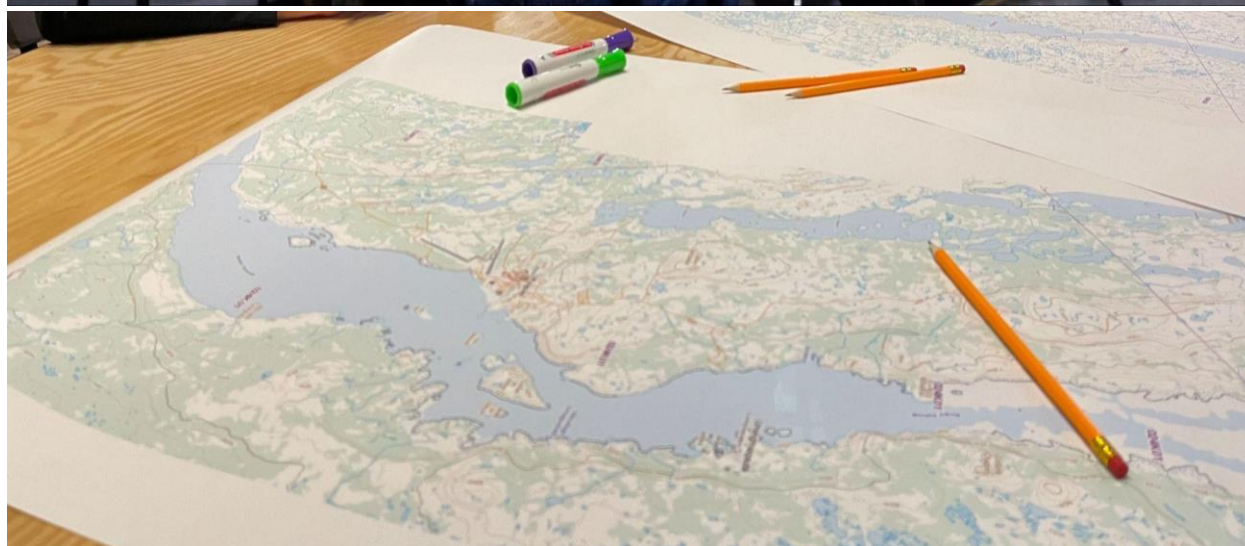


# REPORT –

## Sharing workshop on coastal sensitivities in the Kuujjuaq region

May 3-5, 2022





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## Introduction

The management of a marine pollution incident in Nunavik involves several sectors of activity and requires a good understanding of the local environment. In order to address the various issues related to marine pollution incidents, mapping of the maritime vulnerability of the Koksoak River (hereafter named Kuujjuaq river as locally named) estuary around Kuujjuaq is necessary. Spill responders rely on local and Inuit knowledge to improve their collective preparedness to manage a maritime pollution incident in the region. This project has an approach that links social sciences, health sciences and natural sciences.

Marine transportation is essential, particularly for the resupply of northern communities. Although the risk is small there is always a risk of an incident. Coastal communities are essential partners by sharing knowledge of their waters and lands, both in the North and in the South. This is why it is imperative to ensure an adequate common state of readiness for optimal management of a marine pollution incident. Nunavik's territory is vast and a priority for different levels of government.

In order to improve preparedness for the integrated management of marine pollution incidents, knowledge related to shoreline sensitivities surrounding Kuujjuaq is necessary and will improve the efficiency of response and overall outcomes, should a spill occur.

## Context of the workshop

A joint call for projects between the Centre d'expertise en gestion des incidents maritimes (CEGRIM, Center of expertise in risk management for maritime incidents), the Institut nordique du Québec and the Réseau Québec Maritime (RQM) was launched in 2021. The aim was to fund a project covering the identification of vulnerabilities related to marine pollution incidents in the Kuujjuaq region. The project is specifically focused on 3 themes: food security, coastal vulnerabilities and local knowledge. A research project was selected last December and is planned to be completed in March 2023. The objective of this project is to identify the coastal and marine vulnerabilities of Kuujjuaq, in particular the Kuujjuaq River, by reviewing available information and knowledge, consulting the local inhabitants and integrating their knowledge of the territory.

In parallel, in January 2022, an area plan project for the Kuujjuaq area was organized by the Environmental Response division (ER) of the Canadian Coast Guard (CCG). The objective was to foster joint knowledge development with stakeholders in the environmental response community in order to develop a sound understanding of the key factors to be considered in the event of a spill. In particular, a sensitivities forum was held to identify the environmental, socio-economic and cultural sensitivities of the region that could be priorities for protection in the event of a marine pollution incident. The forum brought together participants from federal and provincial organizations. This event concluded that there is a need to significantly update the level of

knowledge of governments in relation to sensitivities, particularly with the contribution of knowledge from regional and local organizations in Kuujuaq.

The development of a partnership between CEGRIM and the CCG for organizing this workshop, held from May 3 to 5, 2022 in Kuujuaq, allowed for consultation efforts to be aligned and for the coordination of approaches with local partners. This workshop is the result of an intersectoral collaboration between the Government of Canada and the Gouvernement du Québec (Government of Quebec), also supported by RQM, bringing to the forefront the academic expertise of the Université du Québec à Rimouski and Université Laval, all with the objective of developing concerted knowledge related to coastal sensitivities to be considered in the event of marine pollution incidents. The organization of this workshop is a support to the research project which had proposed holding a similar event in the project framework.

CCG-ER is the primary user of this data during a marine pollution incident for the Government of Canada. CCG-ER's mandate is to respond to pollution incidents from ships, unknown sources, transshipment operations in oil handling facilities, and transboundary spills, either by monitoring the polluter's actions or conducting the response if the polluter is unknown, unwilling or unable. In order to ensure that the response is as effective as possible, CCG-ER will ensure that the response prioritizes the sensitivities of the territory. The results of the research project will therefore be used during marine pollution incidents in the Kuujuaq region, by applying local knowledge in the prioritization of response strategies.

Urgence-Environnement\*, is the primary user of this data during a marine pollution incident for the Gouvernement du Québec (Government of Quebec). CEGRIM's mandate is to increase community preparedness for risk management of marine pollution incidents by establishing best practices with partners. In addition to co-funding the research project and the workshop, CEGRIM is also funding other data acquisition initiatives in northern Quebec like coastal imagery acquisition from satellites. All contributions from CEGRIM aim at developing tools for decision making support in case of marine pollution incidents, and should be useful and adapted to the variety of stakeholders to be involved in the case of a spill. As northern local resources are limited, CEGRIM in partnership with CCG, Environment and Climate Change Canada (ECCC) and other governmental departments, wishes to closely collaborate with locals and put in place strategies to reduce the stress on these resources, particularly in the case of marine pollution incidents.

*\*Part of the Ministère de l'Environnement de de la Lutte contre les changements climatiques*



## Objective of the workshop

Identify and advance our shared understanding of coastal sensitivities that would serve to support a response to a marine pollution incident in the Kuujjuaq region.

### Sub-objectives :

- Develop a mutual understanding of the roles and responsibilities of the various agencies and partners associated with the management of coastal sensitivities during a marine pollution incident;
- Exchange and develop knowledge of the coastal sensitivities in the Kuujjuaq region that could be affected in the event of a marine pollution incident
- Compile, organize and analyze knowledge and information gaps on coastal sensitivities in the region;
- Present, discuss and explore the application of a vulnerability index for the Kuujjuaq region;
- Become more familiar with the particularities of the territory in the event of a marine pollution incident.



## Summary of the workshop

The sharing workshop took place at the Kattitavik Town Hall from May 3 to 5, 2022. The first day was a full day followed by two morning sessions. The workshop brought together participants from a dozen regional and local organizations in addition to organizers representing some federal and provincial organizations and the research team represented by two universities. The list of invited organizations is attached. Industry and some tertiary governmental partners did not participate in this stage of the discussion which was mainly targeted towards local and traditional knowledge of coastal vulnerability and food security issues related to a potential marine pollution incident.

The objective of the first day was to present a theoretical overview of the main roles and responsibilities of CCG, ECCC, CEGRIM and KRG in the event of a marine pollution incident. Several discussions were held around these presentations in a "knowledge sharing" format on the shoreline sensitivities involving a marine pollution incident in the Kuujjuaq area. The discussions were rich and brought to light local concerns as well as important findings related to environmental, socio-economic and cultural sensitivities.

The two subsequent mornings aimed at highlighting and advancing the research project "Mapping the maritime vulnerability of Kuujjuaq: a participatory approach co-constructed through local and indigenous knowledge". Participatory mapping workshops allowed for the exchange and development of collective knowledge on the coastal sensitivities of the Kuujjuaq region that could be affected in the event of a maritime pollution incident. This knowledge, shared orally as well as summaries from literature reviews, will allow for the production of analyses and results presented in the form of integrative indices of coastal vulnerabilities. These new mapping tools, which will be validated later by the same organizations, are intended to improve the overall preparedness of all stakeholders during a potential maritime pollution incident.

Holding such a workshop confirmed the necessity of incorporating the knowledge of Inuit and local representatives in preparedness activities. All of the elements that emerged from the participatory mapping workshops and discussions with participants will be captured in the research project and will help guide the production of mapping tools. These results will be shared with various local, regional, provincial and federal stakeholders so these organizations are better prepared for their collective response to a maritime pollution incident in the region.

All objectives and sub-objectives have been met with the exception that no knowledge gap analysis has been initiated at this point and the vulnerability index has not been discussed. The development of this index will take place over the summer and its use and added value will be discussed at the next research team visit scheduled for October 2022. Next steps for the project are detailed below.

## Key messages

In addition to the presentations and group workshops scheduled during the pre-morning sessions, several formal and informal discussions took place with participants and allowed all participants to discuss and exchange around key messages in terms of actions taken during interventions or in preparation for them.

- CCG and CEGRIM share the locals desire to minimize the risks and damages associated with a potential marine pollution incident. We do not act as an enforcement agency, particularly with respect to traditional activities, but wish to develop our knowledge of shoreline sensitivities in order to improve joint preparedness and consequently response to a marine pollution incident in the Kuujjuaq area;
- The safety of citizens and responders will always be the main priority for all responses;
- The identification of the sensitivities, the particularities of the environment and its uses is crucial to prioritize the actions during an intervention, but also to prepare for the recovery stage in connection with the actions to be taken and the compensations to be required in relation to the reference state before the incident;
- Climate change and its effects on the Kuujjuaq River and its resources must be considered in the development of analytical tools in order to continually adjust results and use maps that reflect the adaptive reality of the region and its constant evolution;
- The community of Kuujjuaq has identified the need for training of local responders. CCG has noted the request and will take next steps in this regard under OPP 2.0. The reality of an outlying and remote community must be considered, especially in terms of travel time for responders from outside the northern community;
- The nature of products transported by ship for the needs of the community (gasoline, diesel and jet fuel) leads to the conclusion that a pollution incident in the waters surrounding Kuujjuaq would currently involve so-called 'non-persistent' pollutants. Degradation processes would be set in motion quickly and would contribute significantly to the degradation of the pollutant. Thus, the time required to deploy external teams would possibly be greater than the persistence of the product in the environment, depending on marine and meteorological conditions;
- The polluter must take action under the law for any pollution incident. Potential commercial polluters operating in the Kuujjuaq River and Ungava Bay have the minimum response equipment required by *Canada's Oil Spill Preparedness and Response Regime*. Other complementary actions, such as species monitoring, shoreline contamination assessment and sampling may provide better results for optimal recovery of the environment and traditional activities.

## Next steps

### Research project

Since the workshop, the research team made progress in the project by finalizing the spatial mapping of all the information shared on environmental, socio-economic and cultural sensitivities by the participants. They have also continued the literature review of the existing data, in order to integrate and value them in their results. Here is a summary of the coming steps for the research project (detail calendar in Annex 2).

- **July to September 2022:** Analysis and mapping
  - Development and calculation of the vulnerability indices;
  - Progress and finalization of the geomorphology and identified sensibilities mapping;
- **August-September 2022:** planning the October visit in Kuujjuaq
  - Identification of, and initial contact with, regional and local organizations representatives to be consulted in October 2022;
  - Determination of thematics to be discussed with regional and local organizations;
  - Consultation with CCG and CEGRIM regarding the visit in Kuujjuaq as to combined efforts from different initiatives
- **October 2022:** Return to the community of Kuujjuaq
  - Validate the methodology, scope and added value of spatially calculated vulnerability indices
    - Participatory mapping workshop
    - Individual and group interviews
  - Navigate the Kuujjuaq River to appreciate the scope of the results with the reality of the field
  - Discussion of agreements and data sharing, if required
  - Dissemination platform and expected formats of tools under development



## CCG / CEGRIM

It is important to CCG and CEGRIM to maintain fluid communication with local and regional organizations related to this workshop and continue building relationships. Therefore, CCG and CEGRIM plan to come back to Kuujjuaq to present the final results from research project including identified gaps of knowledge. In the meantime, here are the coming actions to be actioned.

- **Summer 2022:** Post-workshop report sent including next steps communicated to participants; Get participant input especially regarding next steps;
- **Spring/summer 2023:** Visit to Kuujjuaq for presentation of the final results of the research project. The frame of a workshop is to be confirmed with partners;
  - The objective will be to present the results of the research project;
  - To train the community on the use of the main tools developed, as well as to demonstrate their concrete outcomes to the main actors of the environmental response community;
- **2023:** Improve the understanding of the chain of communication, roles and responsibilities and collaboration between the municipality, the regional department of Civil security (Ministère de la Sécurité publique, Gouvernement du Québec), KRG, and CCG in order to better assist all partners in their respective preparedness activities and during a response in the case of a marine pollution incident.
- **By summer 2023:** Clarify the alerting process for the community during marine pollution incidents through the development of a visual decision support tool;
  - The objective is to establish a clear and direct link with the regional organizations responsible for marine pollution incidents, stakeholder from Gouvernement du Québec (Government of Quebec) and the CCG in order to accelerate the actions taken in response;

## Conclusion

This sharing workshop generated many constructive questions and comments from the participants. These exchanges allowed for a better mutual understanding of local and regional concerns regarding the management of a potential marine pollution incident and thus developed a collective understanding of the current state of knowledge and readiness. This first initiative will allow for the validation of ongoing or previously completed research in order to increase the scope of its impacts beyond the disciplinary and academic spheres.

The holding of this first multi-jurisdictional sharing workshop, involved collaboration between the Regional Nunavik organizations, Government of Canada, and the Government of Quebec. A collaborative relationship based on trust are crucial to the success of research projects like this and for ensuring effective response to marine pollution incidents. All the participants demonstrated great interest in the subject matter and the importance of validating the results, which will occur in the spring of 2023. Thus, the continuity of our concerted collaboration is desirable to continuously improve our joint preparation for the management of maritime incidents.

For more information on the workshop and its follow-up, please contact:

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## ANNEX 1

List of invited organizations:

- Institut nordique du Québec;
- Réseau Québec Maritime;
- Kativik Regional Government (KRG);
- Makivik Corporation and the Nunavik Research Center (NRC);
- Nunavik Regional Board of Health and Social Services (NRBHSS);
- Nunavik Marine Region Wildlife Board (NMRWB);
- Nayumivik Landholding Corporation;
- Northern Village of Kuujjuaq;
- Local Nunavimmi Umajulivijiit Katujaqatigininga (LNUK);
- Regional Nunavimmi Umajulivijiit Katujaqatigininga (RNUK);
- Kuujjuamiut society (Kuujjuamiut Inc.)
- KRG's Uumajuit Wardens Program;
- Kuujjuaq Elders Association/ Nunavik's Elders Committee;
- Saturviit Inuit Women's Association;
- Qarjuit Youth council;
- Environment and Climate Change Canada.

## ANNEX 2

Research project calendar as of July 2022 for actions to come until March 2023

Action to come	Date
Spatialisation of existing and acquired data (geomorphology, local sensitivities, etc)	June-to September 2022
Development, calculation and spatialisation of the indices	
Planning of the visit in Kuujjuaq of October 2022 <ul style="list-style-type: none"> <li>- Identification of, and initial contact with, regional and local organizations representatives to be consulted in October 2022;</li> <li>- Determination of consultation topics with regional and local organizations;</li> <li>- Consultation with CCG and CEGRIM regarding the visit in Kuujjuaq as to combined efforts from different initiatives</li> </ul>	August - September 2022
Kuujjuaq visit <ul style="list-style-type: none"> <li>- Validate the methodology, scope and added value of spatially calculated vulnerability indices               <ul style="list-style-type: none"> <li>o Participatory mapping workshop</li> <li>o Individual and group interviews</li> </ul> </li> <li>- Navigate the Kuujjuaq River to appreciate the scope of the results with the reality of the field</li> <li>- Discussion of agreements and data sharing, if required</li> <li>- Dissemination platform and expected formats of tools under development</li> </ul>	October 2022
Compilation of new data to be integrated and adjustment of the indices based on consultations	November- December 2022
Preliminary mapping of indices <ul style="list-style-type: none"> <li>- Follow-up with involved organizations after field/meetings</li> </ul>	
Adjusting mapping and final report writing	January 2023
Presentation of adjusted results for discussion to funding organisation and local and regional organisations from Kuujjuaq (virtually)	February-March 2023
Final update of the mapping	
Revision and delivery of final report and data sharing	March 2023