

WORKPLAN ACTIVITIES FOR BEAUFORT RSEA 2018 - 2021

CONTEXT:

The Beaufort Regional Strategic Environmental Assessment (RSEA) will facilitate a better understanding of the Beaufort Sea Large Ocean Management Area and contribute to the review included in the December 20, 2016 United States-Canada Joint Arctic Leaders' Statement by (a) promoting engagement, education, monitoring, and research projects in the Western Arctic to support informed decision-making around possible future resource development and management, environmental conservation programs, community sustainable and subsistence activities, and other complementary commercial activities (b) review under which conditions do Inuvialuit endorse oil and gas activities in the Beaufort; and (c) assess how other variables will affect the future of the Beaufort (i.e. invasive species, climate change, transportation).

To complete these overall objectives, RSEA related initiatives will contribute to a comprehensive examination of the interrelationships between the environment, social, cultural and economic conditions, the traditional use and wildlife harvesting of natural resources and decision-making by Inuvialuit, regulatory and planning authorities. Inuvialuit Settlement Region community and organizational meetings conducted in 2017 resulted in the identification of priority interrelationships and key research themes. These include:

1. Meaningful inclusion of traditional knowledge and consultation of knowledge holders
2. Invasive Species
3. Effect of marine traffic on water quality, key fish species, and marine mammals
4. Relationship between environmental change and preservation of tradition and culture

Throughout the community engagement process, key cumulative effects indicators were identified and include: employment rate, social wellness (tradition and culture), education, harvesting, food security, lack of oil and gas disaster response infrastructure, climate change and water quality. These priority areas were compared with Inuvialuit data inventories, gap analysis and scoping exercises to clearly identify the strategic direction of RSEA activities required to complete the initiatives overall objectives.

The 2017-2018 RSEA workplan aimed to strategically acquire gap information using traditional knowledge, community-based monitoring and science to fill high priority knowledge gaps. These gaps include: climate change, invasive species, cumulative effects and environment-culture interrelationships. Many of the projects identified require data verification and are scheduled to be completed within the 2018-2019 fiscal year. Results from these studies will fill identified knowledge gaps required to review conditions of development while increasing knowledge of the interrelationships between natural resource development, culture, wellness and the environment.

Additionally, following the 2017-2018 RSEA fiscal year, several areas of research remain under studied. These areas will be addressed by the Inuvialuit through the development of new research projects within the 2018-2019 fiscal year. These new projects include transportation (small vessel traffic), socio-cultural cumulative effects, climate change and invasive species (sand lance, capelin or salmon).

The 2018-2021 RSEA multi-year workplan and associated budget aims to (a) provide coordination for current and future key research activities, (b) develop associated reports/deliverables which will feed into the reevaluation of recommendations report; (b) outline community engagement initiatives; and (d) guide the final assessment and report drafting process.

1. PROGRAM IMPLEMENTATION

The Beaufort Regional Strategic Environmental Assessment will be jointly coordinated by the Inuvialuit Regional Corporation for the Inuvialuit Settlement Region and by the Northern Affairs Organization at CIRNA. Inuvialuit led coordination will include:

- Develop and implement strategic planning materials:
- Coordinate support staff who are responsible for research projects and engagement activities
- Program management including internal processes and external consultants/contracts
- Oversee the planning and execute community tours, a verification workshop and other engagement activities with rightsholders (i.e. elders, youth, co-management organizations, public)

Inuvialuit Regional Corporation (3 years: 2018-2021)

2. RESEARCH/MONITORING PROGRAMS

CLIMATE CHANGE

Project title: Multi-stressor responses of key Arctic fish species within a climate change impact framework

Arctic fish species are exposed to multiple human induced stressors: Climate change related increases in temperature, decreases in pH (ocean acidification), and habitat loss (for sea ice associated species such as Arctic cod), as well as potential increases in noise level and contaminants due to enhanced human activity in the north. The combined cardio-respiratory method examines changes in heart rate and oxygen uptake under stress and is a powerful tool to quantify the impact of multi-stressors upon animal health. This method will be adopted to perform multiple stressor laboratory experiments on key Arctic species. Species will be chosen based on interviews with local communities in the Inuvialuit Settlement Region. Measured physiological responses and thresholds will then be incorporated into risk assessments by DFO's Ecosystem Stressors Program to provide science advice on potential ecosystem impacts of cumulative stressors. Results will be implemented in higher trophic level species distribution and Ecopath models and combined with regional climate model projections to understand already observed changes and assess potential future changes in species abundance, distributions and species shifts. This will allow for the assessment of impacts on species distribution and abundance within local communities.

Objective: To assess the influence of impact of climate change indicators on species health through acidification studies/modelling in the Beaufort Sea. This work will include the identification of acidification thresholds for key species and assessments of associated health characteristics.

Inuvialuit Game Council & DFO (2018-2019)

INVASIVE SPECIES

Project title: Aquatic Invasive Species: Community observations on Pacific Salmon in ISR

Recent community based, DFO collections of invasive Pacific salmon identified high levels of salmon in the ISR in 2016. These fish are probably invading from Alaskan rivers and their presence is problematic for native Dolly Varden and Arctic char. These studies need to be continued.

Objective: To establish the distribution, abundance, health and ecological disruption caused by of Pacific Salmon in the ISR

Fisheries Joint Management Committee & DFO (2 years: 2018-2020)

SHIPPING

Project Title: Transportation and shipping. Safety Assessment for Small Recreational Vessel Traffic

Community and scientific concerns about increased shipping are increasing and the related issues are critical for the REAS. The FJMC supports the Inuvialuit leadership on these initiatives and is ready to cooperate and support in the scenario development and risk analysis. The FJMC proposes that the International Maritime Organization's Formal Safety Assessment (FSA) concept be followed. The goal of the FSA is to predetermine need so that measures can be established in an attempt to prevent tragedy. The FSA risk management methodology is a five step process with feedback loops. The steps include hazard identification, risk assessment, risk control options, cost-benefit assessment, and decision making. There is a need for scenarios to address two different types of vessel traffic. The primary focus of government, academics and industry has been on large commercial vessel traffic viz. trans Arctic shipping, community re-supply and tourist cruise ships. Communities are concerned about this type of shipping, but they are also concerned about the increasing numbers of small private vessels transiting the Beaufort. Sail boats, private yachts and small cruise boats present different hazards, risks and options than large vessels whether it is for search and rescue or access to Inuvialuit lands or hunting and fishing in the ISR. As the community interests expressed to FJMC are most often related to the recreational or small vessel traffic. **Objective:** FJMC is prepared to take the lead to contract an FSA for such shipping and to further develop options for control/mitigation of risks such as fishing and private land use.

Fisheries Joint Management Committee (2018-2019)

CUMULATIVE EFFECTS

Project Title: Socio-Cultural Economic Indicators

This study will provide a strategic approach to identifying regional thresholds of wellness and economic impacts associated with several oil and gas development scenarios. This study will incorporate historical case studies (BREA results & Inuvialuit Indicators), current statistics, literature review and assessment of development scenarios. Results of this work will support cumulative effect indicators gaps identified during the 2017 community tour and form the basis of 2019-2020 cumulative effects research.

Objective: To assess wellness and employment indicators associated with the 'life cycle' of employment within the oil and gas industry within the Inuvialuit Settlement Region.

Inuvialuit Regional Corporation (2 years: 2018-2020)

TRADITIONAL & LOCAL KNOWLEDGE ACTIVITIES AND RESOURCES

Project Title: Assessment of Key Species in the Beaufort

Traditionally, scientific research has informed wildlife and environmental management planning within the Inuvialuit Settlement Region. These studies rarely include traditional or local knowledge and thus create a gap in information when conducting evidence-based decision making. This study aims to fill this knowledge gap by acquiring knowledge from Inuvialuit community members to identify key areas of current use throughout the Beaufort Sea. Priority species will be identified for each community and data will be collected using an interactive iPad application. Areas of current use of the Beaufort Sea, defined as: (a) areas commonly accessed by local harvesters; and/or, (b) areas of cultural or traditional value. Priority species of the Beaufort Sea, defined as: (a) Species commonly harvested and relied upon by community members; and/or, (b) Species with cultural or traditional value; and/or, (c) Species considered invasive or of concern by community members; and/or, (d) Species with significant economic value.

Objective: To develop priority areas for key species in the Beaufort Sea related to food security (fish population), ecosystem (ability of fish habitat to support long term regeneration of fish populations) and cultural importance (traditional harvesting grounds and/or areas of cultural significance).

Inuvialuit Regional Corporation (2018-2019)

Project Title: The Role of Harvest as a Cultural Activity

Traditional harvesting has significant social, cultural and economic value to the Inuvialuit. Marine and terrestrial wildlife have provided food, clothing and materials for tools, arts and crafts for thousands of years within the Inuvialuit Settlement Region. In addition to improving food security, northern economy and sustainability, harvesting should be considered an essential component to Inuvialuit identity. This 1.5-year study will specifically focus the importance of harvest to the Inuvialuit within the Inuvialuit Settlement Region. A literature review will include all relevant literature and identify undocumented knowledge gaps related to the meaning of harvest to Inuvialuit, and similar projects done with other Indigenous groups. A short project planning workshop is planned during the community tour in November 2017 and will be leveraged to discuss logistics, methodology, and interview content. Semi structured interviews will be completed, analyzed and added to the literature review to provide a wholistic connection between the environment, harvest and culture.

Objective: Establish the enmeshment of harvest as a cultural activity within the ISR. Results from this study will clearly establish an interrelationship between harvest, culture, natural resource development and wellness.

Inuvialuit Regional Corporation (2018-2019)

Project Title: Inuvialuit Place Names

Over the centuries that Inuvialuit have lived and travelled throughout their land and given names to camping places, settlements and landmarks. These names may reflect the kinds of activities that were carried out at those places, the kinds of resources the area is known for, or events that occurred there. Place names help to shape and define the cultural landscape, and are an enduring record of Inuvialuit history and heritage. Knowing place names and their meanings, the resources or landmarks at those locations, and the sequence of those place names as people journeyed along travel routes was one way that Inuvialuit learned to read the land without a writing system or printed maps. These locations are of central importance when identifying key areas of significance within the ISR. This initiative aims to identify, collect, overlap and quality controls previously collected Place Names research. Place name information will be compiled from existing research and will include names documented on maps and in interviews (both English and Inuvialuktun).

Objective: Develop a consolidated and quality controlled map of place names within the ISR which can be used to identify key areas of consideration when assessing the potential for natural resource development.

Inuvialuit Regional Corporation (2018-2019)

Project Title: Inuvialuit Harvest Study

The Inuvialuit Harvest Study (IHS) is the current activity and focus of the Inuvialuit Regional Corporation's Community Based Monitoring Program. The Inuvialuit Harvest Study (IHS) collects harvest information from Inuvialuit harvesters, 16 years of age and older, whom are registered with their local Hunters and Trappers Committee. The IHS is a community based effort that recognizes the importance of traditional knowledge and meaningfully engages beneficiaries of the Inuvialuit Final Agreement in harvest data collection. In addition to harvest information, participants are asked to share their comments, observations, and concerns regarding environmental trends or changes they have experienced while out on the land. This not only ensures that the Inuvialuit Harvest Study is able to

provide a more complete analysis of harvesting in the ISR, but facilitates meaningful community participation and self-advocacy.

Data collected from the IHS is used to better inform Inuvialuit decision and policy makers on wildlife and environmental matters including environmental assessments. The Inuvialuit Harvest Study fulfills core requirements of the Inuvialuit Final Agreement (IFA) by collecting the required information to continue to protect and preserve Inuvialuit harvesters and traditional harvesting lands. Through identifying key areas of harvest and associated ecosystem, results from this work will support the review of under which conditions do Inuvialuit endorse oil and gas activities in the Beaufort.

Objective: To support Inuvialuit focused wildlife and natural resource development decisions in the ISR by providing local environmental and harvest information.

Joint Secretariat (2 years: 2018-2020)

Project Title: Identify an On-Going Monitoring Program

The Beaufort Sea is a naturally evolving and interconnected system. Additionally, the Beaufort Sea is changing at an accelerated pace due several external influences such as climate change, increased human activity, ice dynamics and extreme weather events. Therefore, it is increasing important to fully understand the baseline state of the Beaufort Sea. When the baseline is sufficiently captured, it will become much easier to accurately identify or predict changes. These changes may have tremendous impact in the people and wildlife within the Inuvialuit Settlement Region.

Objective: Establish a continuous monitoring program which includes the on-going collection of data to establish baseline conditions and identify/provide changing conditions. Results for the monitoring program will support evidence-based decision making within the Inuvialuit Settlement Region.

Inuvialuit Regional Corporation (2 years: 2019-2021)

DATA MANAGEMENT

The RSEA is providing an opportunity for innovative research, community-based monitoring, geospatial solutions and science/TLK research within the Inuvialuit Settlement Region. From 2016-2021, information will be actively collected and managed by IRC using a consolidated data management system. The Government of Canada and IRC have prioritized the improvement data management solutions, records management and consolidation of geospatial infrastructure to efficiently manage incoming data. These principles should be applied to RSEA data products.

Objective: Support existing databases, data recovery initiatives, metadata development, best practices, website maintenance, mapping support and information exchange between partners.

Inuvialuit Regional Corporation (3 years: 2018-2021)

3. ASSESSMENT AND RECOMMENDATIONS

Project Title: RSEA final report(s) and recommendations

As a culmination of previous BREA/RSEA deliverables, the final report will focus on a comprehensive examination of the interrelationships between the environment, social, cultural and economic conditions, the traditional use and wildlife harvesting of natural resources and decision-making by Inuvialuit, regulatory and planning authorities.

Objective: This report will a) recommend desired economic and environmental outcomes and thresholds

for oil and gas development in the Beaufort region while respecting the Inuvialuit Final Agreement and relevant regulatory processes; (b) advance baseline understanding of the state of knowledge around the Beaufort Sea; and (c) support informed decision-making around possible future resource development and management, environmental conservation programs, community sustainable and subsistence activities, and other complementary commercial activities. Indigenous knowledge, local/community knowledge and western science will be utilized and included equally whenever possible.

Inuvialuit Regional Corporation & CIRNA (2018-2020)

Project Title: Framework/Process for TLK inclusion into Assessment

Traditional and local knowledge (TLK) should form the basis of and contribute to baseline information for any environment assessment. To ensure this occurs, TLK must be included at all stages of the assessment process including scoping, establishing baselines, identifying key areas of sensitives, cumulative effects, identification of thresholds and mitigation measures. However, a framework or process must be outlined to ensure equitable inclusion when placed alongside western science.

Objective: Outline how TLK should be utilized in the Beaufort Regional Strategic Environmental Assessment process and accompanying final report.

Inuvialuit Regional Corporation and Joint Secretariat (2018-2019)

REFINE & FINALIZE REGIONAL STRESSORS AND TRENDS - SCENARIO(S)

Project title: Beaufort RSEA Oil and Gas Life Cycle Activities Scenario

To the extent possible, CAPP and Imperial Oil has brought in other Beaufort license holders to produce an initial framework that covers both near term exploration (10+ years) and longer-term development, (25+ years) for both shallower and deeper waters of the Beaufort, as well as some offshore areas that have not yet been explored. This document will be reviewed, recommendations provided, revised and the final product will be considered when evaluating the need for additional research around the environmental implications associated with oil and gas exploration.

Objective: The finalized scenarios will form the basis of a ‘scenarios’ chapter within the final RSEA assessment report.

Inuvialuit Regional Corporation, Inuvialuit Game Council, CIRNA and Industry (2018-2019)

4. CONSULTATIONS AND ENGAGEMENTS

Staff Travel

IRC and IGC representatives will travel periodically for meetings and engagement sessions occurring outside of the Inuvialuit Settlement Region. Travels funds will provide support for RSEA Inuvialuit Chairs, Coordinator and support staff for approximately two trips throughout the year.

Inuvialuit Regional Corporation (3 years: 2018-2021)

Community Tour – November TLK Workshop

An ISR community workshop will be carried out in support of several Inuvialuit RSEA research initiatives identified above. Focused primarily on traditional and local knowledge verification, this tour will engage local Hunters and Trappers Committees, Community Corporations and

Community Elders Committees. Additionally, the workshop will provide an avenue for community input into the framework for TLK inclusion into the assessment process/report.

Inuvialuit Regional Corporation (2018-2019)

Community Tour – March Community Update and Outreach

A community tour will be completed each March to ensure adequate information exchange and progress reporting with ISR community organizations/members. Representatives from IGC, IRC, FJMC and INAC will facilitate K-12 outreach activities, community meetings and engagements sessions with local Hunters and Trappers Committees/Community Corporations.

Inuvialuit Regional Corporation (3 years: 2018-2021)

Engagement – Youth, Elder & Public

On-going and engaging communications with all rightsholders are crucial to the success of RSEA. In addition to the targeted engagement sessions mentioned above, additional outreach methods will be utilized to ensure all community members can provide input or feedback on priorities, recommendations, processes and on-going monitoring. These methods may include online forms/surveys, booths at community events, information pamphlets, podcasts, targeted interviews or educational resources/lesson plans.

Inuvialuit Regional Corporation (2019-2020)