities in management and minimize adverse economic impacts. The Act went on to define the term "fishing community" as a

... community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such a community (16 U.S.C. §1802, Sec.3, 104-297 (16)).

The need to identify fishing-dependent communities in order to measure and mitigate impacts led to the development of federal guidelines for defining fishing communities and for assessing the impacts of fisheries management upon them. In addition, several projects were implemented that attempted to profile fishing communities in virtually all of the seven U.S. fisheries management regions.⁵ Both the federal guidelines and subsequent community assessments constituted fishing communities as primarily geographical entities (e.g. deduced from employment and other fisheries business statistics within standard municipal and census boundaries). These studies also utilized understandings of community as homogenous groupings and agreed upon norms (cf. Agrawal and Gibson 1999).

The containment and delimitation of fishing communities is, however, difficult; fishing communities are leaky containers at best. In the Northeast, recent research has pointed to the variable and flexible nature of fishing communities' boundaries. For example, Hall-Arber et al.'s (2001, 415) attempt to define community based upon the extent of capital flows (amongst other variables) soon faltered when it became apparent that "capital flows must be charted over time at local, sub-regional, regional, national and international levels to trace effects and predict change." While this work retained the definition of community as a geographic place, it considered the identified fishing communities as nodes within a network of multi-scalar capital flows. In addition, it pointed to a variety of other leaky boundaries and flows such as vessels migrating from one port to another, a movement typically associated with target species movement, marketing, and access to fishing grounds; the multi-ethnic and multi-national character of many fishing ports; and the diversity of attitudes relative to perceptions of resource change, benefits of manage-

ment, etc. (Hall-Arber et al. 2001; see also St. Martin et al. 2007).

Leaky and Disintegrating Containers

The federal mandate to assess management impacts upon “fishing communities” has unleashed a search for such communities where none had been previously documented. Social science methods (e.g. ethnographic, demographic, and geographic) were suddenly needed and deployed to categorize places and activities as (or as not) “substantially dependent on or substantially engaged in” fisheries (Olson 2005). The great diversity of fishermen and related industry participants might then find themselves classified by residence or occupation within a particular municipality or census tract as being members or not of “fishing communities.” Where found, communities would, presumably, be sheltered from adverse or overly harsh impacts of management or would be sites where the effects of management might be somehow mitigated.

This search and delimitation of fishing communities is clearly useful for analyses of impacts, for example, to assess the multiplier effects of decreased landings. It has, however, the unwelcome effect of also constituting communities as fundamentally sites that are threatened, in decline, or vestigial. The focus on boundaries and communities as containers of indicators and thresholds of fishing activities will, by definition, make such communities difficult to find in the largely urban and industrially mixed U.S. Northeast. Also, insofar as they are leaky containers, they are further dissipated and distanced from the ideal of a discrete, cohesive, homogenous, and geographically defined fishing community. While the difficulty to produce fishing communities in the image of the latter only confirms the extent of negative “impacts,” it simultaneously undermines communities as sites of potential for community-level participation or community self-management of resources.

Containers Tied to Shore

Community as a geographically defined container of socio-economic indicators, designed to gauge impacts, works to not only position communities as threatened and in retreat, it also positions them within the terrestrial geographies of socio-economic data collection (St. Martin 2006). That is, to the degree such communities can be found, they are tied to land, albeit port, locations. Fishing economies and cultural practices certainly take place in/on docks, processing plants, neighborhoods, homes, cultural institutions, and other sites but these are not the spaces of fisheries management per se. Fishing communities are effectively outside of the marine realm of fisheries science, management, and fishing itself. While well-positioned to be sites of impact or, more accu-

rately, impact analysis, communities are hopelessly disconnected from the very practices, processes, and relationships that are the focus of fisheries science and management.

If we look to the paradigms that are currently central to fisheries science and management, it is clear that they focus on particular processes that can be mapped and powerfully represented as integral to the marine environment. Bioeconomic and ecosystemic processes are vital to current management regimes and are subjects of extensive data collections, theorizations, implementations, and, increasingly, geocodings. These practices serve to make bioeconomic processes (e.g. aggregate fishing effort and its relationship to fish population dynamics) and ecosystemic processes (e.g. essential fish habitats, assemblages of species, or bottom morphology) visible within the marine environment, they literally map them into the space of fisheries’ resources such that their relevance cannot be denied (Kostylev et al. 2001; Greene et al. 2003; Iampietro et al. 2005).⁶ There is simply no corresponding data collection effort, theorization, or embedding of community/commons processes within the marine environment.

The search for fishing communities, based upon a particular image of community as a spatial unit, homogenous, and cohesive, has yielded a variety of sites where fishermen’s “way of life” is threatened, economies are failing, and cultures are dissipating. These sites, severed from the commons upon which they depend, are infiltrated and dissected by other more powerful economic and cultural trends (e.g. waterfront gentrification). While these processes are certainly essential to document and to address in terms of impact analyses and, hopefully, amelioration, their conflation with “community” serves to undermine the latter as a site of potential. When community is reduced to collections of terrestrial indicators, it is difficult to see it as a determinant of fishing practices or even a force that can mitigate the drive to individual utility maximization.

(Re)Constituting Community and Commons: The “Atlas Project”

While the advent of “community” within U.S. fisheries science and management is problematic, especially relative to participation in the latter, it nevertheless provides an opening into which competing definitions and documentations of “community” might be deployed. Wishing to increase the potential of “community,” the Atlas Project was designed to document community processes, rather than boundaries, and to embed them within the marine environment, rather than relegate them to ports. It raised questions about whether or not a more explicitly spatial management might be feasible, more amenable to participation, and more effective than the

current regime at sustaining both local economies and environments.

Using a participatory action research approach (Cameron and Gibson 2005; Pain 2003, 2004), the project engaged fishermen in an examination of their community and territorial practices and explored their own sense of community, its utility, and its potential relative to fisheries management. Specifically, the project revolved around a series of maps that gave participants an explicit spatial framework within which to discuss the above issues. Using federally collected vessel trip report (VTR) data aggregated by gear type and port (see below), the maps depicted the fishing territories or frequently visited locations of peer groups of fishermen from several ports in Maine, New Hampshire and Massachusetts. The maps were central to the project's main goal of visualizing a space for communities within the marine environment.

Producing an Alternative Ontology of Fisheries

Previous research amongst the trawl gear fishermen of Gloucester, MA has revealed the existence of community processes such as the sharing of information amongst fishermen, the nature of local ecological knowledge (e.g. species composition, bottom morphology), and how and why fishermen are territorial (St. Martin 2001). The Atlas Project confirms the existence of similar processes across several New England fishing communities that vary in size, dominant gear type, target species, boat size, capitalization, etc. In addition, it documents such processes relative to explicit locations at sea (see below). By superimposing the areas frequented by vessels from each port on standard nautical charts and by making the composite maps central to each Atlas Project interview, project participants were able to directly relate the processes that bind them together as a community to processes of harvesting within and knowledge about particular locations at sea. In this sense, the project worked to (re)unite community and commons.

The Atlas Project presents a forum in which community and commons can be co-constituted (cf. Gudeman and Rivera 2002). It suggests an alternative ontological frame within which communities are assumed to affect and be affected by the specific ocean spaces they inhabit. This understanding works as a way of knowing, a starting point for investigating the relationship between fishermen and the marine environment that displaces the currently institutionalized starting point of bioeconomics where fishermen are individuals competing on an open access resource. The latter attempts to control the behavior and practices of individuals and/or individual vessels in order to maximize harvest while the former suggests the possibility of community-based mechanisms or innovations aligned with place-based ecosystem approaches.

Beginning from the assumption that community is commons, that they are homologous constructs, suggests alternative ways to know both community and the marine environment. Impact analyses, participatory approaches to management, and other initiatives that presume a community presence could be more directly relevant to the management of fish stock and marine habitats if community were always and necessarily co-produced by fishing grounds, environmental histories, territories, and environmental knowledge. Similarly, understanding the marine environment, the processes and dynamics of fish, fish harvesting, and environmental change, would be altered by the assumed presence and practices of communities within that marine environment. In both cases, an altered starting point would imply new forms of data collection, particularly geocoded data that would literally allow for the overlay and analysis (via Geographic Information Systems) of communities and biophysical data.

Motivating Community

As a collaborative project, the Atlas Project sought to enroll "community researchers" who would contribute to the project design and who would then recruit and interview commercial fishermen from the ports where they lived and/or worked (cf. Community Economies Collective 2001). Community researchers were, ideally, either fishermen themselves or other members of fishing communities with close ties to fishermen and their experiences. While there was considerable interest in the project insofar as it advocated for fishing communities generally, most prospective community researchers were skeptical once they understood that the project would revolve around the mapping of commercial fishing locations. They perceived the project as one of revealing the secret fishing spots, the "hot spots," of fishermen. Concern about the outcome of the project was expressed very simply, "If we give them [meaning fisheries regulators] that information, it will be used against us."

The premise of the project was to engage participants (both community researchers and eventual interviewees) as representatives of their community (albeit only vaguely defined); yet actually doing so was initially very difficult. Prospective participants were much more likely to relate to the project (and us) as individuals, with individual fishing histories, and individual "hot spots" or experiences at sea. They could not see that the project was not interested in mapping locations at the scale of individual boats and their "hot spots" but broad areas important to communities. The identity of fishermen as individuals competing on an open access commons, the very positionality that we were hoping to challenge/redefine with this project, was a barrier to participation insofar as individuals did not want to divulge their individual fishing areas either to each other or to the government. While

espousing their allegiance to “the fishing community” in a variety of ways, prospective participants had difficulty imagining themselves as community members (or able to map community domains) within the marine environment.

The resultant hesitancy of prospective participants to engage with the project, to position themselves as community members/representatives within the space of fisheries management itself, eventually dissipated for at least two reasons. First, the management of groundfish, the primary fishery in the region, radically changed with the implementation of Amendment 13 to the Multispecies Fishery Management Plan in 2004. In addition to reducing access to fish via gear and days-at-sea regulations, the amended plan opened up the possibility of “sector allocations” (50 CFR 648.87). Under this amendment, the Cape Cod Commercial Hook Fishermen’s Association (CCCHFA) gained an allocation of 12.587% of the total allowable catch for Atlantic cod. Suddenly, the fishing industry became acutely aware of the potential benefit of acting as a community and documenting their “traditional” fishing grounds. A new institution had emerged that could accommodate community interests and direct involvement in management.

The CCCHFA’s allocation must be harvested by association members, using specific gear (hooks), and within a particular area (i.e. Georges Bank). It is clearly representative of the trend toward more localized and area-based fisheries management strategies and, more generally, of an emerging marine spatial planning (Norse and Crowder 2005; Pauly 1997). In the Northeast there are now a variety of competing claims that would parcelize and zone the marine environment in ways reminiscent of terrestrial enclosures and their resultant exclusions. For example, recent proposals to establish a large wind farm on fishing grounds in Nantucket Shoals and to restrict access to the Stellwagen Bank Marine Sanctuary, an historically important fishing area. The rapid emergence of area-based initiatives within the marine environment is convincing fishermen that they too need to make area-based claims to resources. While doing so as an individual is difficult, the example of the CCCHFA’s allocation suggests a place for community both within the politics of marine planning and, importantly, within the marine environment itself.

The second process that worked to recruit participants was considerably more micropolitical. At several workshops with prospective community researchers, we presented maps that already depicted broad areas frequently visited by peer groups of fishermen from ports of interest to those at the workshop. Using fishing trip locations from VTRs (which must be reported to NMFS) and a GIS-based density mapping methodology, we created a series of unique maps that showed neither individual “hot spots” nor the distribution of an aggregate fishing effort but areas upon which particular ports

and/or gear groupings clearly depended. These maps were both alarming and intriguing to our workshop attendees. While most were very familiar with the nautical charts upon which we superimposed the data and, indeed, charting their individual presence within the marine environment, they had not seen a map of any collective/peer group experience. The maps made clear that the government (and academic researchers) already knew where fishermen fished.

The VTR maps as well as the general trend toward staking claims on locations within the marine environment worked together to shift fishermen’s desire for secrecy to a desire to be seen as inhabiting and depending upon particular locations at sea. Within this shift we see a nascent community subject replacing that of the competing individual on the commons.

Creating a Graphic Language of Community

Working with community researchers from a variety of fishing ports, we developed an interview protocol that integrated and revolved around maps similar to those used in the recruitment workshops. The immediate goal of each interview was to assess the accuracy of the maps depicting “community territories” (made from NMFS collected VTR data) and amend them accordingly. While doing so, it was hoped that the maps would also become a forum for documenting extant community processes as well as a space within which fishermen might project themselves as community members. To counter the potential for the initial interview maps to fix community boundaries rather than solicit community processes, we repeatedly asked questions about the nature of the boundaries depicted, overlaps amongst communities, and movements between communities. We thought of the maps as entry-points into processes of community and territoriality rather than containers within which to place interviewees.

For each interview, three maps were created that moved from the scale of the Gulf of Maine as a whole to areas of specific concern to each peer group (defined by port and gear type) of the fisherman being interviewed (Figure 1). During the interviews each map was presented to the participant with a series of questions guiding the interviewee to react to the accuracy of the areas outlined, offering them the opportunity to physically amend the maps to show current and previous patterns. How the areas are inhabited, by whom, how they are important, and how they have changed were all asked. Explanations for change over time were also requested, as was local ecological information. The community researchers recorded each of the interviews and took extensive notes.

By the end of the data-gathering portion of the project, seven community researchers had interviewed 59 commercial fishermen from Gloucester, New Bedford, and Cape Cod, Massachusetts; New Hampshire; and Portland and Port

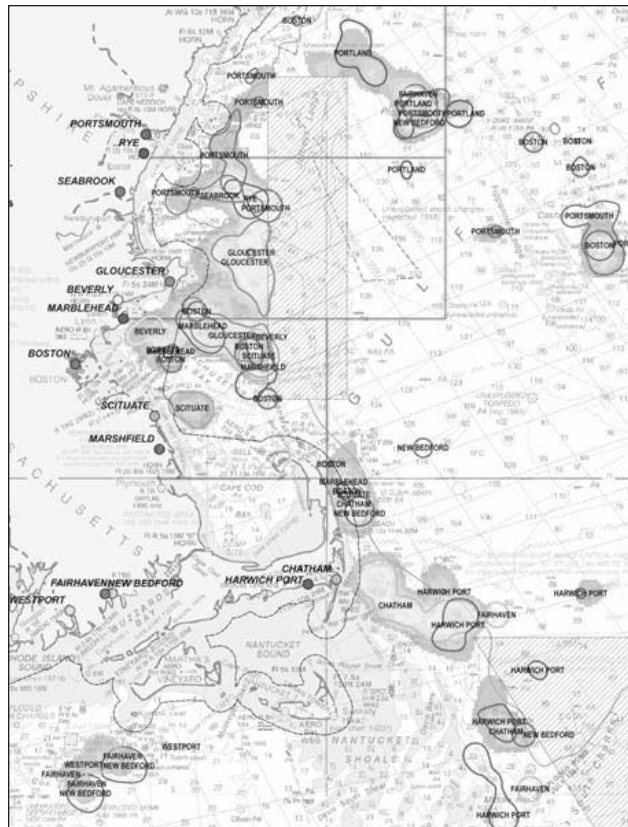


Figure 1. An extract from one of the Gulf of Maine maps used in the project. The outlined areas (color-coded in the original) correspond to individual ports from which, in this case, vessels with gillnet or longline gear originate. The outlines represent primary fishing grounds by principal port. The shaded areas represent locations important to the aggregate of all vessels across all ports.

Clyde, Maine.⁷ All but four of those interviewed were captains and 46 (78%) were owners (though two no longer own boats). All were experienced fishermen with from 15 to 46 years on fishing vessels (averaging 29 years). Gear types included trawl gear on vessels both over and under 65 feet, lobster pots, gillnets, scallop dredge, handlines, longlines, harpoon and jigs. About two-thirds of the interviewees fish for multispecies (groundfish) primarily using otter trawls, gillnets or hooks. Eight lobsterers and nine scallop fishermen were also interviewed. A few interviewees fished for a combination of finfish, lobster and/or scallops.

The diversity of the interviewees effectively reflects the breadth of experience within and between the fishing communities of the Northeast. This diversity, while limiting any quantitative analysis, provided a rich set of recorded narratives and hand amended maps illustrating the pervasiveness of community processes, their variability from one site to the next, and the degree to which they are part of the spatial experiences and domains of fishing communities.

Preliminary Results

The three maps used in each Atlas Project interview offered participants the opportunity to analyze and amend the patterns of fishing depicted. The first two maps were at the scale of the entire Gulf of Maine, one showing overall fishing patterns by gear type and the other outlining areas important to particular ports (also by gear type) (see Figure 1). While these first two maps were used by the interviewees to point to a variety of processes, they most often used them to discuss and illustrate the effects of recent area-based regulations (permanent closures and “rolling closures”) that have altered the spatial patterns of communities and have created new concentrations, overlaps, and intermingling of fishermen. The third map was much more focused upon the experiences and knowledge of the interviewees. It was at the scale of their port/peer group and depicted only those areas of importance to the interviewee’s peer group.⁸ The results from this section of the interviews point to the wealth of local knowledge about specific fishing grounds. Their environmental history, utilization and fishing practices, and importance to community were clearly possible to capture through the interview/mapping method.

While project participants, both the community researchers and the interviewees, used the maps to often focus on the impacts of regulations, they did so in terms of the spatial displacements and replacements of their peer group and other groups/communities of fishermen rather than in terms of port-side effects due to decreases in landings, which is typical of official impact analyses. Their descriptions of and dismay relative to spatial change pointed not only to a desire for spatial stability (rather than infinite mobility) but also to a variety of community processes that were disrupted and transformed. In addition, they hinted at the formation of new alliances and communities as a result of displacement. Indeed, if community and commons are co-constitutive, then the re-formation of one suggests the re-formation of the other.

Several interviews were done in the port towns of New Hampshire and the north coast of Massachusetts. These interviews describe the struggles of inshore fishermen who work on relatively small vessels, deploy trawl gear, and take single day trips to familiar fishing grounds to catch ground fish such as cod and flounder. They, invariably, used the interview maps to illustrate the effects of specific regulatory closures of prime fishing grounds and to, thereby, explain the current pattern of fishing depicted on the maps. For example, they spoke of the closure of areas on Georges Bank (offshore) in the mid-1990s that had pushed larger trawl vessels into the inshore areas of the smaller vessels. They described in detail just which areas they had traditionally fished within the now closed Western Gulf of Maine. And they reported just where they go when their remaining fishing grounds are closed in

June due to the “rolling closures” instituted in 2002.

Before 2002, you would see more concentration [in] area[s] closer to home, more to the west. People would wait for the fish to come to them [. . .] They made enough money fishing there [. . .] They didn't have this need to go 25 miles offshore, or to drive down to [the] Boston area in June like we do now. A lot of things have changed [. . .] We spend a lot more time riding than before all of these restrictions (interviewee).

The quote above is a brief excerpt from one interview with a small boat fisherman from Hampton, NH. The longer passage from which it is taken describes the nature of fishing practices in each location, who fishes in each location, and the degree to which the interviewee considers these to be sites of community (e.g. degree of cooperation, sharing of local knowledge, mutual dependence). The locations discussed were drawn in detail on a corresponding map (Figure 2).

Interviewees who corroborated the stories of inshore displacements and movements due to rolling closures not only

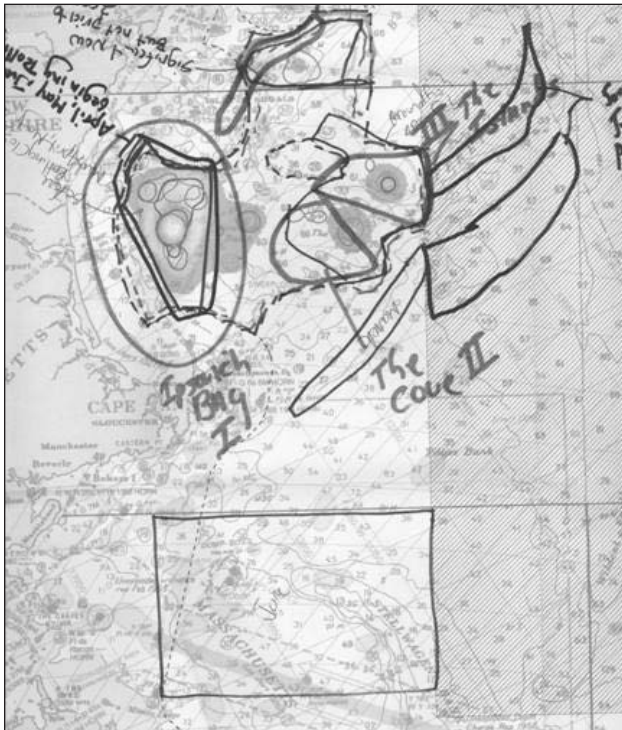


Figure 2. An extract from a map that focuses on the fishing locations of small trawl vessels from Hampton, NH. The interviewee has extensively amended this chart to illustrate the story of displacement due to regulations. The square box in Massachusetts Bay (lower part of image) represents the fishing grounds to which this NH fleet moves in June.

suggested increased crowding amongst fishermen and between communities, they also pointed to increases in communication, information sharing, and a sense of camaraderie between fishermen and across communities affected by regulations and forced to work in closer proximity.

Because of the rolling closures, everyone from different ports works together (interviewee).

Yes, we communicate about regulations [and] safety. For example, if it is bad weather and we tell them to come to Gloucester, it is closer than going home to their ports (interviewee).

Plenty of gossip, regulation[s], everything. So few people, everyone knows each other (interviewee).

Yes, more social information and opinion because of the escalation of management, regulation has focused a lot of discussion, broadened people's discussion on social issues (interviewee).

Yes, during fishing. Some new people do not know the bottom and I warn them about it and give suggestions about where to fish (interviewee).

Rather than pointing to increased competition and the demise of community processes, the above quotes suggest, to some degree, increased cooperation and emergent processes of community. It is clear that community processes are not so much erased by regulations as they are (re)shaped and (re)placed.

While the issues of displacement and overcrowding have been voiced before in a variety of public fora and are widely known, the local and distinctly spatial dynamics of displacement on a community by community basis remain largely undocumented. Project participants, however, were eager to graphically illustrate and describe precisely these dynamics, not at the scale of management (the scale of regional stock assessments) but at the scale of community and the resource areas upon which they depend; they spoke not as individuals but as representatives of such communities tied to particular locations. Furthermore, the suggestion that new community processes and potentials might be emerging as a result of regulations is nowhere discussed; yet, interviewed fishermen repeatedly pointed to just such processes amidst their stories of, very real, community hardship and decline.

While the solicitation of similarly rich map-based descriptions of community resource use and change are commonplace within participatory development and conservation projects in the global south (Harris and Hazen 2006; Fox 2002), they are unexpected and uncommon in the industrialized fisheries of the U.S. Northeast where their invisibility has served to constitute the current absence of community-

based development and conservation schemes. The repositioning of fishermen as community representatives, of community as coexistent with a commons, and the marine environment as a social landscape, however, suggests a role for community as an active agent in development and conservation even in the industrial Northeast.

Conclusion

Despite the institutionalization in the U.S. and elsewhere of a fisheries science and management built upon what might be characterized as “anti-community” foundations, there is a growing trend in fisheries toward the incorporation of “community” that parallels a global shift within resource management and development practices toward community-level initiatives (See for example, Locally-Managed Marine Area (LMMA) Network in the Pacific and Asia⁹). The call to community-level participation and implementation, even by such macro-level actors as the World Bank and the FAO, is designed to facilitate projects that build upon local skills and resources, and to enroll local people as active participants in conservation and sustainable development (Chuenpagdee et al. 2004). While “community” may be increasingly central, if only rhetorically, to development and conservation across many sites, its position within fisheries science/management, particularly in the global north, remains peripheral. This is true despite recent government mandates that it be incorporated and considered relative to fisheries management plans.

Defined and measured primarily in terms of the potential social and economic impact of fisheries management, communities remain external to the essential(ized) bioeconomic dynamic of fish harvesting. Indeed, as a function of percentages of fisheries related activities (e.g. numbers of vessels, employment, vessel services, or sea food processing), fishing communities are reduced to terrestrial locations, entities bound by the spatial units within which socio-economic indicators of community can be calculated. This understanding of community as a geographic container of indicators severed from the dynamics of fisheries themselves impedes community-level participation in both fisheries science and management; understood in these terms, community cannot be harnessed for conservation or sustainable development. Yet, the case of the CCCHFA (see above) suggests the power of placing community—community fishing practices and community knowledge—within the marine environment.

The Atlas Project was designed to address this problematic by documenting the existence of community processes and their corresponding commons within the fisheries of the U.S. Northeast. The project utilizes a map-centered action research methodology to produce a series of maps for a variety of ports in the Northeast that depict areas frequented by fish-

ermen grouped by gear types and port. The maps are interpreted and given meaning in terms of community by fishermen and community researchers working together in an interview setting. The resultant stories offer information that is distinctly different than that found in standard impact analyses insofar as they describe processes associated with harvesting practices directly (e.g. where harvesting occurs and by whom) rather than port-side effects of changes in harvesting practices (e.g. landings decline or economic multiplier effects). In addition, these stories make clear the spatially uneven effects of regulations, which are obscured by impact analyses that are solely port based.

The project, however, works in other ways that also foster a community and commons becoming. In particular, as an action research project its goal is not only to produce data but a transformation of participants’ understanding of and relationship to community and commons (St. Martin and Hall-Arber 2007). Also, the project has the potential to work as an intervention into the emerging ecosystems based approach to fisheries that is distinctly spatial and potentially accommodating of community as the “human dimension” of marine ecosystems. The vetted maps and narratives of the Atlas Project constitute a new ontological foundation and starting point for fisheries science and management as well as community advocacy. Such foundations are essential for the formation of new institutions that would foster community and expand commons.

Endnotes

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3. “An Atlas-based Audit of Fishing Territories, Local Knowledge, and Community Participation in Fisheries Science and Management” was funded by NOAA via the Northeast Consortium (#01-840). Principal investigators were Kevin St. Martin, Rutgers University and Madeleine Hall-Arber, MIT Sea Grant.
4. By “community processes” we mean those actions, practices, knowledges, forms of inhabitation, etc. that constitute community not as a closed and bounded entity but as a set of relations, itself an ongoing process of becoming.
5. Examples of community profiles and descriptions of methodology can be found in McCay and Cieri 2000; McCay, Oles et al. 2002; McCay, Wilson et al. 2002; and St. Martin et al. 2005 concerning the Mid-Atlantic region. For the New England region see Hall-Arber et al. 2001. For examples beyond the U.S. Northeast see Jacob et al. 2002; Langdon-Pollock 2004, 2006; Sepez and Package 2004.
6. See, for example, the website for the Gulf of Maine Ocean Observing System (GoMOOS) <http://www.gomoos.org/>.
7. Fourteen interviewees listed their homeport as Gloucester; 13 were from New Bedford/Fairhaven; five from Portland, ME; one from Boston; five from four different ports in New Hampshire; five from

- three ports in ME outside of Portland; six were from Chatham/Harwich and one from New York.
8. These maps also included spatial pattern by season. This was done by creating percent volume contours for trips by season. The depiction of seasonal pattern was variably successful depending upon the numbers of data records available and the nature of the peer group/gear type in question (e.g. communities that fish with lobster pots show virtually no seasonal variation in spatial pattern).
 9. <http://www.lmmanetwork.org/>

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