

**NWRT Final Progress Report  
Submitted June 25, 2014**

**1. NWRT Project Number:** 3-13-35

**2. Project Title:** DEVELOPMENT AND IMPLEMENTATION OF A COMMUNITY-BASED FISHERY MONITORING PROGRAMME AND ADAPTIVE FISHERIES RESOURCE MANAGEMENT SCIENCE APPROACH FOR ARCTIC CHARR IN BAFFIN REGION, NUNAVUT.

**3. Project Leader:**

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**4. Summary:**

We proposed to continue development and implementation of a community-based fishery monitoring program and adaptive fisheries resource management science approach for Arctic Charr in partnership with the Pangnirtung community and Hunters and Trappers Association (HTA). The project is in year 2 of 5 and two indicator stocks for Arctic Charr in the Cumberland Sound Area have been identified: Naulinarvik (PG008) and Anaktuajuit (PG010). The indicator stocks will be the focus of annual sampling and monitoring efforts during the five consecutive years, including (i) a test fishery program with progressive increase in harvest; (ii) biological sampling of fish; (iii) harvest monitoring; and (iv) monitoring of selected environmental parameters related to Arctic Charr movement, habitat and fishery productivity. The project involved a platform for IQ gathering and synthesis and for knowledge co-production on Arctic Charr and freshwater ecosystems in Cumberland Sound. Expected outputs include significant data development on Arctic Charr, information gap-filling on the responses of Arctic Charr populations to fishing pressure and selected environmental drivers, and the development of an adaptive fisheries resource management science approach for the species. Community involvement and participation is at the core of this project, which is designed to stimulate and enhance local capacity for data collection and knowledge gathering and to integrate traditional practices with scientific expertise. Long-term goals are to demonstrate the effectiveness of community-based monitoring and adaptive co-management for realizing conservation and simultaneous optimization of Arctic Charr resources in Nunavut as well as fostering community involvement in decision-making processes. The implementation and fine-tuning of a community-based fishery monitoring program/adaptive fisheries resource management science approach for Arctic Charr in Pangnirtung should facilitate future expansions to other Baffin Island communities, which is the intended scope of this project.

**5. Project Objectives**

Short-term objectives are:

- (i) The identification of indicator stocks in participating communities.
- (ii) The hiring and training of community fishery monitors and community co-researchers
- (iii) Collection of five (5) consecutive years of biological data on Arctic Charr as well as selected environmental information

- (iv) The delivery of test fishery programs consisting in submitting indicator stocks to a progressive increase in harvest
- (v) The completion of an integrated Inuit Qaujimagatuqangit-scientific assessment on indicator stocks at the end of the five (5) years and the production of fisheries resource management science approach for the Arctic Charr.

Long-term objectives are:

- (i) Demonstrate the effectiveness of a community-based fishery monitoring program for: (a) assessing fishery sustainability on an ongoing basis; (b) validating and testing new protocols for the determination of sustainable harvest levels for Arctic Charr; and (c) detecting changes in the health of Arctic Charr populations as related to changes in fishing pressure and/or external stressors.
- (ii) Provide a platform for articulating Inuit traditional knowledge and customary practices together with scientific tools and experimentation into an adaptive co-management plan for Arctic Charr. Promoting fisheries development while ensuring conservation of Arctic Charr resources and related traditional activities and traditional use areas.

## **6. Materials and Methods**

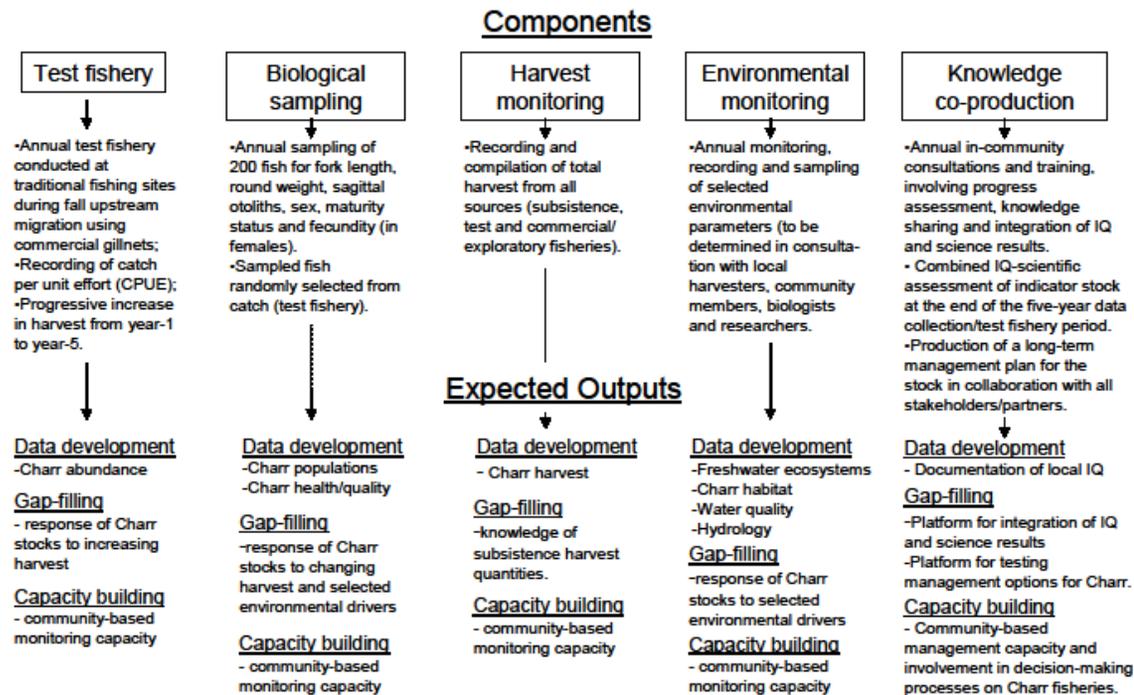
### **Study area**

Our research concerns all Arctic Charr stocks in Nunavut. The focus for this research as per the proposal has been based on Cumberland Sound Arctic Charr populations.

## Methods

# Community-based Fishery Monitoring Programme and Adaptive co-Management Plan for Arctic Charr

**Target/duration:** Indicator stocks selected via integration of local IQ and scientific results/ 5 years.



## 7. Project Schedule:

This project is on schedule. All tasks listed below are on schedule and were completed as of April 2014.

Work plan for April 2013- March 2014			
Action	Schedule	Objectives	Specific Objectives
Meet with local HTO and Hamlet regarding project to confirm continued	May – June 2013	<ul style="list-style-type: none"> <li>- Discuss project and seek partnership letters</li> <li>- Gather feedback from confirmed partners on project details for 2013</li> </ul>	
Hire Project Coordinator	June 2013 – March 2014	<ul style="list-style-type: none"> <li>- Advertise and interview for a successful candidate from Pangnirtung</li> <li>- DFO Science staff work with coordinator to meet 2013 project goals</li> </ul>	
Community meetings (Pangnirtung)	May 2013	<ul style="list-style-type: none"> <li>- Presentation of research proposal to Pangnirtung HTA.</li> </ul>	
		<ul style="list-style-type: none"> <li>- Outline role and responsibilities of Pangnirtung HTA as project lead (Phase I).</li> </ul>	
		<ul style="list-style-type: none"> <li>- Consultations with HTA board members, local harvesters, elders and interested community members.</li> </ul>	<ul style="list-style-type: none"> <li>- Monitor indicator stock in Cumberland Sound<sup>1</sup>;</li> <li>- Continue gathering and documenting IQ on indicator stock;</li> <li>- Continue five-year monitoring program and adaptive co-management plan<sup>2</sup>;</li> <li>- Hiring and training of fishery monitors;</li> <li>- Identify potential fishery monitors for 2013-14;</li> <li>- Continue monitoring a suite of environmental parameters;</li> <li>- Discuss and outline progressive increase in harvest to be carried out in test fisheries and determine harvest quantities to be targeted annually.</li> </ul>

Community Meetings and Training (Pangnirtung)	August 2013 –	- Hiring and training of fishery monitors.	- Biological (fish) sampling and data collection training provided by DFO biologists.
	March 2014	- Meetings with fishery monitors, harvesters and community members	- Designate community co-researchers to be involved in every step of the program/plan; - Finalize agreement among stakeholders for targeted increase in harvest on indicator stock.
Continuation of monitoring program and adaptive co-	Winter 2014	- Fishery monitors and associated actors take on tasks and responsibilities	
Community meetings (Pangnirtung)	December 2013	- Meetings with all project participants	- Discuss year-2 accomplishments; - Share knowledge and ideas for improving monitoring in year-3.

## **8. Preliminary results/discussion:**

As this is year 2 of a 5 year research program we cannot provide any preliminary results. We successfully collected Arctic Char samples from Naulinarvik (PG008) (n= ~200) and Anaktuajuit (PG010) (n = ~160) in February and March 2014. Three (3) local people who had been trained in sampling were hired by the local Hunters and Trappers Association to assist with the field work. Due to staff limitation a preliminary report on the biological characteristics of the samples is not available at this time, but will be available in the fall 2014 and will be distributed to the community and the NWMB. In addition to the field work we proposed to hire a local community based coordinator, this was completed but unfortunately the person hired did not complete all tasks associated with the position and the Pangnirtung Hunters and Trappers Association has taken over those responsibilities. It has been reported that ~70 interviews have been completed by the Pangnirtung Hunters and Trappers Association. The interviews will be shipped to Iqaluit DFO in the near future. The Pangnirtung Hunters and Trappers Association is in agreement to continue working with Fisheries and Oceans Canada Science on this research project.

## **9. Reporting to communities/resource users:**

This project has been presented and discussed in person at Regional Wildlife Board meetings (QWB executive meeting (Iqaluit - May 2011), Kivalliq Wildlife Board AGM (Rankin Inlet - June 2011) and QWB AGM (Iqaluit - November 2011)), at a community consultation to Pangnirtung Hunters and Trappers Organization in June 2011, December 2011, May 2012, December 2012, May 2013, November 2013 and May 2014. Interviews with fishers from Pangnirtung were initiated in December 2011 and have been completed. The results from this research will be presented to the Pangnirtung HTO for consultation and verification. Upon completion of the project, results will be presented at RWO meetings, when applicable. The interim and final translated reports of this research will be presented to and made available at the Pangnirtung HTO along with the NWMB.