SAMPLING PROTOCOL FOR THE CLYDE RIVER WINTER LONG-LINE FISHERY, STAGE II EXPLORATORY

Context

The Clyde River Hunters and Trappers Organization (HTO) have been working towards the development of an inshore winter turbot fishery in areas adjacent to their community since 2001. In 2003 they formed a partnership with the Marine Institute of Memorial University and in 2003, 2006 and 2007 conducted Stage I exploratory fisheries in Hecla and Griper Trough, Scott Inlet, Sam Ford Trough and Scott Trough. Results indicated the potential for development to a Stage II exploratory fishery. Fisheries Management has requested Science advice on the development of a sampling protocol for implementation by the Clyde River HTO, inshore winter turbot fishery, Exploratory Stage II.

Background

It is important to collect biological data at all stages of a fishery. During fisheries development these data provide information on the potential for the stock to support a fishery and if it becomes fully developed then the data provide information with which to monitor the stock and ensure the fishery can continue to be sustainable with the added fishing mortality. However, it can be difficult to obtain data from community based fisheries development projects because the fishermen are not trained in biological sampling techniques. In Clyde River the HTO has been working together with staff from the Centre for Sustainable Aquatic Resources (CSAR), Marine Institute of Memorial University, Newfoundland. The exploratory fishery project included both classroom and on-ice training in winter long-line fishing techniques for local fishers but not data collection. Biological and catch-per-unit effort data were collected by CSAR staff and presented in annual reports that also contained information on fishing location, methods, discussion of results and recommendations.

Analysis and Responses

The HTO is considering a Stage II fishery for 2008 but they would not have the assistance of the Marine Institute. This could limit their ability to provide the data and sampling necessary for Fisheries and Oceans Canada (DFO) to conduct an assessment of the fishery and determine the potential for commercial development. In the past DFO has prepared sampling kits and provided data sheets and instructions to help fishermen based in remote northern communities collect CPUE and biological data from exploratory charr fisheries. This model could also be applied in this case.

At a minimum data on fishing location, catch-per-unit of effort (CPUE), by-catch species (including corals and bottom dwelling invertebrates) and biological data from a sub-sample of

the Greenland halibut caught should be collected. A general description of the fishing gear configuration and bait type should also be provided.

The number of Greenland halibut caught and the number of by-catch species caught must be recorded for each set, along with information on the location of the set, the number of hooks set and lost and the times the line was set and retrieved.

The biological sample can be taken from a sub-sample of the catch. For example all the fish from one set each day could be sampled and information recorded on data sheets provided. Greenland halibut would be sampled for weight (grams), length (mm) and sex. Sampling instructions should contain information on how to use the scale and measuring board and a photo key to assist with sex determination.

Conclusions

In the Emerging Fisheries Policy (Fisheries and Oceans Canada (2001) (http://www.dfo-mpo.gc.ca/communic/fish_man/nefp_e.htm) the responsibility for developing a sampling and data collection program during Phase I and Phase II Exploratory fisheries lies with the license holder, not DFO. But data generated from the sampling program is to be sent to DFO for analysis and consideration in the formulation of advice regarding the development of the fishery. However, remote northern communities do not necessarily have the capacity to take on this responsibility themselves or to hire outside consultants. Therefore, it is important for DFO to look at other options for collecting information on these northern stocks that are the subject of emerging fisheries development. It may not be possible to acquire the detail that trained fisheries observers or professional consultants could provide but the sampling protocol described above should be sufficient for assessing the potential for the stock to support a commercial fishery. Once this is determined then DFO would consider the implementation of a research program to gather data on an ongoing basis for stock monitoring and assessment purposes.

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Sources of Information

Walsh, P. 2003. Training and preliminary resource assessment of potential commercial turbot fishing areas in the Baffin Island Region. Unpublished Report for Government of Nunavut, Department of Sustainable Development, Baffin Fisheries Coalition, Indian and Northern Affairs Canada, Kakavak and Human Resource Development Canada. 29 pp.

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