THE POTENTIAL USE OF OBSERVER DATA IN COMMUNITY BASED FISHERIES MANAGEMENT

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Introduction:

The marine environment is complex, with webs of interdependency between and among species that are just beginning to be examined. With every research project and new technology, this statement is confirmed. Along with investigating these complex relationships, traditional methods of defining stocks must take into account the effect that these relationships have on the future of sustaining both the resource and the fisheries.

Community Based Fisheries Management (CBFM) is an alternative approach to the traditional "top down" management practiced in the United States. Where these traditional methods examine populations based on more jurisdictional boundaries than biological restrictions, CBFM seeks to empower local fishers to become stewards of their local fisheries resource by using a more ecosystem-based management (EBM) approach[1].

The Port Orford Ocean Resource Team (POORT) is a nonprofit organization based in the small (1200 population), rural community of Port Orford, Oregon. Their mission is to engage local fishers and other members of the community to ensure the long-term sustainability of the nearby marine ecosystem and the social system dependent on it. Several programs, including establishing a Community Stewardship Area, have energized much of the fleet to take care of the fish and habitat that provide their livelihood. As such, the POORT office is a hotbed of useful local knowledge and viewpoints on fisheries management.

Methods:

During the last 3 years, the author was employed as a West Coast Groundfish Observer in Port Orford and with POORT as the project director. Through both talking with the fishers and learning the inner workings of how fisheries are managed on the West Coast, it became apparent that these fishers sincerely want what is best for the resource to sustain their livelihood. It was also apparent that the ability to manage local stocks is hindered by the traditional management practices because of confidentiality restrictions and lack of confidence in small datasets.

This is a preliminary report based solely on these experiential knowledge interviews to shed light on the need for further examination of the use of observer data in CBFM. The information regarding policies and management is the viewpoint of these fishers, right or wrong, and is used because it is important examine the perception alongside the reality when discussing CBFM to determine how best to use local knowledge in the management of our oceans.

Results/Discussion:

Marine organisms are true citizens of the world. They don't abide by state, federal, or international boundaries because they are bound by their own biology and ability to live and move in favorable habitats. Management lines on the west coast are created on maps with latitudinal lines bisecting habitats and creating a potential for two different regulation structures upon the same fishing grounds[2].

1 Port Orford Ocean Resource Team website (http://www.oceanresourceteam.org)
2 Pacific Fishery Management Council's Council Guide (http://www.pcouncil.org/guide/Guide-intropage.html)

A striking example of this is seen when looking at the Rockfish Conservation Area (RCA), a large-scale closed area extending the length of the entire west coast, with different boundaries for different gear types[3]. Observer data is used to determine the rates of discard for several key species, including the Yelloweye rockfish. Yelloweye is the most restraining species in management plans for the nontrawl fisheries around Port Orford. Because of its rebuilding status, its capture as bycatch is restricted to near nothing.

If the data collected by observers show the bycatch rates of Yelloweye are higher than optimal, managers have the option to flex the RCA through east-west boundaries based on fathom curves. In an attempt to better serve regional differences in the both bycatch rates and habitat, several large blocks delimitated by arbitrary latitudinal lines are available to segment the boundary changes.

For the 2009-2010 management cycle, the Pacific Fishery Management Council (PFMC) looked at bycatch rates for the Yelloweye rockfish in the limited entry nontrawl sablefish fleet. From this, it was decided to move the RCA western boundary out to 120 fathoms in the management block that bisected a key traditional fishing ground north of Port Orford. Experiential knowledge from several limited entry sablefish fishers pointed to the lack of Yelloweye capture in that area. Because of restrictions in obtaining place-based observer records, there was no way for the fleet to gather bycatch rates for their grounds, and the Oregon Department of Fish and Wildlife (ODFW) does not have the directive to go after such small scale information. Without this evidence, however, the fleet could not make it's case to the PFMC.

There are two main reasons for this lack of place-based examination and use of observer data: confidentiality restrictions and the lack of large datasets. The Magnuson-Stevens Fishery Conservation and Management Act[4] is the leading authority governing fisheries management in the United States. It restricts how the data is binned based on the number of observed trips and observed vessels in a given area to preserve fisher confidentiality and increase the size of the datasets. Because of this, data is binned into large areas, long time periods, or both. Unfortunately, small communities caught in the middle can be unduly restricted.

With half of this vital sablefish ground lost and the loss of the salmon fishery for the second consecutive season, fishers in Port Orford who were unable to move into other fisheries began to struggle. The willingness to trust management authorities has been decreased because of this, and is talked about regularly over morning coffee and down at the dock.

Ensuring confidentiality of fishing vessels is important. The observer program would not be tolerated by fishers if the data collected was open to the public. But the devastating socioeconomic effects of large-area restrictions that are not appropriate should be avoided to preserve both the social structure of fishing communities and their economic strength. By figuring out how to preserve fisher confidentiality and confidence in the observer program, as well as finding innovative ways to use small datasets, observer data can be a step closer to its full potential as the leading collection method for fishery-based information.

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3 NMFS Groundfish Closed Areas Website (http://www.nwr.noaa.gov/Groundfish-Halibut/Groundfish-Fishery-Management/Groundfish-Closed-Areas/)

4 Magnuson-Stevens Fishery Conservation and Management Act (http://www.nmfs.noaa.gov/sfa/magact/)