
A Network Approach to Addressing Strategic Fisheries, Aquaculture, and Aquatic Sciences Issues at a National Scale: An Introduction to a Series of Case Studies from Canada

Caleb T. Hasler, Gavin C. Christie, Jack Imhof, Michael Power, Steven J. Cooke

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Summary

This paper was prepared as the introductory article for a series of papers in *Fisheries* highlighting NSERC's Strategic Network Grants (SNG) program. The series was proposed by the Canadian Aquatic Resources Section of the American Fisheries Society as a way of showcasing the programs of aquatic oriented grants to the members of the American Fisheries Society – a global professional society for fisheries and aquatic resource researchers, managers, and practitioners. The paper provides a brief history of the program and outlines its requirements. The authors also discuss benefits and challenges of the SNG program and outline how the series will unfold in future issues of *Fisheries*. The paper will be of interest to HydroNet members and stakeholders, as it provides a general understanding of the SNG program and the broader context of the program's development and goals. HydroNet was one of the SNG highlighted in the series, cf. *NSERC's HydroNet: A National Research Network to Promote Sustainable Hydropower and Healthy Aquatic Ecosystems* (Karen Smokorowski et al, *Fisheries* Vol. 36 No. 10, October 2011).

The SNG program enables multi-institutional teams of academics to collaborate with industry and government partners on multidisciplinary research projects. The network model creates unique training opportunities and enables researchers to study problems that could not be addressed using traditional funding models. The authors explore perceived benefits and challenges with the research network-funding model. To date the traditional model of grant programs has been to award funds to individuals or small groups, the draw-back of which is that researchers often work in relative isolation. However, science may benefit from more holistic approaches to funding that enable larger collaborative, interdisciplinary and integrative research approaches. Strategic network grants aim to contribute to research and training of highly qualified personnel in areas of key national importance (including hydropower impacts on fish habitat). The SNG program requires both that the problem be of national importance and that industry be involved. The network approach has benefits and challenges, such as networking for the lead researchers and students involved. The mix of skills offers opportunities for synergistic research reactions. Furthermore, networks may produce more well-rounded science graduates with an appreciation of both the social relevance of their research and the science needed to address critical needs in future. However, the multiparty nature of the grant structure involves considerable administration, which is resource-consuming and should not be underestimated. The need to tackle major issues may require resources that outstretch capacity.