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Watershed Talk

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An Aboriginal fisheries newsletter for fisheries representatives and their organizations

Catch Monitoring: Explaining First Nations, Recreational and Commercial Programs

In a continued effort to address important technical fisheries issues, the Fraser River and Approach Working Group (FRAWG), a planning committee funded by the Fraser River Aboriginal Fisheries Secretariat (FRAFS), hosted a Catch Monitoring Workshop in Richmond on November 22nd and 23rd. This was an opportunity for First Nations to engage in direct dialogue with Fisheries and Oceans Canada in the interests of developing a common understanding of monitoring programs affecting Fraser River salmon. The workshop highlighted monitoring activities in different sectors, including commercial, recreational and First Nations fisheries. The purpose of the workshop was for all attendees to obtain better knowledge of the programs in place, and to identify areas where improvements to catch information could potentially be made.

The workshops main objective was to address concerns about the adequacy of monitoring programs and the subsequent potential impact on the management of Fraser salmon. Through presentations, it was hoped that attendees would gain a common understanding of the rigour and effectiveness of the current monitoring of harvests of Fraser-bound salmon, identify important shortfalls and gaps in monitoring programs, and identify options and strategies to address identified shortfalls and gaps. Apart from simply clarifying the scope of catch monitoring programs related to Fraser River salmon, the workshop provided an opportunity for First Nations to offer advice and present recommendations for monitoring programs.

The first day of the workshop had three components, which included a general overview of catch monitoring, a discussion about the role of biological sampling, and presentations on First Nations Food, Social and Ceremonial catch monitoring programs. The first presentation, an overview of fisheries monitoring and catch reporting by Carole Eros of Fisheries and Oceans Canada, highlighted the prospects and limitations of each program while emphasizing the necessity of reliable, timely and accessible information for sustainable management practices. Carole also outlined the Proposed Strategic Framework for Fishery Monitoring and Catch Reporting in Pacific Fisheries. This framework, which will be available in draft form in the coming weeks, is meant to be an approach that strengthens monitoring in all Pacific fisheries (commercial, recreational and First Nations). The framework, following recommendations outlined in *Charting Our Course* (2007), includes the development of criteria to determine the required level of monitoring in a particular area as well as a risk assessment to ensure monitoring programs can be managed within current budgetary conditions. The framework will be systematic, consistent and explicit, yet adaptable in recognition that not all fishery areas require the same level of monitoring.

To provide some conceptual background for further discussions about catch monitoring, Fisheries and Oceans Canada Biologist Rob Houtman clarified the definition and use of the terms *accuracy* and *precision* when estimating stock abundance. As stated by Rob, ideally, both precision and accuracy will be high, but often, precision and accuracy are low, thus the validity of estimates is limited. The importance of this statement is that the 'truth point' is unknown; however, a confidence limit is established that reflects the clustering of data figures. For instance, accuracy is determined by the elimination or mitigation of known biases, while precision is determined by sample size and variation in the data. Interpreting data figures is a complicated task, but it was important to illustrate how Fisheries and Oceans Canada uses information collected to estimate critical fisheries data.

Apart from the conceptual framework of catch monitoring, Kathy Fraser and Chuck Parken of Fisheries and Oceans Canada described current monitoring activities, specifically, biological sampling and coded wire tags. As stated by Kathy Fraser, the coded wire tag program is used for both domestic management decisions as well as the Pacific Salmon Treaty (assessment of stocks and harvest impacts). According to the Expert Panel Review of the Pacific Salmon Commission (2005), coded wire tag is the only effective tool for coast wide assessment of Chinook and coho. Moving forward, a monitoring program must produce accurate and precise estimates of encounters, representative samples for at least 20 percent of the catch for coded wire tag, and recoveries of at least 10 coded wire tags for the main brood year for each indicator stock. Currently, there is a lack of participation by First Nations, but AFS, AAROM and Treaty Agreements might incorporate coded wire tag

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programs. Fisheries and Oceans Canada recognizes some of the perceived disincentives for participating (such as cultural value of fish heads or apprehension that data will be used to limit access), but strong data produces strong policy. Fisheries and Oceans Canada reiterated their commitment to the coded wire tag program despite its challenges, as it is understood as the most cost-effective and applicable technology available at this point.

In addition to general information provided by Fisheries and Oceans Canada, the first day of the workshop also provided an opportunity to discuss First Nations Food, Social and Ceremonial catch monitoring programs in the South Coast, Lower Fraser and BC Interior. Outlining monitoring in the South Coast, Greg Thomas (Fisheries and Oceans Canada Resource Management) indicated that First Nations guardians and program staff regularly participate in monitoring, but in some cases of intensive fisheries (Somas sockeye) or the use of commercial gear, Fisheries and Oceans Canada is notified for further monitoring. As an example of First Nations fisheries monitoring, the A'tlegay Fisheries Society has developed a data-reporting program that covers designation of fishers as well as catch reporting. Other examples include the limited 'Dual Fishery' experiment (a report will be available in January's post season discussions), which provided a limited number of seine vessels the opportunity to harvest Fraser sockeye for commercial and Food, Social and Ceremonial purposes at the same time. Current gaps in the program surround incomplete reporting (some fisheries provide minimal information) and lack of funding (current agreements do not provide resources for monitoring capacity-building). The presentation highlighted First Nations constructive participation in catch monitoring, a positive example of the potential capacity for joint management initiatives.

The second day of the workshop was meant to provide an overview of catch monitoring in the recreational and commercial sectors. Similar to the overview of catch monitoring in respect to Food, Social and Ceremonial purposes, the presentations provided a regional perspective from the South Coast, Lower Fraser and BC Interior. The overview of the commercial sector highlighted the methods employed by Fisheries and Oceans Canada in catch monitoring activities. For instance, Barbara Mueller (Lower Area Fisheries Management) noted that Fisheries and Oceans contracted J.O. Thomas & Associates to perform validation in the Lower Fraser. In recognition of potential joint management initiatives, some participants recommended that Fisheries and Oceans Canada transfer similar contracts to First Nations, as many First Nations have been trained and accredited as catch monitors. Despite nominal gaps in the commercial catch-monitoring program, the commercial sector must maintain a standard for monitoring and reporting as a condition of licensing. However, as a previous example explained, there is potential for further participation from First Nations in this process.

Building on the discussions about the commercial sector, the workshop provided information on recreational catch monitoring programs. David O'Brien, Fisheries and Oceans Canada Biologist, outlined the South Coast recreational catch-monitoring program, specifically, how the Department uses creel surveys, logbooks, broad based surveys, and indirect observations. For example, in creel surveys, the critical information (precision objective, interview rate, biological sampling, audit processes, and reporting) is used to produce an activity profile to describe the proportion of effort exerted on a daily basis (Formula: *Average Catch by Species Per Trip* x *Number of Fishing Trips* = *Total Catch By Species*). However, there are several gaps in the program. As the surveys focus on boat trips returning to the surveyed access sites, the survey might miss non-boat based recreational trips. In addition, a number of biases emerge. For instance, there is the potential for biased sources (guided versus un-guided in relation to catch per unit effort), and compliance (although almost 97 percent of those asked provide interview data). Currently, Fisheries and Oceans Canada is defining needs by species and program, assessing current status, reviewing analytical methodology, identifying gaps on an ongoing basis, developing ways to fill program gaps, and participating in pilot programs (integrating logbook and creel survey methods, alternative effort methods into catch estimation, and development of in-season data review process). Ultimately, the recreational catch-monitoring program on the South Coast is beset with variability, but Fisheries and Oceans Canada contends that the current program adequately estimates harvest.

Similar to the South Coast, the Lower Fraser and BC Interior use a number of methods to estimate harvest, including over flights and surveys. Although the Pacific

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Integrated Commercial Fisheries Initiative has provided additional resources for additional monitoring activities, prioritization of monitored areas occurs in both the Lower Fraser and BC Interior. As articulated by Fisheries and Oceans Canada Biologist Jamie Scroggie, future improvements are contingent on funding to monitor emerging fisheries (new or neglected areas), funding to confirm effort and catch in fisheries that are not monitored on an annual basis, the implementation of new database and analytical packages (CREST), the completion of bias testing and precision estimates, and ultimately, the general improvement of sampling designs when new information or sources emerge.

Throughout the two days of technical discussions a number of evident opportunities and challenges emerged, but the workshop also brought forward tangible recommendations to be considered by Fisheries and Oceans Canada. For instance, participants recommended that an area license regime be implemented that localizes user fee payments to fund catch monitoring programs in the recreational sector. Similar to hunting permits, recreational licenses might be distributed via a lottery system that is based upon stock availability. Furthermore, participants recommended that Fisheries and Oceans Canada enhance consultation when recreational activities occur within reserve or traditional territories. Other recommendations included the implementation of a cap on new operating permits as a means to ease the rapid expansion of recreational operators. In the end, the workshop offered technical information about Fraser salmon as intended, but also illustrated practical examples of how First Nations participate in the sustainable management of the fisheries resource. However, participation by First Nations in catch monitoring programs represents one facet of fisheries management, as Fisheries and Oceans Canada must afford realistic consultation periods that recognizes capacity limitations, provide substantive and timely information to First Nation communities, ensure equitable and non-discriminate opportunities, determine the health of stocks before commercial or recreational access is permitted, and standardize catch monitoring and reporting across all sectors. As one participant stated, First Nations aspiration for conservation should not be seen as First Nations forfeiting their right to the resource while another sector continues to harvest.

A comprehensive summary of the workshop proceedings and related PowerPoint presentations are available here: www.frafs.ca/?q=node/43

Upcoming Meeting Dates

Below are some important meeting dates for scheduling considerations.

Fraser River Aboriginal Fisheries Secretariat Meetings:

- **January 25-26, 2011:** Forum on Conservation & Harvest Planning for Fraser Salmon (Richmond)
- **February, 2011:** Roadmap: Co-Management Development (location to be determined)
- **February 22-23, 2011:** Forum on Conservation & Harvest Planning for Fraser Salmon (Richmond)
- **March 29-30, 2011:** Forum on Conservation & Harvest Planning for Fraser Salmon (Vancouver Island)
- **May 10-11, 2011:** Forum on Conservation & Harvest Planning for Fraser Salmon (Kamloops)

Other Meetings:

- **November 30-Dec 1, 2010:** ITO Assembly (location to be determined)
- **December 1-3, 2010:** First Nations Summit Meeting
- **December 6, 2010:** Lower Fraser Fisheries Alliance Interim Coordinating Committee Meeting (Sumas First Nation)
- **December 9-10, 2010:** Fraser Panel
- **January 6, 2010:** Lower Fraser Fisheries Alliance Forum (location to be determined)
- **January 10-14, 2011:** Pacific Salmon Commission

For further information about important meetings please see www.frafs.ca. The Fraser River Aboriginal Fisheries Secretariat now has a calendar that will provide up-to-date meeting information for Fraser River processes.