Inuit Marine Monitoring Project
Inuit Marine Monitoring Project (IMMP)

◊ Introduction to IMMP
◊ What we learned
◊ Challenges & Benefits
◊ Where to now?
• Safe and efficient shipping is essential to the well being of Nunavummiut;

• Shipping also poses significant risks like oil spills, marine wildlife disturbance, break-up of sea-ice on hunting grounds, etc;

• It is critical that strong monitoring and management efforts be undertaken to prevent serious impacts from shipping.
Two key components of the IMMP are:

- Building a network of local Inuit marine monitors, who are employed during the shipping season to record observations of vessel activities in Nunavut’s coastal areas;

- Tracking data on shipping activities in Nunavut with Off-Grid and In-town AIS making it accessible to interested community members, NTI, RIAs, and HTOs.
Map of AIS and Marine monitors

- The communities of Cambridge Bay, Clyde River and Iqaluit have remote AIS installed;

- The communities of Kimmirut, Rankin Inlet and Chesterfield Inlet have In-town AIS installed;

- Install AIS in strategic points in Nunavut in the first phase and then prioritise to the rest of Nunavut.
Canada’s Arctic Passageways Are Shared by Ships and Wildlife
Vessel, whale, fish, and bird movements
Inuit Marine Monitors

- Inuit Marine Monitors have been trained in Cambridge Bay, Clyde River and Kimmirut;
- Marine Monitors in Cambridge Bay are Bobby and Bailey Klengenberg;
- Marine monitors in Clyde River are Joanasie Illauq, Lucassie Panipak, Bobby Panipak and Michael Illauq;
- Monitors in Kimmirut had boat problems
Monitors data collection sample

Inuit Marine Monitoring Program
Vessel Observation Form

Monitor Name: [Handwritten name]
Date: [Handwritten date]
Time: 8:00

Your location (GPS coordinates): [Marked location]

Make a mark on the map showing your location (X) and the location of the vessel (O).

Vessel Identification

- [ ] Sailboat/Yacht
- [ ] Tanker
- [ ] Tug
- [ ] Cargo/Industrial
- [ ] Fishing
- [x] Cruise Ship

Colours: White | Blue | Description: huge

Name: Bremen
Other Identifiers (eg. flag):

Vessel Behaviour

Direction: Draw an arrow on the map to show the direction the vessel is heading

Proximity to shore: [ ] within 50m [ ] within 500m [ ] greater than 500m

Speed: [ ] at anchor [ ] slow [ ] underway [ ] speed of concern

Behaviour: [ ] passing by [ ] exploring the area

How long did you observe the vessel in the area?: [Handwritten duration]

Concerns

Does anything about the vessel’s behaviour concern you? [ ] Yes [ ] No

Please check all that apply: [ ] Dangerous ice or weather conditions
[ ] Disturbing wildlife [ ] Signs of pollution [ ] Interfering with local travel or harvesting
[ ] Other

Did you communicate with the boat?: [ ] Yes [ ] No

Please provide as much information about your concerns as possible:
### Inuit Marine Monitoring Program Daily Observation Form

**Monitor Name:** Скока
date: Aug 20, 2017

**Camp Location (GPS coordinates):**

**Mark routes travelled on the map if you stayed at camp check here**

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### Marine Wildlife Observations (e.g., marine mammals, significant number of birds, rare species, etc.)

<table>
<thead>
<tr>
<th>Species</th>
<th>N. &amp; H.</th>
<th>#</th>
<th>Time</th>
<th>Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seal</td>
<td></td>
<td>#</td>
<td></td>
<td>Feeding</td>
</tr>
<tr>
<td>Golden Eagle</td>
<td></td>
<td>#</td>
<td></td>
<td>Flying</td>
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</tbody>
</table>

### Time Spent Monitoring (Check boxes when you were actively monitoring):

- 9am-10am
- 10am-11am
- 11am-12pm
- 12pm-1pm
- 1pm-2pm
- 2pm-3pm
- 3pm-4pm
- 4pm-5pm

- [ ] 9am-10am  [✓] 10am-11am  [ ] 11am-12pm  [ ] 12pm-1pm  [ ] 1pm-2pm
- [ ] 2pm-3pm  [ ] 3pm-4pm  [ ] 4pm-5pm

### Reason for Not Observing (poor weather conditions, safety concern, etc.):

- Rough waters - unable to travel to cabin 2 routed to Baychimo.

### Problems encountered that day and suggestions for improvements:

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Introduction:

Hi my name is Dolly Khonguitiaq and this my son Bailey and we are Marine monitor with NTI.

We are hired to monitor vessel traffic and report to NTI.

The information we gather is shared with NTI, communities, and if need be with Coast Guard and Transport Canada.

Would like to know:

Name of Vessel: WHY - FAC 2289

Where are you from? FRANCE

Purpose of Visit: Expedition - www.underthepole.com

Destination: ALASKA

When did you arrive in Canada and how long are you planning to stay?

August 2, 2017 - 1 month

Is there any other places you are planning to visit during your trip?

- Pond Inlet - Resolute - Qaanaaq - Cambridge Bay - Tuktoyaktuk

- record any specific destinations including communities, but also any islands, bays, other sites of interest

Do you have an AIS transmitter installed on your boat?

Yes

- Did you report to NORDREG upon entering Canadian waters?

No

(NORDREG is the Coast Guard's monitoring program based in Iqaluit. It is mandatory for large vessels to call and report daily on their movements but some smaller ones also report in for safety reasons — the NORDREG number is located at the bottom of page 2 — Coast Guard Office in Iqaluit: 807-979-5269)
Partnership between Marine Exchange of Alaska and NTI;

Real-time live feed with local support from local marine monitors strategically placed near their community.
INUIT MARINE MONITORING PROGRAM – Pilot Project

Communities have wanted to know more about what ships are passing through arctic waters.

NTI will do a pilot using hardware (AIS) and experts (HTO members) to locate and document ships.

Large ships have AIS on board that the projects AIS stations can pick up and send to a central receiver monitored by NTI project people.

Inuit monitors will be contracted through the HTO to camp on the land in specific places identified by the HTO to look for ships that the AIS is not seeing and report that information to the NTI project staff.

Some smaller ships (yachts, pleasure craft, adventurers, etc) use AIS voluntarily but many do not.

The AIS stations have a range of between 30-150 miles.
What we learned

Challenges for the IMMP

- Each community HTO/HTA is unique and may not respond to emails or phone-calls on a timely manner delaying community engagement in Project;

- Weather is unpredictable, delays can last days and sometimes weeks (fog, snow, rain, blizzard, etc.)

- Need support for IMMP Program Coordinator
Challenges

◇ Animal disturbances will have to be assessed on Off-Grid AIS (Polar Bears, Grizzlies, Birds of Prey, foxes, etc.)

◇ Need to plan for Off-grid enclosures for next season

◇ AIS Equipment Seizure (CBSA / Canada Border Services of Canada)

◇ Suppliers are from Alaska so equipment took a while to arrive at times (MXAK / Marine Exchange of Alaska)
Challenges

- Technical training and support is from Marine Exchange of Alaska (4 hour time difference)
- No Canadian supplier
- No in-house expertise in troubleshooting Off-Grid AIS Maintenance
- Satellite consistency
  (Globalstar vs Iridium)
Benefits

- Community engagement;
- Inuit employment;
- Local economic support
  - ie. Inuit guides, gas, supplies;
- Capacity Development;
Benefits

- Inuit will know who is sailing in their waters near their community;

- Community empowerment.
  - Collecting, storing and sharing data is a vital key to establishing shipping corridors near communities to minimize impacts on the marine environment and animals.
Goals achieved (Assets)

- Community Support, Hunters and Trappers Organizations/Associations, RIA’s, CLO’s, local coop and individuals;
- Community contacts;
- Outsider support (Oceans North, Arctic Cooperatives, Coast Guard)
Where to now?

**Strategic partnership Opportunities**
- Ocean Protection Plan
  - Coast Guard
  - Transport Canada
  - Environment
- National Defence
- Indigenous Guardians Network

**Community awareness - communication campaign.**

**Website and app development.**
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