

Title: *Mobilizing New Science for Fisheries Policy and Management: The Case of Biotelemetry and Pacific Salmon Species in Canada*

Overview: The proposed research will investigate potential avenues for translating new scientific knowledge in the field of biotelemetry into real-world fisheries policy and management strategies, using Pacific salmon species in Canada as a case study. The proposed research is an extension of an NSERC-funded study currently underway (Scott Hinch, PI)¹ examining the knowledge needs and knowledge management strategies of regulators (primarily the Department of Fisheries and Oceans and the binational Pacific Salmon Commission) and stakeholder groups (First Nations, conservation groups, commercial and recreational fishers). Preliminary findings suggest that interest in new scientific findings from biotelemetry is high among both regulators and stakeholders, but that significant barriers to adoption and implementation remain. Among these barriers is lingering confusion about how biotelemetry findings “fit” with existing policies, regulatory decision-making processes, and stakeholder interests. The proposed research will address this uncertainty by investigating the potential impact and integration of biotelemetry findings with existing fisheries policy and management practices. The primary tool for this research will be collaborative scenario-building, wherein key informants are invited to develop a series of policy and regulatory options in which biotelemetry plays several possible roles (peripheral, moderate, and central). Although research will be focused in the Pacific Arena, this model can be exported to the other arenas in the future and will be useful in identifying future research needs and opportunities of broad relevance to OTN as a whole (e.g., when the Networks of Centres of Excellence proposal is developed).

Research Plan: Research described here is embedded within the Pacific Arena OTN research program and involves direct and continual collaboration between Young, Hinch, Cooke, Miller, Farrell, and Patterson. The proposed research will build on interviews currently being conducted as part of the Hinch et al. study (N ~ 50-60) in the Pacific Arena. Potential participants for scenario-building will be identified from this pool. Scenario-building is a multi-step activity that first involves individual semi-structured interviews with a total of ~ 20-30 well-informed participants representing both government and stakeholder groups. These interviews are then followed on a later date by collaborative focus group or workshop-style interviews. For the group interviews, participants will be randomly assigned to one of ~ 3-4 groups (with the option of sample adjustment if groups are overly homogeneous). The individual and group interviews will be recorded and subject to content analysis, with particular attention to both consensus and dissension.

¹ *Climate warming, pathogen expression, and capture locale: recent and emerging challenges for managing Pacific salmon fisheries.* Scott Hinch, PI. Co-Investigators: Steven J. Cooke, Anthony Farrell, Kristi Miller, Nathan Young. NSERC Strategic Grant.

Outcomes: The proposed research will produce plausible and well-refined scenarios under which biotelemetry findings, technologies, and conclusions may be integrated into various aspects of fisheries management and policy. It will also generate substantial data on the objections, hesitations, qualifications, and concerns of regulators and stakeholders regarding biotelemetry research and technologies (as generated from the individual and group interviews). Both outcomes will be valuable to biotelemetry researchers, stakeholder groups, and the broader fisheries management community. Findings will be published in scholarly journals and lay-language research reports. In addition, findings will be shared with the OTN community via the annual reports and the OTN annual meetings.

Timeline

Instrument design and population building: June-September 2014
 Application for approval from University of Ottawa’s Ethical Review Board: September-October 2014
 Individual interviews with participants: October-December 2014
 Group interviews with participants: January-March 2015
 Data analysis: April-August 2015
 Writing (reports and scholarly articles): August-December 2015

Budget

Item	Funds requested
One graduate level research assistant (8 months)	\$11,000
Travel for Nathan Young, Ottawa-Vancouver (3 trips x 1 week)	\$4,500
Travel for research assistant, Ottawa-Vancouver (2 trip x 1 week)	\$2,200
Transcription services, individual & group interviews	\$1,300
Supplies (software, photocopying, telephone charges)	\$1,000
Item	\$20,000 (over two years) \$10,000/year (2014 & 2015)

Budget Justification: The research merits one graduate-level research assistant to aid with preparation of the interview instruments, scheduling of interviews, conducting of interviews, and data analysis. Performing the research will require a minimum of 3 trips by Young and 2 trips by the research assistant to perform individual and group interviews. Transcription services will be required to process the large amount of data generated.