



Catch Shares and Monitoring Ensure Effective Management

Monitoring is an essential component of effective and successful fisheries management. Reliable monitoring and reporting can support and improve the management of a fishery by providing verifiable information on fishing activities and assessing the performance and success of fisheries management plans. Developing an effective monitoring program can be complex and many programs evolve over time.

Catch share fisheries tend to have robust monitoring programs and the transition to catch share management offers the opportunity to design an effective monitoring system. In this collection of Catch Share Conversations, we summarize common monitoring approaches, discuss how monitoring systems provide incentives for participants, offer case studies of existing monitoring programs, and present Guiding Principles for the development and implementation of a monitoring system.

Monitoring Supports Management Goals

As there is no one size fits all model of management, so is the case for monitoring. Monitoring approaches have largely developed to achieve data collection for science, catch accounting, and enforcement.

- Scientific monitoring focuses on collecting data in order to assess stocks, set catch limits, and/or collect biological information on species.
- Catch accounting tracks caught and/or landed fish against the catch limit or, frequently, against an quota holder’s available shares. This generally requires an efficient, timely monitoring approach.
- Enforcement activities may also depend on monitoring data, such as hail programs and Vessel Monitoring Systems (VMS), to ensure participant compliance.

There are a variety of commonly used monitoring strategies to support these goals and many strategies can be used in combination. Monitoring activities can occur at-sea or dockside and can include self-reported or independently collected data pertaining to fishing effort, landings, bycatch, discards, and fishing areas.

Developing a monitoring program requires thoughtful consideration of the fishery’s goals and the information needed to support those outcomes. The transition to catch share management is commonly used as a time to assess and adapt existing monitoring approaches to ensure an effective, efficient system.





This may include new technology employment and more innovative monitoring systems that can enhance the quality of data and provide timelier reporting for management and catch accounting.

Catch Shares Overcome Barriers and Create Incentives for Monitoring

Experience shows that catch share management with effective monitoring go hand in hand to improve fisheries. By providing a long-term stake in the fishery, catch shares encourage fishermen to become stewards of the resource - creating strong incentives for establishing a robust and reliable monitoring program that can improve information and compliance. Fishermen are motivated and want to increase monitoring efforts because additional data will reduce uncertainty and may lead to less precautionary, and therefore increased, catch limits.

This desire for improved monitoring not only builds trust among fishermen but also between the fishery managers and fishermen. The fishery is no longer a battleground between fishermen and fishery managers, but rather a place where they can work together to better understand the stocks under management.

A well-designed catch share program and efficient monitoring system means a healthier, more profitable fishery and increased business efficiency for fishermen. Catch accounting systems that allow for real-time data give fishermen the ability to make informed business decisions about when to fish, what type of species to target, how much to land, and if they should sell or lease quota. Without this readily available information, fishermen can be vulnerable to making decisions that are not beneficial for the health of the stocks or their businesses.

Furthermore, catch share fisheries are generally more profitable than traditionally managed fisheries. Because they are in better financial positions, catch share fisheries are more able and willing to contribute to some management costs.^{1,2} Also, it has not been uncommon for fishermen to support the monitoring system by voluntarily participating and/or providing funding towards increased monitoring costs to enhance knowledge of the stock. For example, New Zealand rock lobster quota holders support two full-time scientists to improve future stock assessments.³ Quota holders in the New Zealand Chatham Rise orange roughy fishery have contributed to exploratory fishing ventures, bathymetric surveys and trawl surveys – totaling over NZ \$1 million dollars.⁴ This additional data contributed to stock assessments for this fishery. These improvements would have not been achieved without the strong incentives the catch share program gave to participants toward their self-motivated monitoring additions.

Catch Shares and Monitoring Reinforce One Another

Catch shares and monitoring reinforce one another and are critical for the success of a fishery. The collected knowledge supports the longevity and sustainability of the stock, which in return supports the profitability of the industry. Monitoring is an integral part of good management, and catch shares present the opportunity and framework to improve systems currently in place. Through better science, accountability, and enforcement, catch shares and monitoring make for robust management and a sustainable future.



Sources

¹ Fujita, R., Bonzon, K., Wilen, J. E., Solow, A., Arnason, R., Cannon, J. and Polasky, S. (2004). Rationality of Chaos? Global Fisheries at the Crossroads. In L. Glover and S. Earle (Eds.), *Defying the Ocean's End: An Agenda for Action*. Island Press.

² World Bank and the Food and Agriculture Organization of the United Nations. (2008). *The sunken billions: the economic justification for fisheries reform*. The International Bank for Reconstruction and Development/The World Bank. Washington, D.C.

³ Annala, J. (1996). New Zealand's ITQ system: have the first eight years been a success or a failure? *Reviews in Fish Biology and Fisheries*, 6, 43-62.

⁴ Annala, J. (1996)