HARVESTING COOPERATIVES

Benefits and Challenges

Harvesting cooperatives are a type of catch share in which groups of organized fishery participants jointly manage secure and exclusive access to fishery resources. In return for this privilege, cooperatives are accountable for operating a sustainable fishery within the scientifically determined catch limit and/or dedicated area.

There are at least 20 cooperative catch share programs worldwide, including thousands of organized fishing cooperatives. Over 150 unique* species are managed under cooperative catch shares in at least a dozen countries ranging from small-scale artisanal fisheries in Bangladesh and Vanuatu to large industrial fisheries in the United States. (Note- It has not been determined if all of these cooperatives have and enforce a catch limit).

Cooperatives form when the government directly allocates shares to a group of fishermen or when individual fishermen pool existing individually-allocated shares. Cooperative participants usually share a common feature such as gear or vessel type, location, community affiliation or target species.

When designed well, cooperatives enjoy many of the well-documented benefits of catch shares such as longer seasons, increased flexibility, reduced costs, increased value, and more.[1] However, cooperative catch shares have some distinct differences to individually-allocated catch shares. Most importantly, cooperatives maintain centralized decision-making, as compared to individually-allocated catch shares which decentralize decision-making to individual participants.

Benefits of Cooperatives

Centralized decision-making can provide some distinct benefits to cooperatives, especially in regards to information sharing and increasing efficiencies. Specifically, cooperatives can:

- **Increase efficiency by coordinating members' efforts and/or sharing information.** Many cooperatives effectively coordinate participants' efforts including managing the timing, location and amount of each harvester's catch.
    - Prior to implementing a cooperative, the Alaska offshore pollock fishery experienced short, hurried seasons that led to a glut of product. Since the cooperative formation in 1999, the season has slowed and participants have increased the amount of product recovered from landings by over 50%, reducing biological waste and increasing fishermen revenues.[2]
    - In Japan, some fishery cooperative associations (FCAs) are allocated area based privileges. In the Suraga Bay shrimp fishery, two FCAs have created a fishing committee that directs all fishing activities including timing and location of catch with the goal of maximize the value of the cooperatives' landings. Revenues are then shared among harvesters.[3]

* Unique species refers to counting each species once, regardless of which country or management authority is managing the species, whereas a managed species unit may count a species more than once if multiple countries or management authorities include the species under multiple cooperative programs. For example, both US manages halibut on the west and east coast under cooperatives. Under unique species, halibut will count as one, whereas under the managed species units it would count as two.

- **Improve the sustainability and longevity of fish stocks through coordinating fishing and research efforts of members.** Cooperatives often coordinate effort of participants to ensure the sustainable use of fish stocks, reduce waste and improve fishery research and data.
    - In New Zealand, the Orange Roughy Management Company, now the Deepwater Group, created a cooperative of members as they developed a deepwater fishery for orange roughy. Due to the long lifespan of (100+ years) and the late maturation age (spawns begins at the age of 30) of the fish, it was essential for the members to coordinate efforts and collectively manage quota to prevent stock depletion. [4] Additionally the cooperative has developed and funded new research techniques and deepwater acoustic surveying to accompany traditional stock assessments.[5]
    - Both the Pacific Whiting Conservation Cooperative and the Pollock Conservation Cooperative pool real time bycatch data through a third party vendor, Sea State, Inc., which in turn uses this information to advise vessel captains where bycatch hotspots are likely to occur, so they can avoid these areas.[6,7]
    - Cooperatives in the Northeast Multispecies Sector Management Program can choose to pool quota of depleted stock, and in Japan, some cooperatives, or cooperative groups, actively manage to prevent localized depletion.[8]

- **Promote the economic viability of fishing communities by allocating them a secure share. Some cooperatives are tied to a specific community.** By receiving a secure share of fish, a community may be able to enhance their economic viability.
    - The Community Development Quota (CDQ) program of western Alaska allocates a portion of the catch limit to community cooperatives to promote jobs and economic development.[9]
    - The Central Alaska Rockfish pilot program divides catcher vessels and the catcher-processor vessels into separate cooperatives, with restrictions on trading. Catch-processor cooperatives are not allowed to lease or purchase shares from the catcher-vessel cooperatives in order to ensure an active shore-based fleet. Landings to shore-based processors are at a historical high and local processing plants, and therefore local jobs, that serve the shore-based fleet are thriving.[10]
    - By collectively and sustainably managing and coordinating efforts, nine community cooperatives that form the FEDECOOP spiny lobster fishery in Baja Mexico became Marine Stewardship Council certified. This allowed the expansion of their markets and diversification on a global level, specifically in US and European markets.[11]

- **Promote co-management, or self-governance, by allowing cooperatives to perform some of the traditional roles of government including monitoring, individual allocation of shares, quota tracking and stock research.** Well-run cooperatives can perform many functions of traditional government and ultimately reduce management costs for the government.

- The Northeast Multispecies Sector Management Program requires each sector to coordinate their own monitoring and catch reporting. This requires increase of effort by the cooperatives, but has reduced the government's role in administering the fishery.
- The Japanese cooperative system relies heavily on self-governance to ensure compliance with catch limits and other regulations. Each cooperative develops their own rules and techniques, including peer pressure and incentives, for ensuring participants act on behalf of the cooperative.
- The Federation of Cooperatives of Baja California (FEDECOOP), comprised of nine cooperatives, has successfully attained MSC certification for its spiny rock lobster fishery due in part to the joint effort of member cooperatives in carrying out fishery management, monitoring, enforcement and scientific research with little government assistance. [12]

- **Achieve biological, social and/or economic goals by scaling cooperatives to match the fish stock, community and/or political boundaries.** Managing for differing biological, social and political scales of a fishery can be difficult, but when designed with these considerations in mind, cooperatives can do so successfully.
  - Japan has developed a nested cooperative system which manages for different political and biological divisions in the fisheries. Fishery Cooperative Associations (FCAs) in Japan have access to areas whose boundaries are typically seaward extensions of municipal boundaries on land, and are partially a function of the type of gear used, the targeted species and the topography of the ocean floor. When the target species straddles multiple FCAs, overarching Fishery Management Organization (FMO) have also formed to coordinate fishing across FCAs and protect the resource at its biological scale.[13]

Challenges of Cooperatives

The biggest challenge for cooperatives is preventing the race for fish. A race for fish occurs when fishermen must compete with each other to maximize their individual share of the total catch. To do so, fishermen fish sooner and increase capacity and effort. As additional effort and capacity increase the total catch remains limited, resulting in shorter seasons and decreased profits. Whereas individually-allocated catch shares inherently remove the incentive for a race to fish, allocating a secure share of fish to a cooperative may merely induce its members to race each other for a portion of the cooperative's catch. Cooperatives must account for this and actively manage against a race. Some commonly used approaches include:

- Allocating permanent or annual shares to cooperative members based on catch history, equal shares or a multi-factor formula. In some cases, members may then trade;
- In the case of area-based cooperatives, allocating individual TURFs to fishermen;
- Dividing cooperative activities (including harvesting, processing, and monitoring), assigning roles and sharing profits among cooperative members.
- Leasing quota outside of the cooperative and using the revenues to support cooperative members and/or the associated community

Sources

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