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Arctic Corridors and Northern Voices

GOVERNING MARINE TRANSPORTATION IN THE CANADIAN ARCTIC

AKLAVIK NORTHWEST TERRITORIES

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ARCTIC CORRIDORS RESEARCH

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MEOPAR

OCEANS NORTH

IRVING
Irving Shipbuilding Inc.

WWF

Fisheries and Oceans Canada
Pêches et Océans Canada

PARTICIPANT BIOGRAPHIES

Dean "Manny" Arey is President of the Aklavik Hunters and Trappers Committee (AHTC) and Director of the Aklavik Community Corporation. Dean is an active harvester and trapper. He is also involved in the Mad Trapper Rendezvous and Aklavik Spring Music Festival, Sam Arey Curling Club, and the Shingle Point Summer Games Committee. He is the foreman at the Hamlet. He also sits on the Inuvialuit Land Administration Commission. He is often the Master of Ceremonies (MC) for community events. He is a husband and father of four children.

Dennis Arey is an active harvester and trapper. He has worked in oil and gas, construction, as a char monitor, and as part of the bowhead tagging program.

Joe Arey is Director of the Inuvialuit Elders Committee. Joe is an active harvester and trapper in the winter, getting out on the land regularly. He regularly works with the school for on-the-land programs to share his knowledge with youth. He has sat on the AHTC in the past. He is an active member of community life.

Nellie Arey is Director of the Inuvialuit Elders Committee. She is an active Inuvialuit harvester. She likes to spend time at her camps at West Channel and Shingle Point. She is a very respected seamstress in the community and region.

Renie Arey is Director of the Aklavik Hunters and Trappers Committee and is an active harvester. She has been involved in Committee of Peoples Entitlement and Inuvialuit Final Agreement negotiations. Renie is a role model for people in the community, is active on the land, and has worked for the Inuvialuit Cultural Resource Centre, for the Inuvialuit Communications Society, and as the AHTC resource person.

Annie B. Gordon is Chairperson of the Inuvialuit Elders Committee and is an active harvester. She is involved in school activities. Annie is a respected Gwich'in descent but is an Inuvialuit. She does Gwich'in interpretation as needed and has been a Gwich'in language teacher. She is involved with the Justice Committee. She sat on the AHTC in the past. She likes to pass on her knowledge to the younger generation.

Colin Gordon worked as a Park Ranger at Herschel Island Territorial Park for 11 years. He is on the Elders Committee. He worked as an ILA land monitor and as a marine mammal observer.

William Storr is Secretary-Treasurer of the Aklavik Hunters and Trappers Committee. Billy is an active fisherman. He loves to fish. He sits on the Hamlet Council and is a representative to the Inuvialuit Game Council. He is the AHTC delegate for the review of the plans by Parks Canada and Yukon Parks for Ivvavik and Herschel Island respectively.

EXECUTIVE SUMMARY

Ship traffic in the Canadian Arctic nearly tripled between 1990 and 2015.[1] The Government of Canada is developing a network of low-impact marine transportation corridors in the Arctic that encourages marine transportation traffic to use routes that pose less risk and minimize the impact on communities and the environment. The Low Impact Shipping Corridors will be a framework to guide future federal investments to support marine navigation safety in the North, including improved charting and increased hydrography, in partnership with Northerners. The corridors initiative is co-led by the Canadian Coast Guard, Transport Canada, and Canadian Hydrographic Service.

Key considerations in the current prioritization of the Low Impact Shipping Corridors include identification of Inuit and Northerners' perspectives on 1) the potential impact of marine vessels on marine areas used for cultural and livelihood activities, and on community members and 2) potential management strategies for the corridors.

This report reflects knowledge and opinions gathered through participatory mapping, focus group discussions, and interviews with Aklavik community members who were identified by local organizations as key knowledge holders. This report was validated by the research participants.

THE SPECIFIC PROJECT OBJECTIVES WERE TO...

- Describe local marine use areas including significant socio-cultural, archaeological and ecological areas, and local travel routes, for integration into the Low Impact Shipping Corridors;
- Outline the potential impacts of marine vessels on identified marine use areas and community members; and
- Provide potential strategies regarding management of the Low Impact Shipping Corridors and Arctic marine vessels.

KEY FINDINGS OF THE PROJECT ARE...

- Potential impacts of marine vessels transiting through the Low Impact Shipping Corridors include
  - contamination or pollution of Arctic waters, animals, and people;
  - behavioural changes in wildlife;
  - increased food insecurity;
  - increased expenses incurred by hunters, decreased revenue from pelt sales; and
  - limited income and revenue opportunities.
- Disruption of sea ice formation by icebreakers and marine vessels is especially disruptive to polar bears and seals, and may ultimately lead to potential food insecurity in the community.
- Existing oil spills and groundings response capacity is not sufficient - locally, federally, on vessels.

COMMUNITY-IDENTIFIED RECOMMENDATIONS INCLUDE...

- Avoiding community-identified culturally significant marine areas particularly during times of local use for harvesting; and
- Increasing communication between ships and the Hunters and Trappers Committee (HTC); between the HTC, Aklavik Community Corp (ACC) and Hamlet; and between the HTC and Environmental Impact Screening Committee (EISC).

The results of this study should be shared in all communities in the Inuvialuit Settlement Region and the research participants in Aklavik.

BACKGROUND

Ship traffic in the Canadian Arctic nearly tripled between 1990 and 2015.[1] The Government of Canada is developing a network of low-impact marine transportation corridors in the Arctic that encourages marine transportation traffic to use routes that pose less risk and minimize the impact on communities and the environment **(Figure 1)**. The Low Impact Shipping Corridors will be a framework to guide future federal investments to support marine navigation safety in the North, including improved charting and increased hydrography, in partnership with Northerners. The corridors initiative is co-led by the Canadian Coast Guard, Transport Canada, and Canadian Hydrographic Service.

Key considerations in the current prioritization of the corridors include identification of Inuit and Northerners' perspectives on 1) the potential impact of marine vessels on marine areas used for cultural and livelihood activities, and on community members and 2) potential management strategies for the corridors.

This report documents Aklavik community members' knowledge and extensive year-round use of important marine areas (ecological, socio-cultural, archaeological, and travel routes), the potential impacts of shipping on those areas and on community members, and potential management strategies for the Low Impact Shipping Corridors.

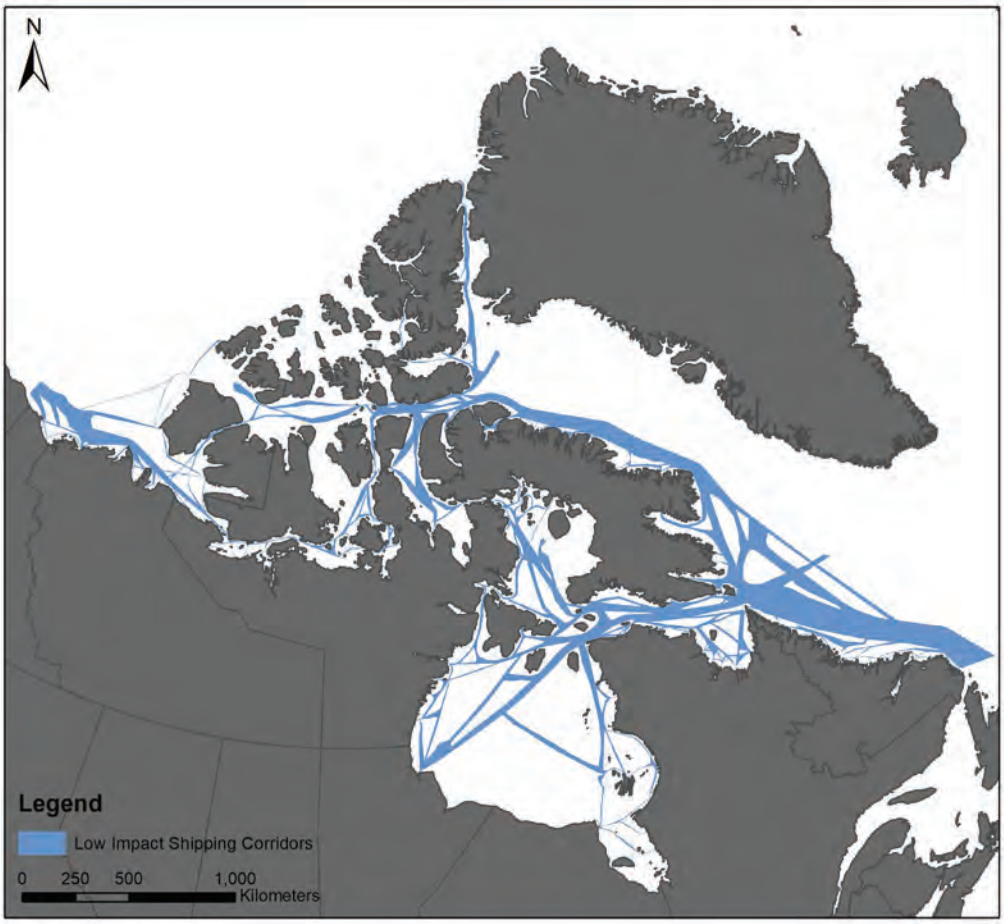


Figure 1. Example of Low Impact Shipping Corridors

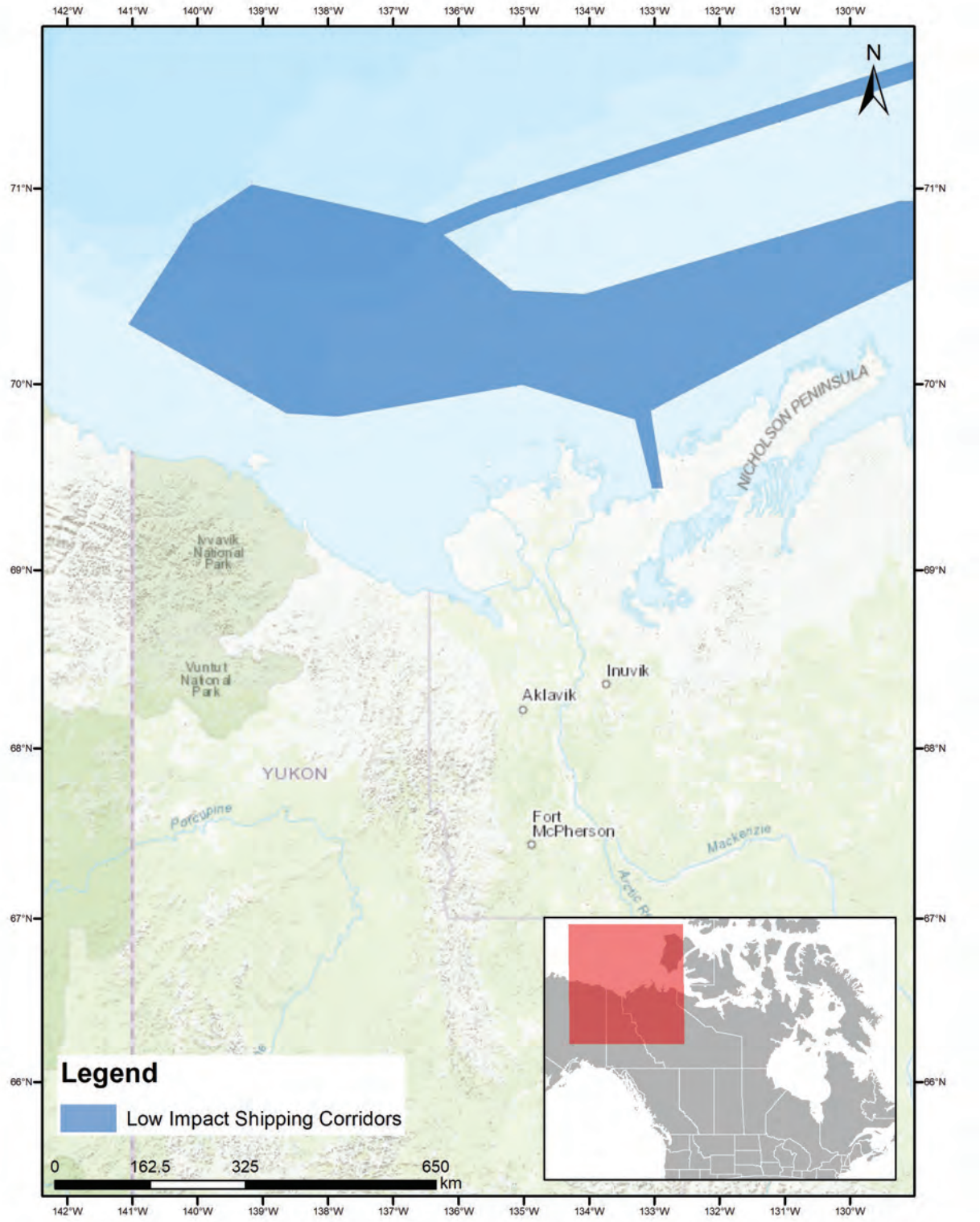


Figure 2. Example of Low Impact Shipping Corridors near Aklavik, Northwest Territories

CHANGE IN SHIPPING ACTIVITY

(1990–2000 ANNUAL AVERAGE COMPARED TO 2011–2015 ANNUAL AVERAGE)

In the Canadian Arctic, when comparing the average annual number of kilometres of shipping activity from 1990-2000 to the annual average from 2011-2015, shipping increases have been predominantly focused in the eastern Arctic, particularly around southwest Baffin Bay (e.g., Pond Inlet, Clyde River, Qikiqtarjuaq, Iqaluit), in the Queen Maud Gulf area (e.g., Cambridge Bay and Gjoa Haven), and northwest Hudson Bay (e.g., Chesterfield Inlet) **(Figure 3)**. Changes in Hudson Strait have been generally minor (e.g., Cape Dorset, Kimmirut), and changes in the High Arctic have been negative (e.g., Resolute Bay, Arctic Bay, Eureka). The Inuvialuit Settlement Region experienced a 6,497 km increase in shipping from 2011-2015 compared to 1990-2000; Aklavik experienced a 1,630 km increase, the second largest increase in the Inuvialuit Settlement Region **(Figure 4)**.[1]

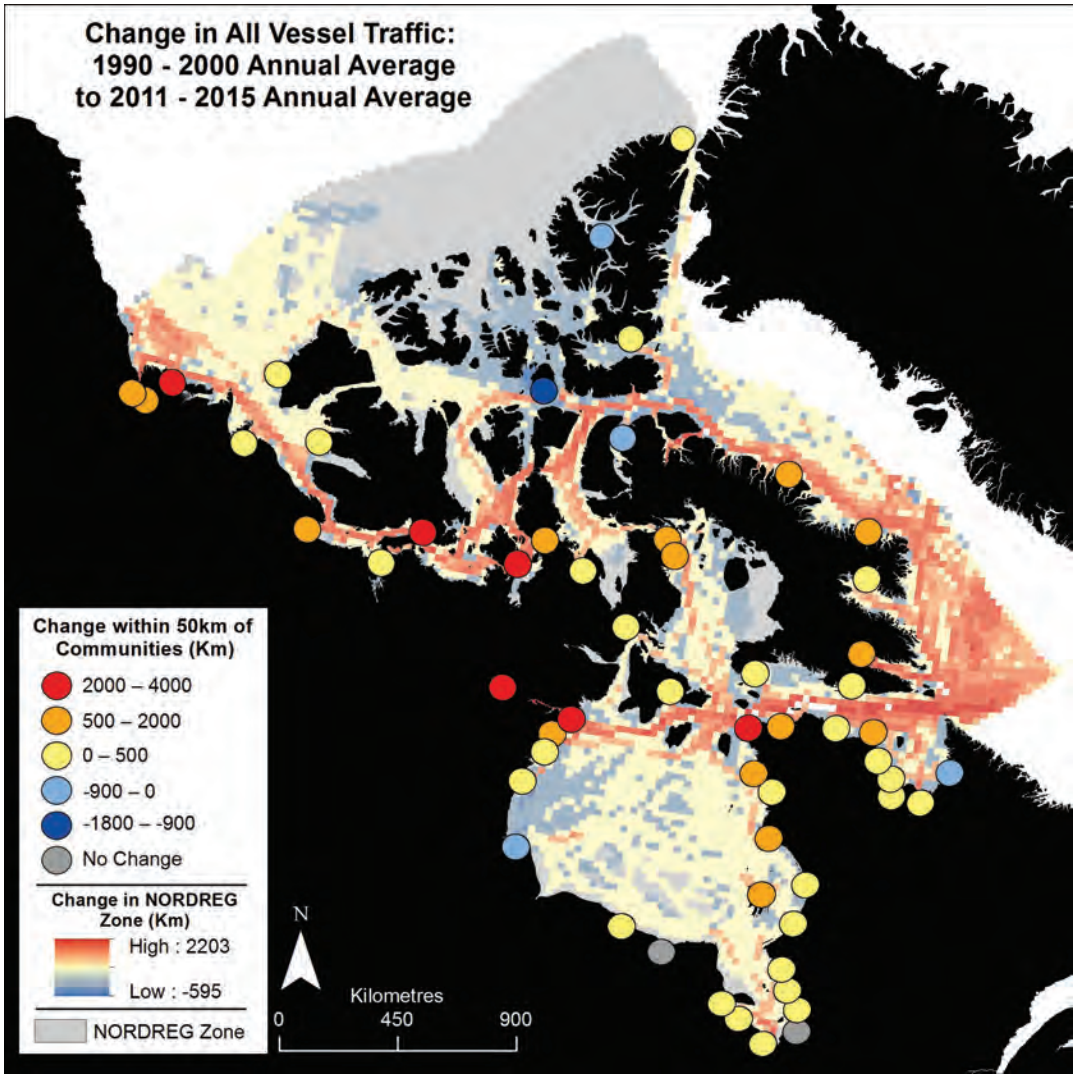


Figure 3. Change in shipping activity (km) in the Canadian Arctic: 1990–2000 annual average compared to 2011–2015 annual average[1]

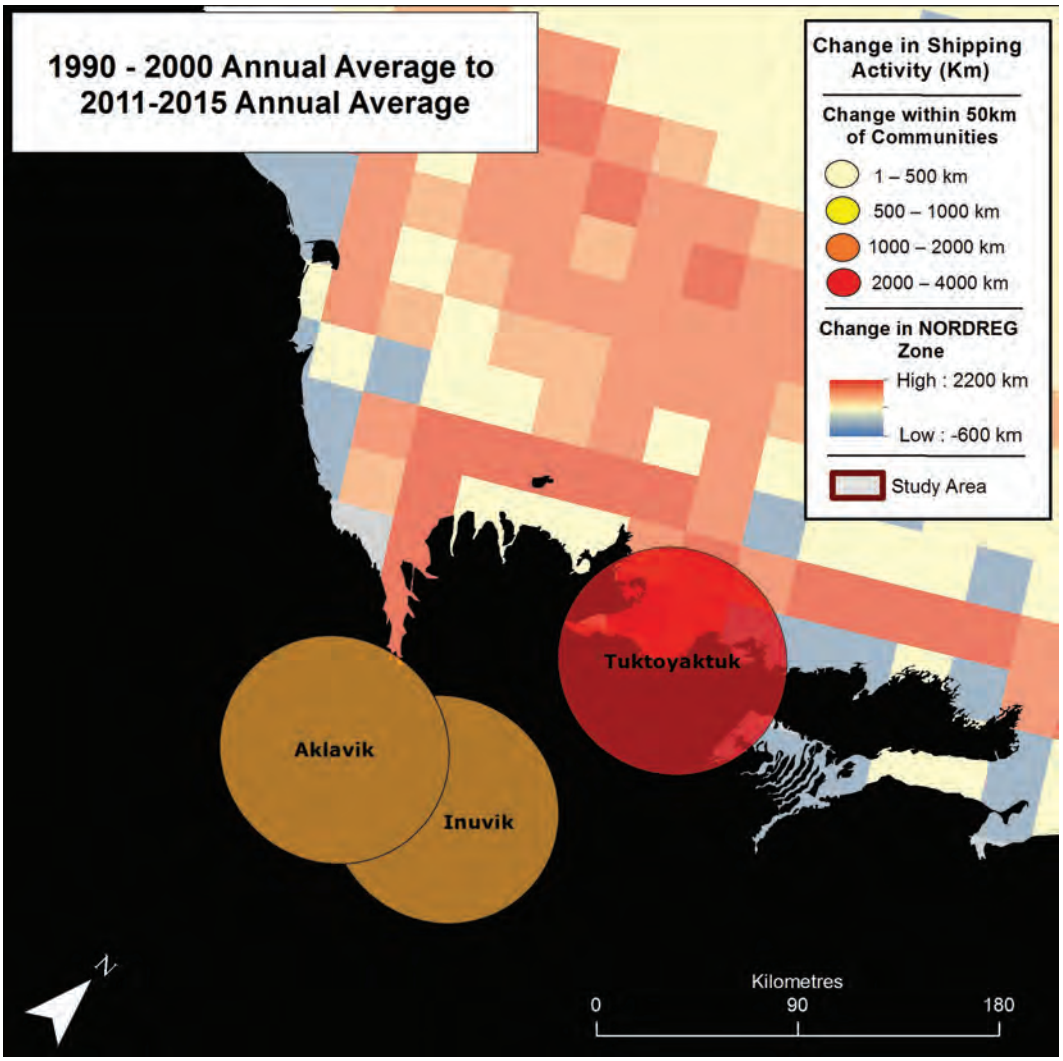


Figure 4. Change in shipping activity (km) near Aklavik, Northwest Territories: 1990–2000 annual average compared to 2011–2015 annual average[1]

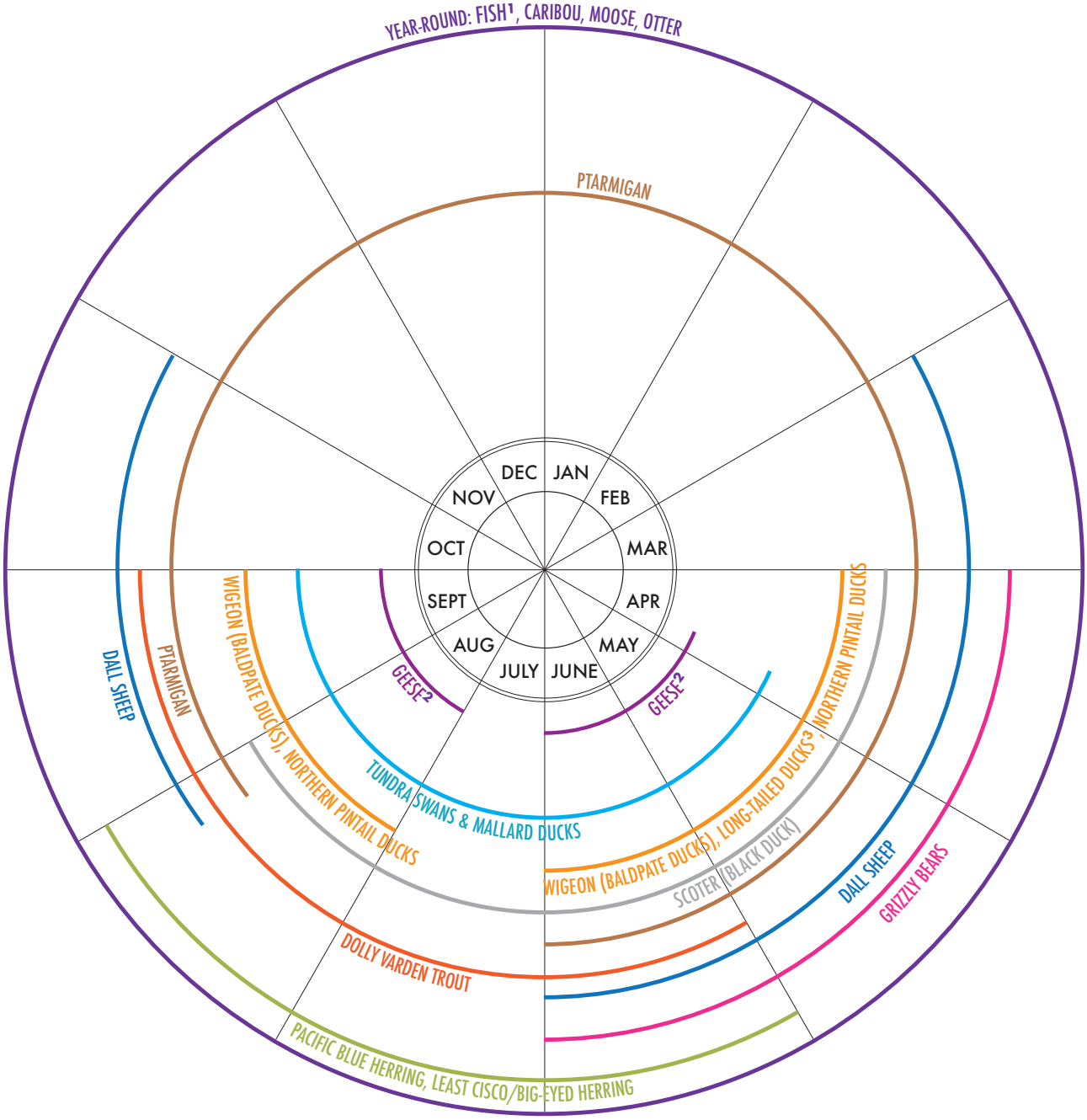
FOUR SEASONS

There are 4 main seasons in Aklavik, Northwest Territories. The seasons are weather and ice dependent; therefore, the months each season happens in can be different each year. However, in general the seasons are:

SEASON	MONTHS IN WHICH THEY HAPPEN	OCEAN CONDITION
Spring	March to end of June	Frozen and sea ice break-up in May
Summer	July to the end of August	Open water
Fall	End of August to end of October	Open water
Winter	November to end of February	Freeze-up and frozen sea ice

SEASONAL HARVESTING CYCLE

Harvesting happens according to seasons and follows an annual cycle.



[1] FISH: Arctic Cisco, Arctic Grayling, Broad Whitefish, Coney or Inconnu, Lake Trout, Lake Whitefish/Crooked Backs, and Northern Pike/Jackfish

[2] GEESE: Canada Goose, Snow Goose, White-fronted Goose, and Brant Goose

[3] LONG-TAILED DUCK: People referred to long-tailed ducks by the old, no longer used name of Oldsquaw.

Figure 5a. Seasonal cycle of harvesting activities near Aklavik, Northwest Territories

Figure 5b. Seasonal cycle of harvesting activities near Aklavik, Northwest Territories

MAPS OF CULTURALLY SIGNIFICANT MARINE AREAS

Maps include:

1. Location of animals, marine mammals, and fish;
2. Location of community members' activities, as well as camps and burial sites; and
3. Local travel routes and safe harbours.

Maps will be available at www.arcticcorridors.ca and in Aklavik at Aklavik Hunters and Trappers.

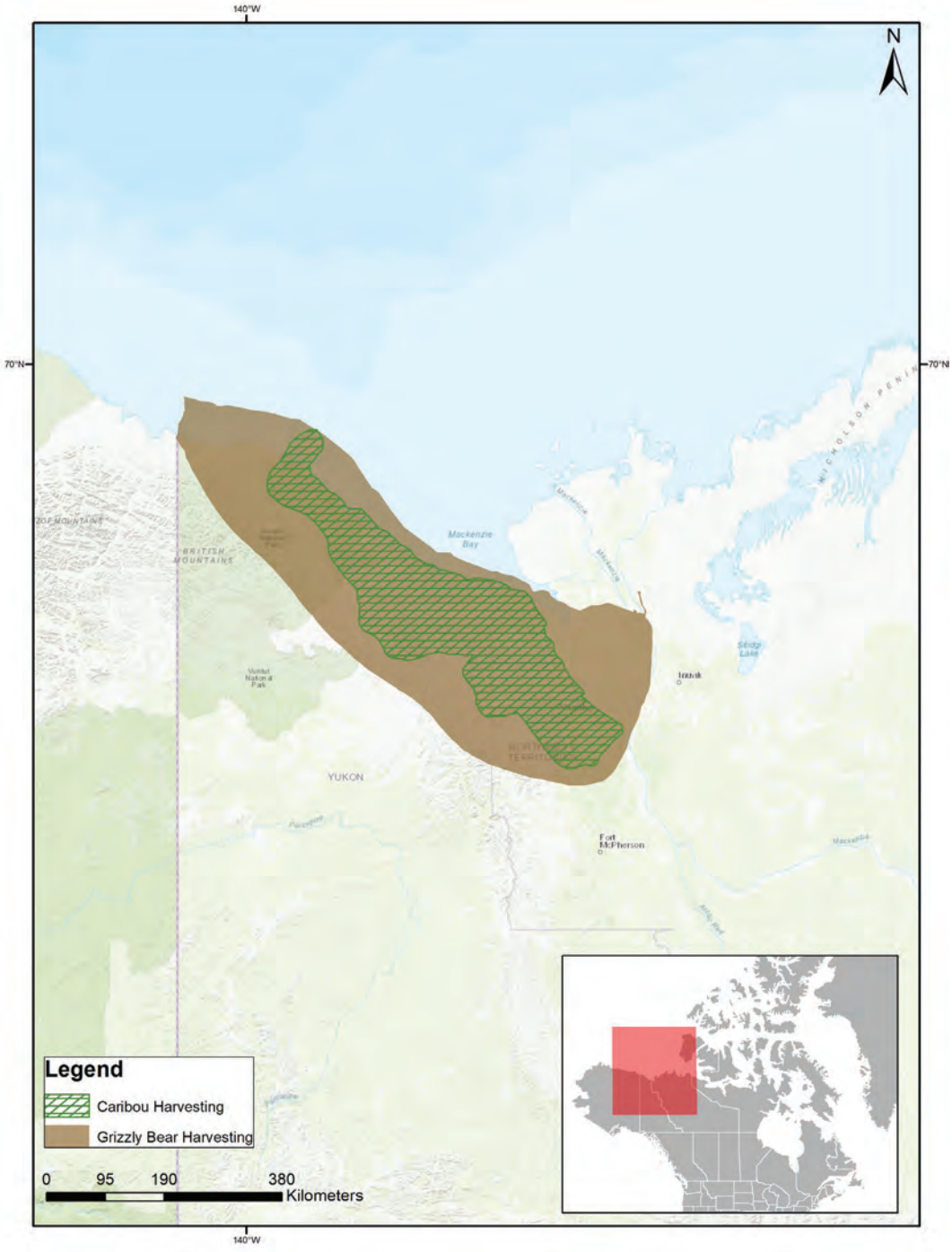


Figure 6. Location of community members' activities when the ocean is frozen and around the time of sea ice break-up

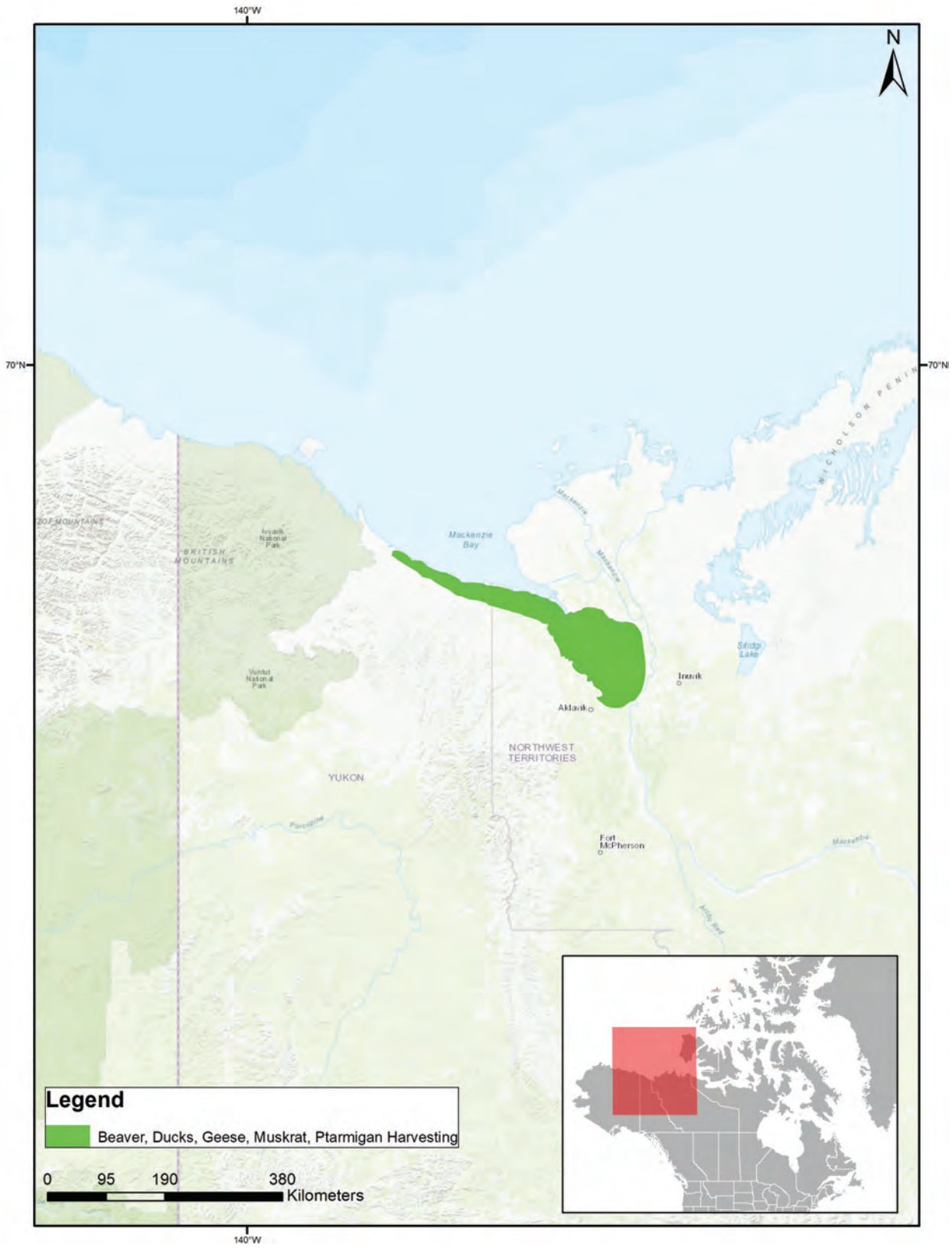


Figure 7. Location of community members' activities when the ocean is frozen and around the time of sea ice break-up

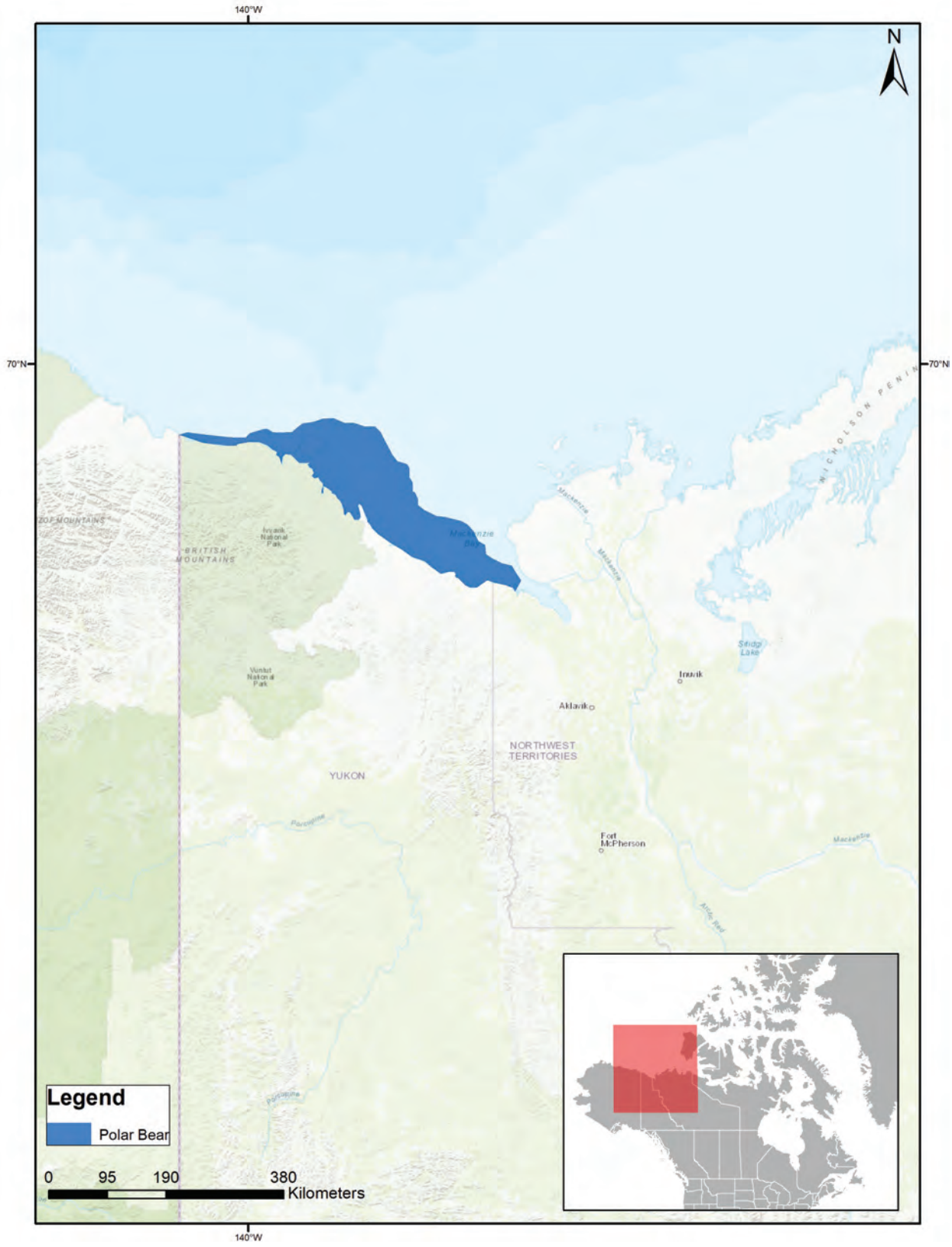


Figure 8. Location of wildlife when the ocean is frozen and around the time of sea ice break-up

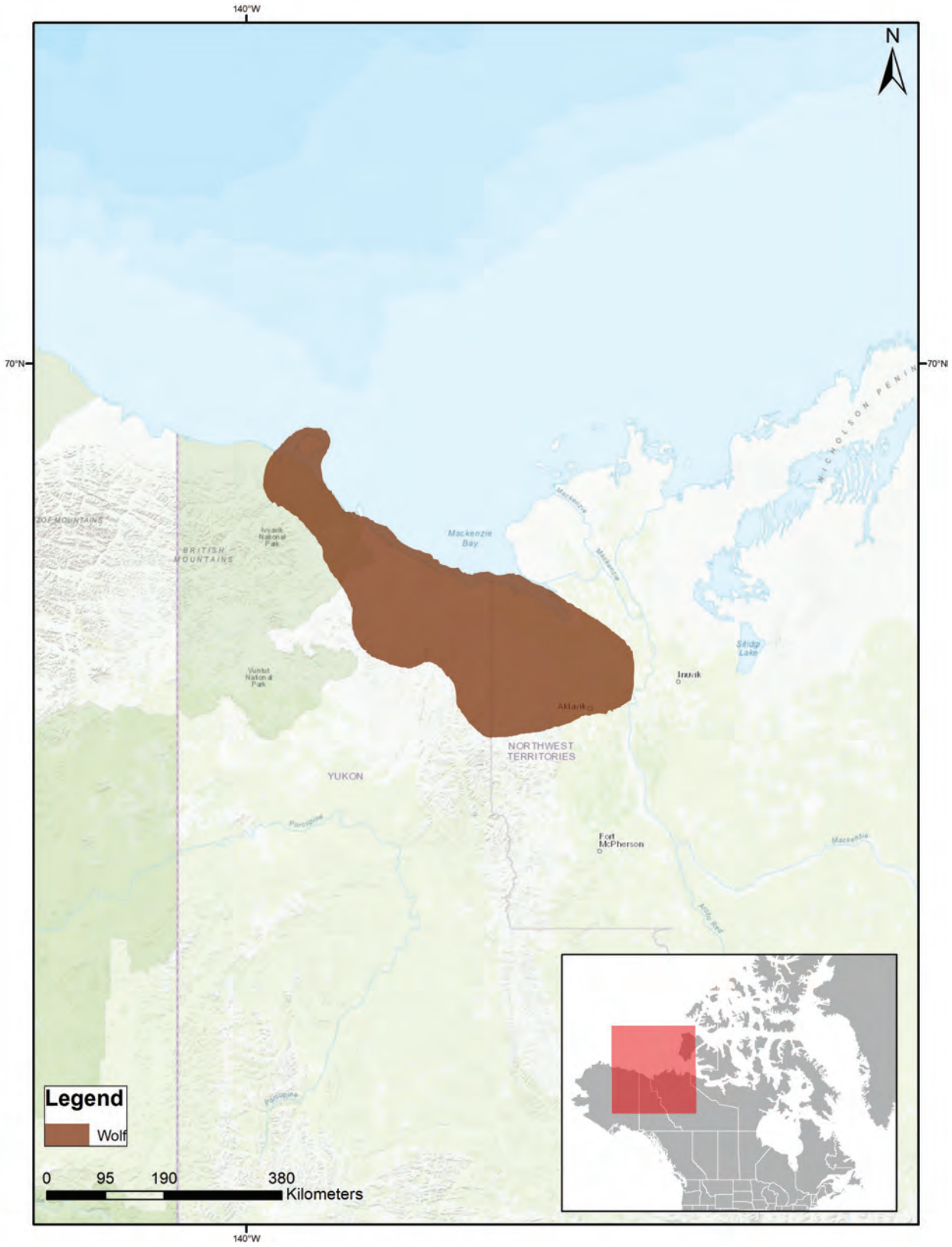


Figure 9. Location of wildlife when the ocean is frozen and around the time of sea ice break-up

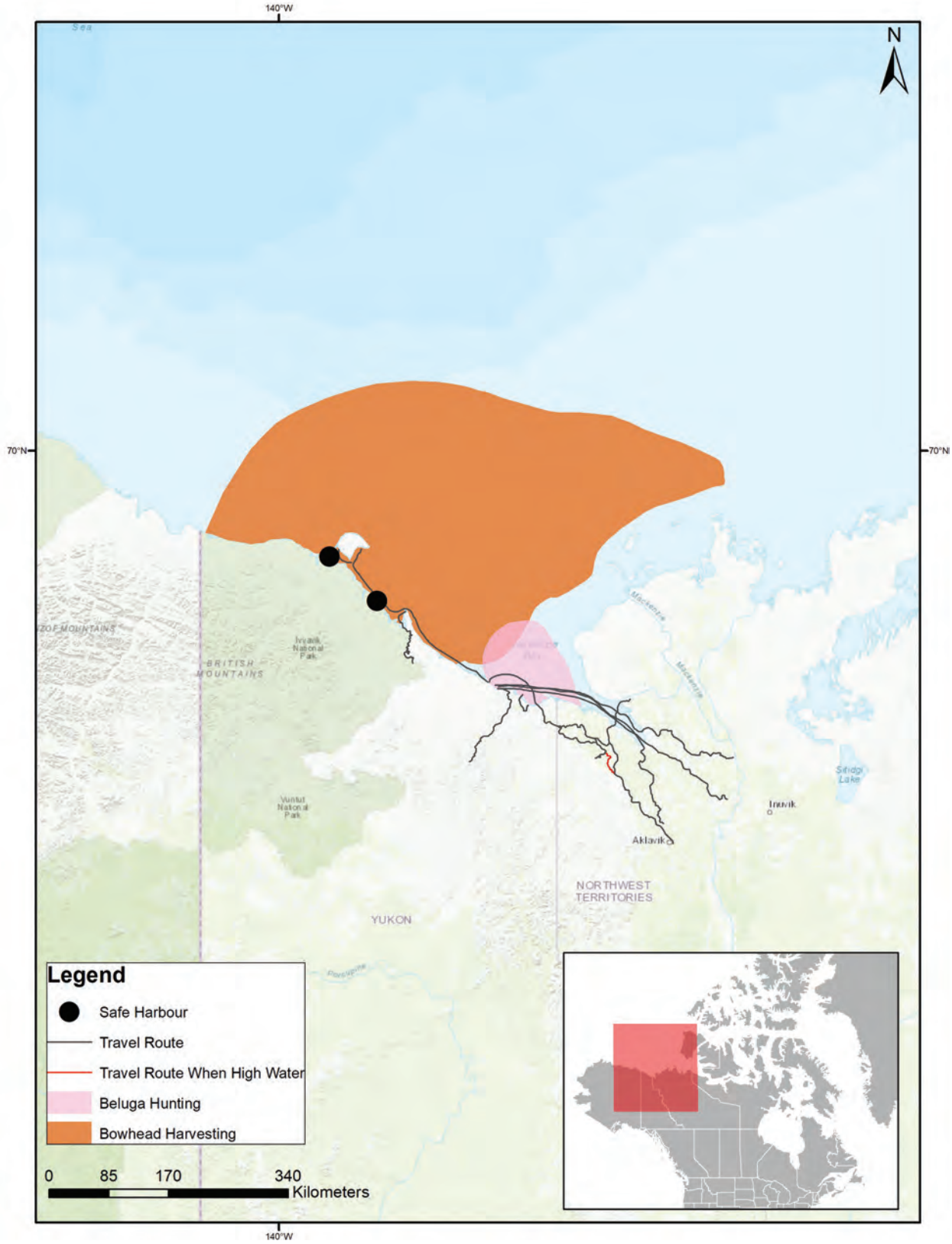


Figure 10. Location of community members' activities during open water

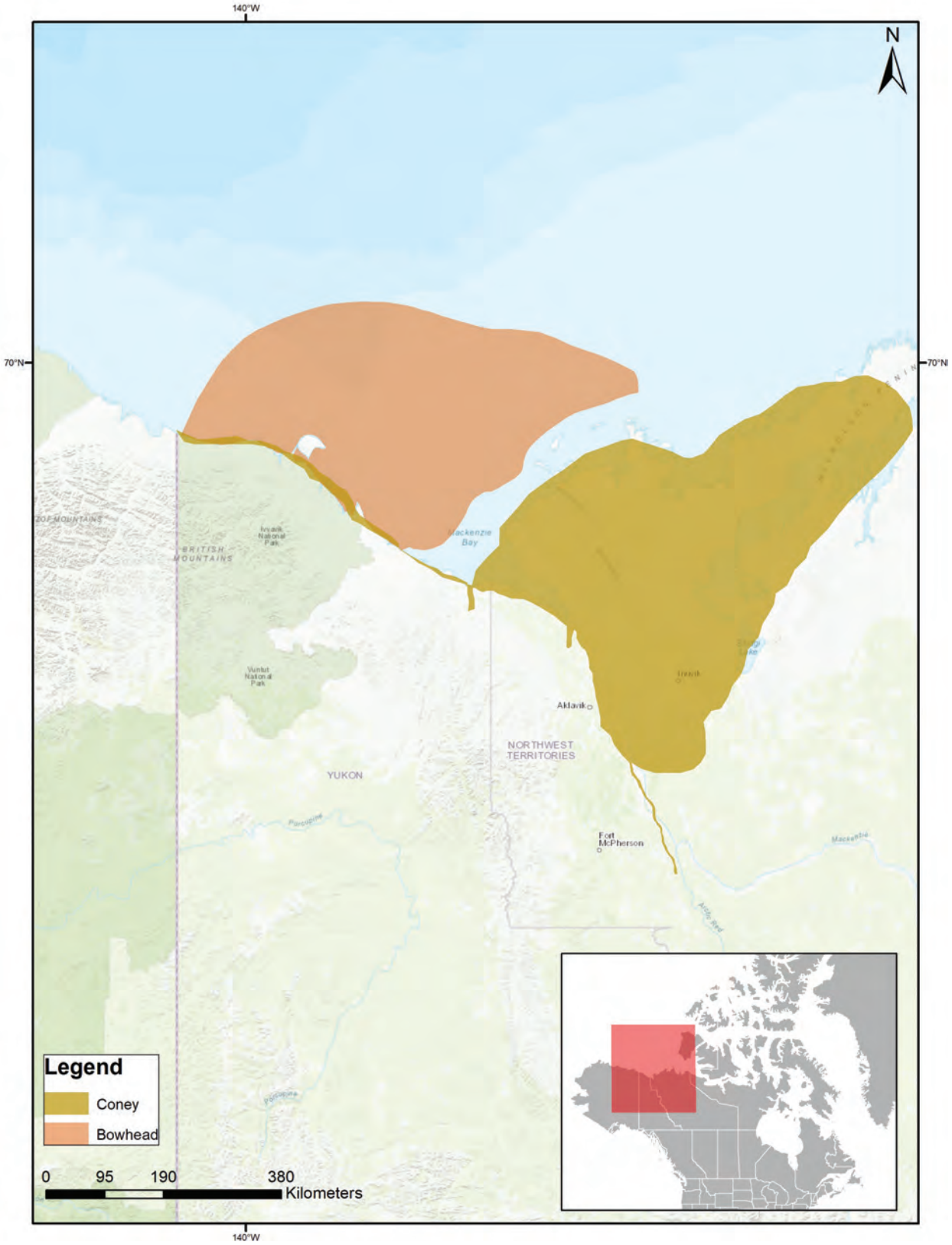


Figure 11. Location of wildlife during open water

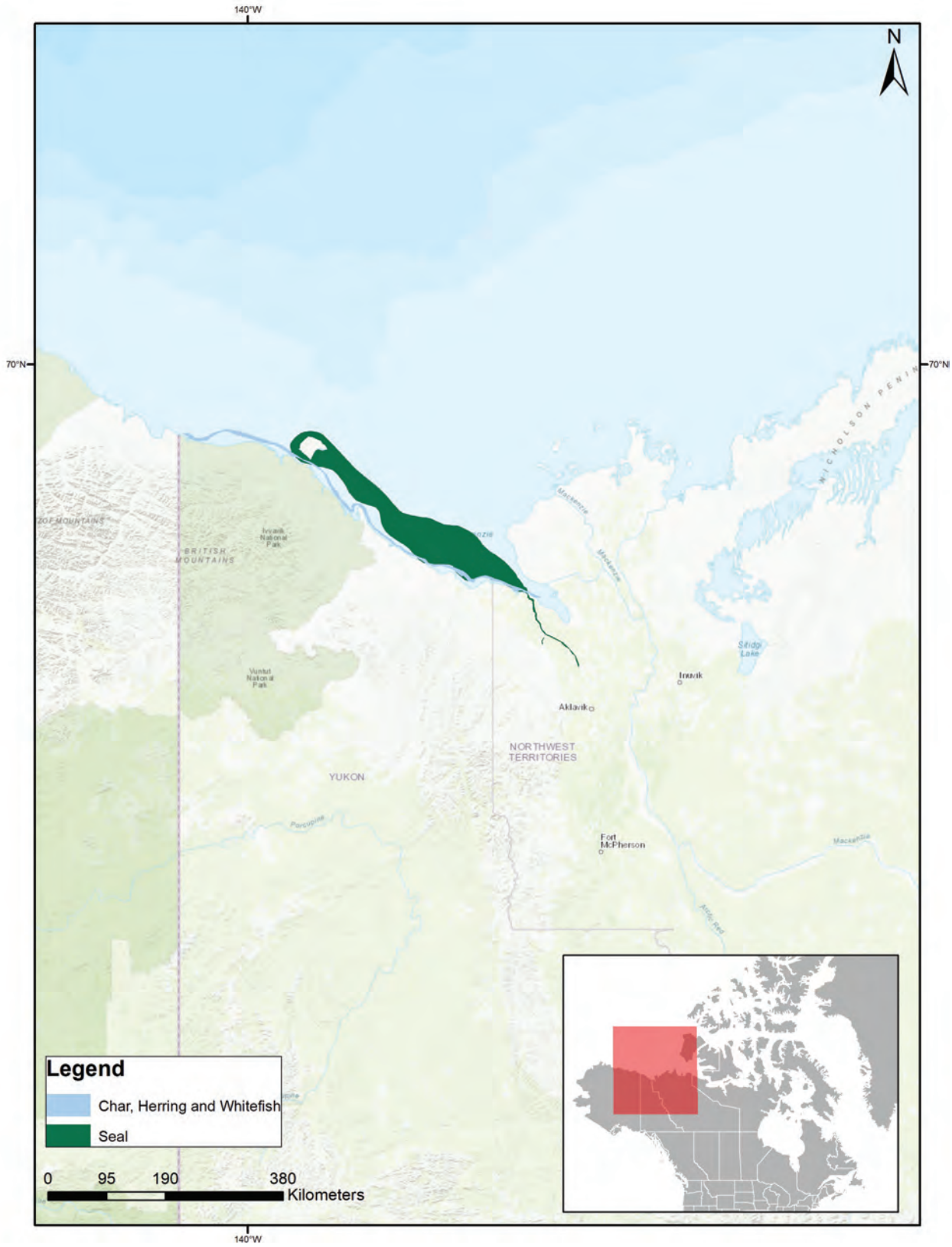


Figure 12. Location of wildlife during open water

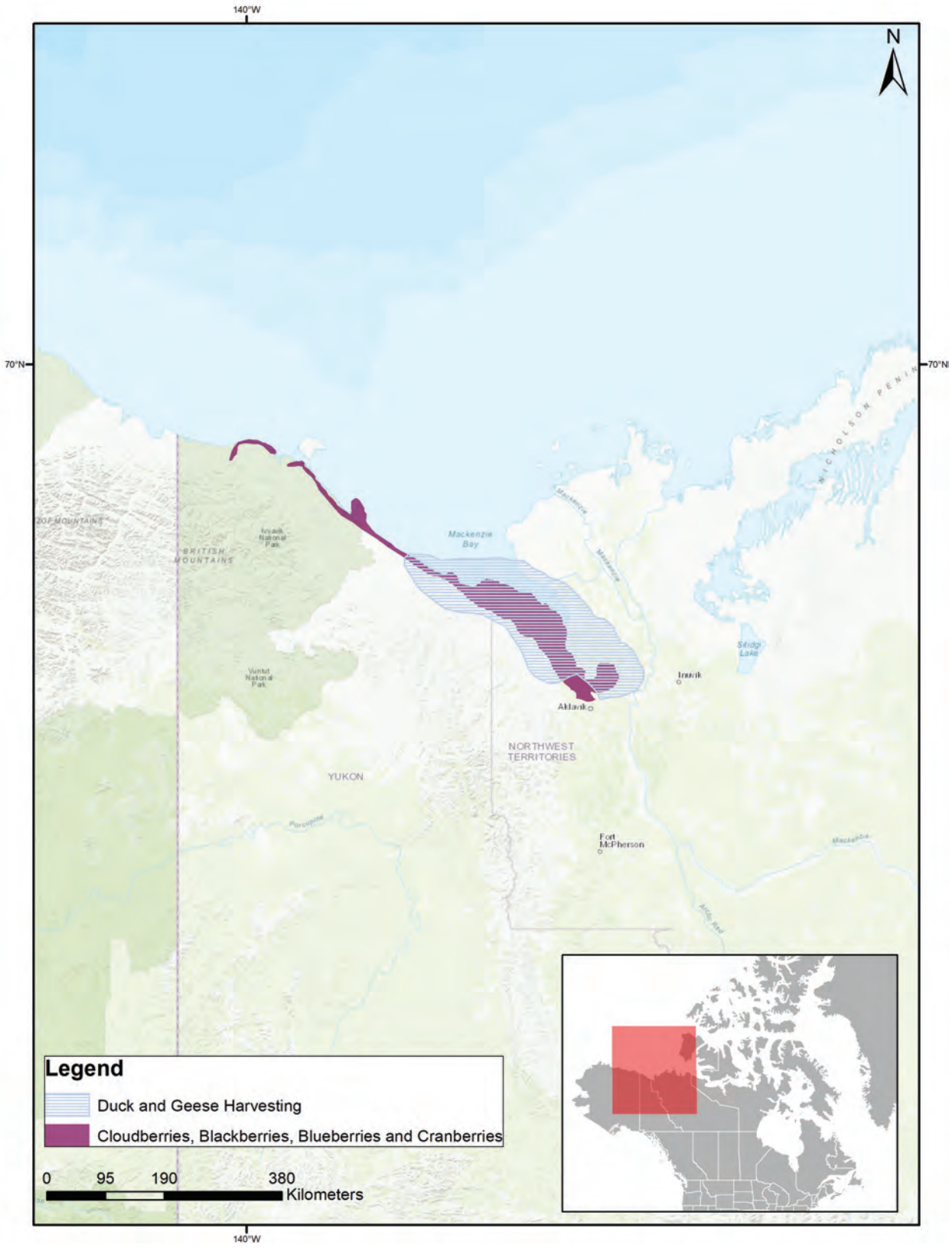


Figure 13. Location of community members' activities during open water

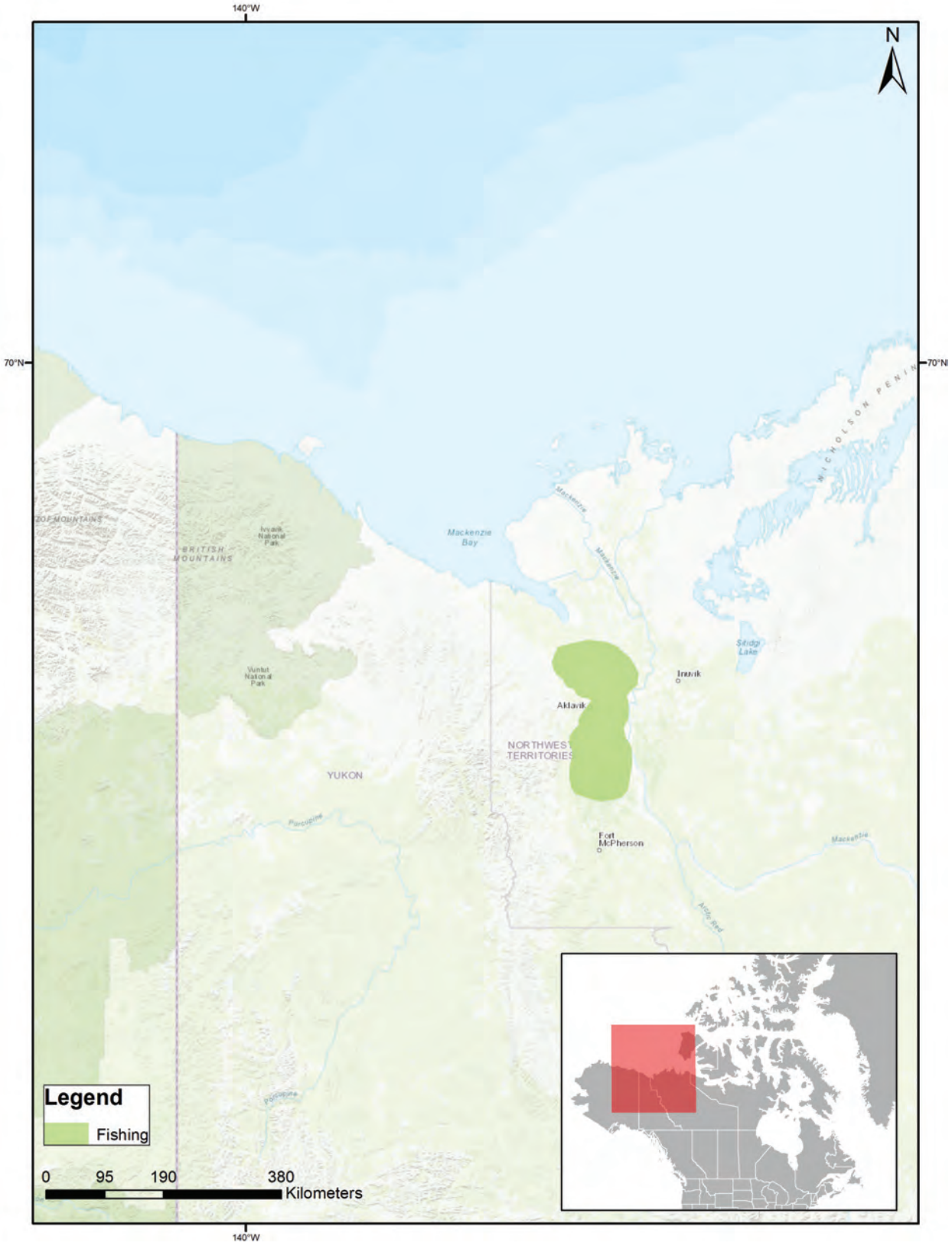


Figure 14. Location of community members' activities during open water

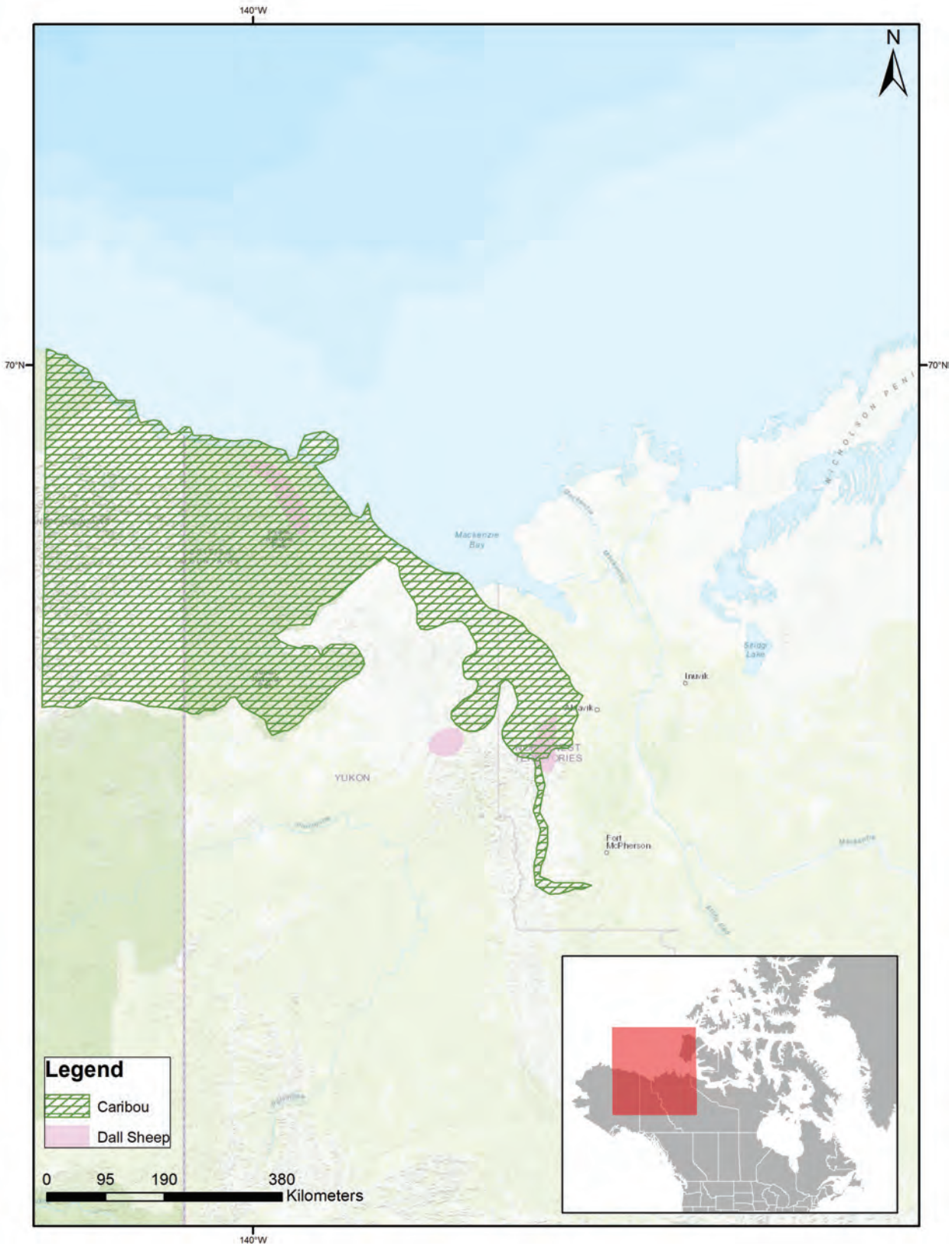


Figure 15. Location of wildlife during open water

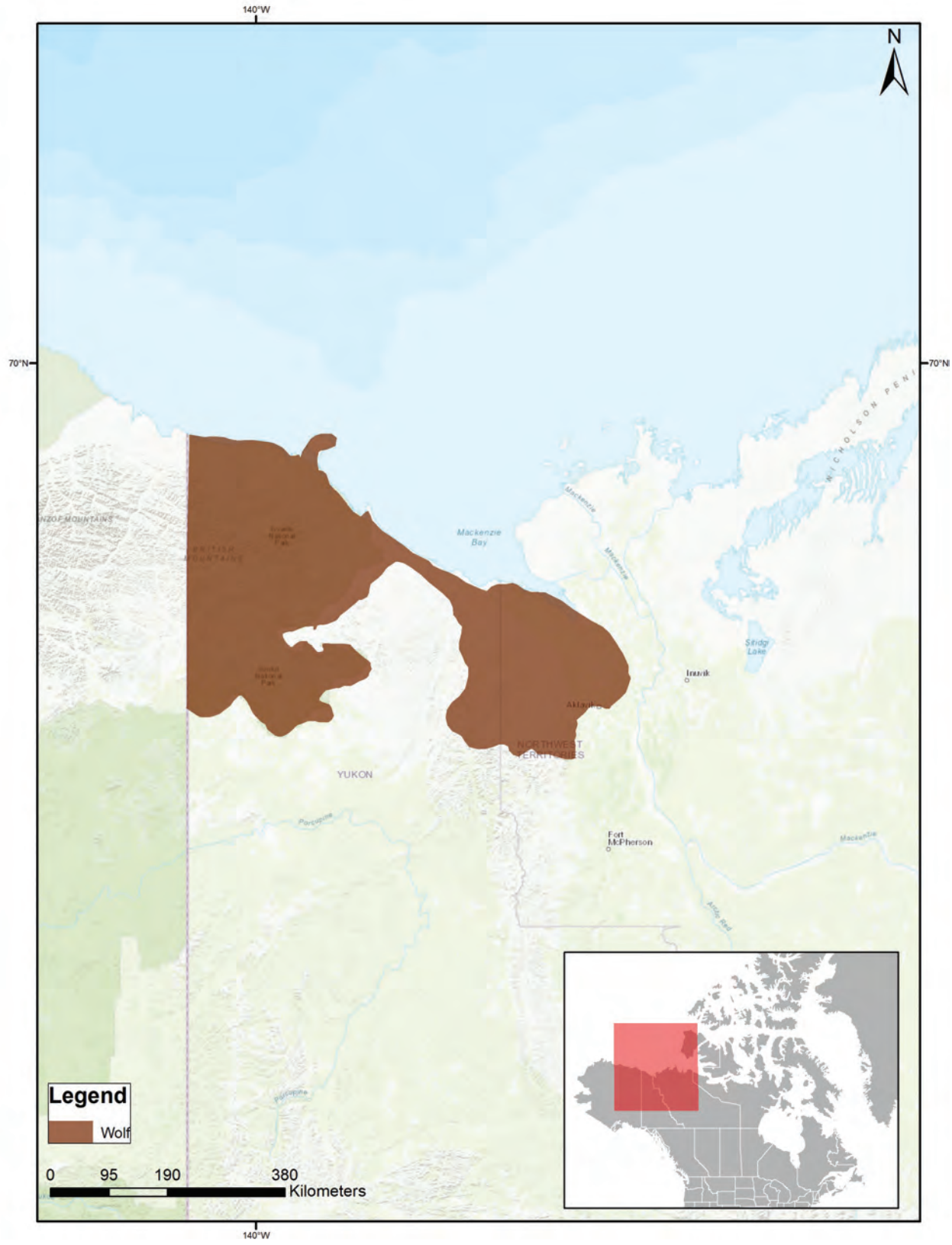


Figure 16. Location of wildlife during open water

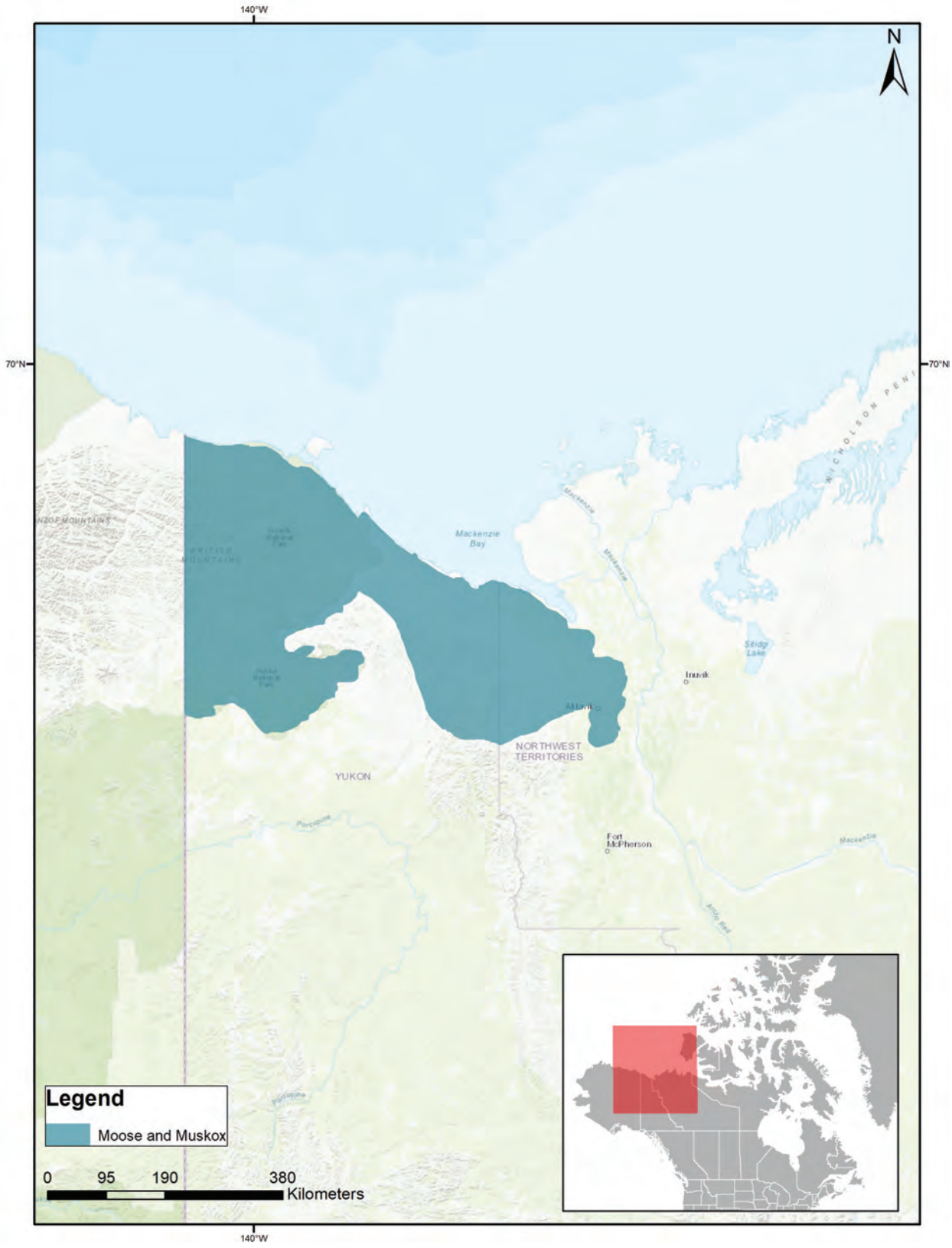


Figure 17. Location of wildlife during open water

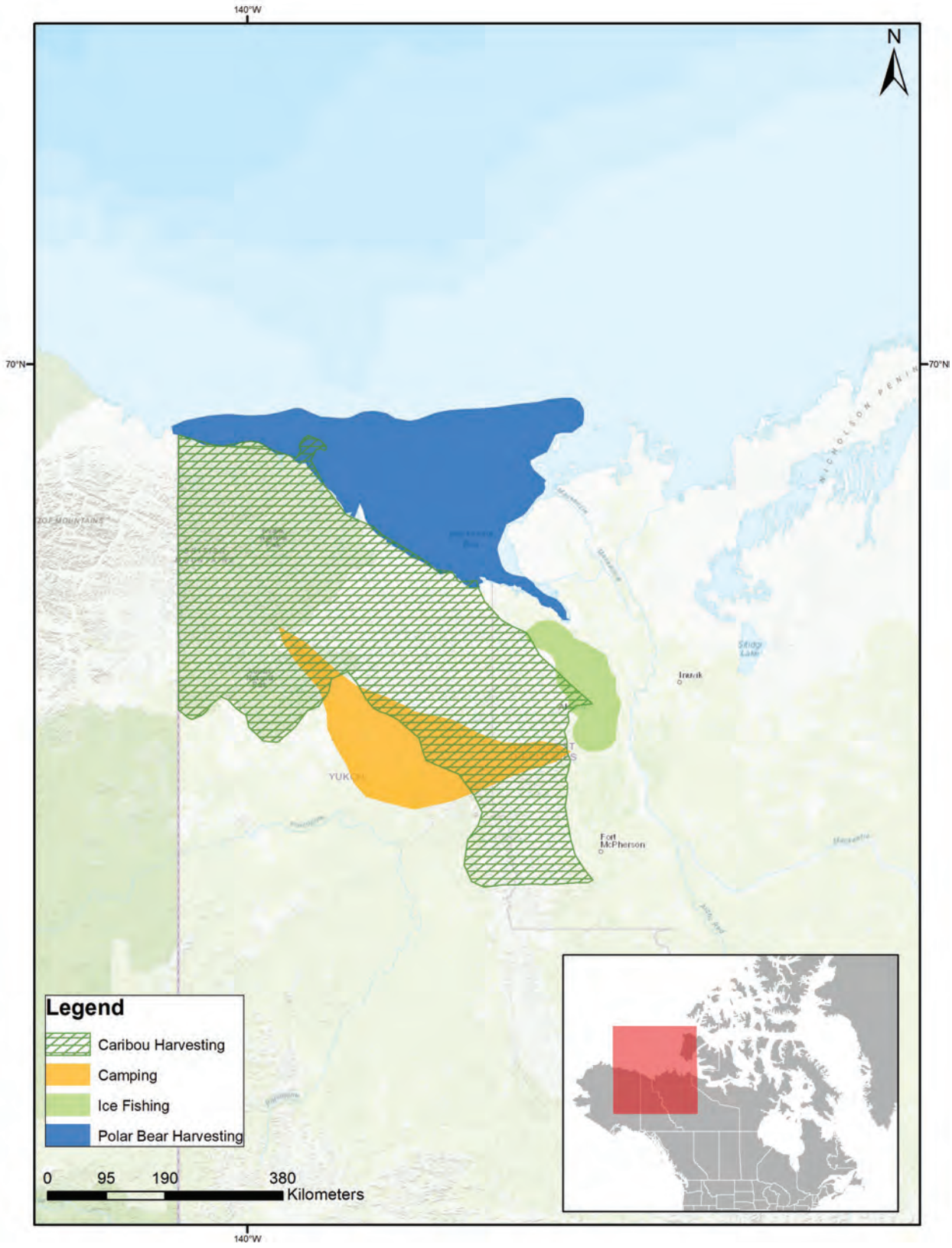


Figure 18. Location of community members' activities around time of sea ice freeze-up and when ocean is frozen

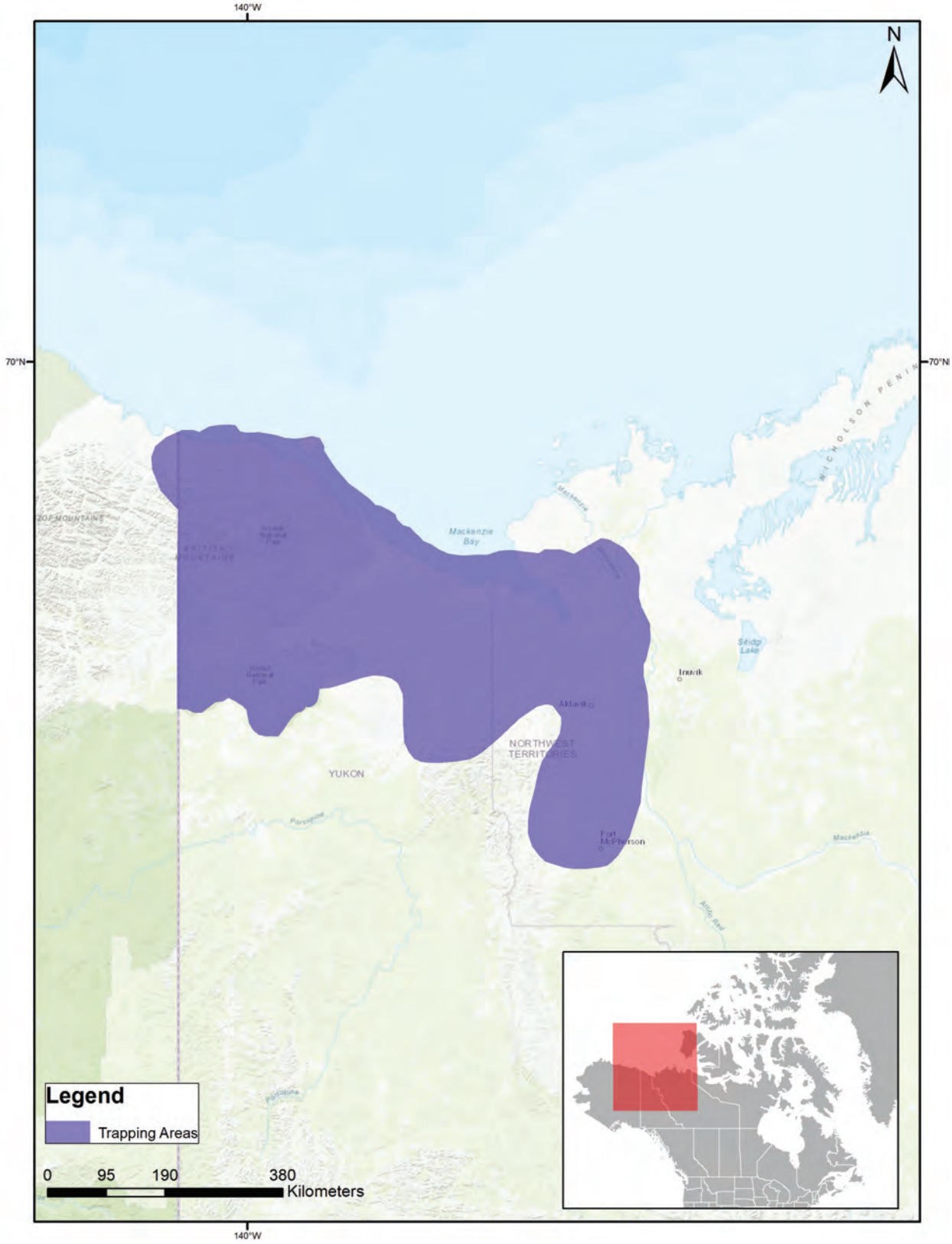


Figure 19. Location of community members' activities around time of sea ice freeze-up and when ocean is frozen

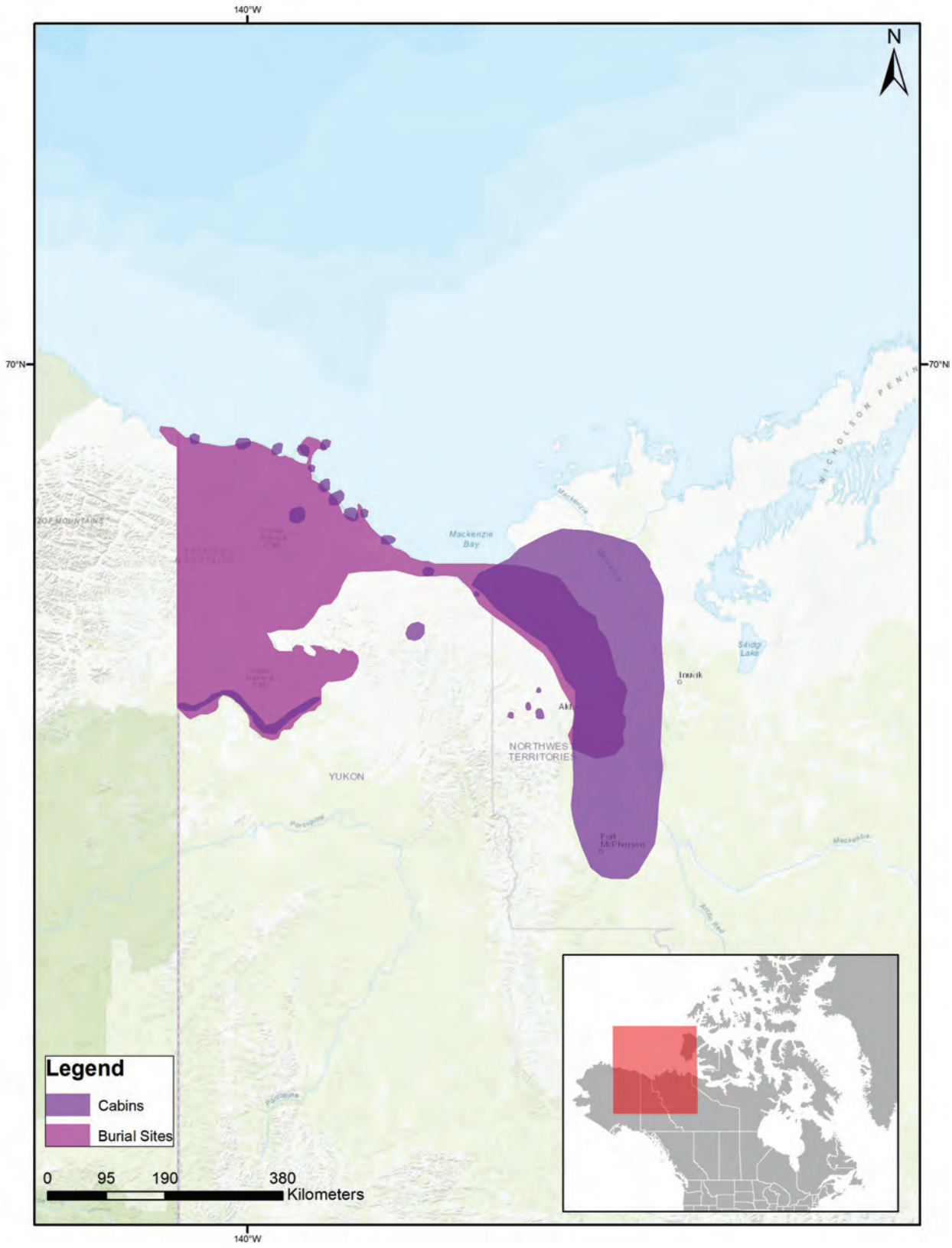


Figure 20. Location of community members' activities around time of sea ice freeze-up and when ocean is frozen

POTENTIAL IMPACT OF MARINE VESSELS

Potential impacts of marine vessels travelling though the Low Impact Shipping Corridors, and related recommendations, are described in **Table 1.**

Table 1. Potential impacts of marine vessels using the Low Impact Shipping Corridors and related recommendations

POTENTIAL IMPACT OF MARINE VESSELS	WHEN IT MAY HAPPEN	RELATED RECOMMENDATION
Beluga, bowhead, char and seals may be scared away by ship noise making it harder for hunters to harvest them, resulting in: 1) fewer successful hunts; and 2) less country food for people. This will cause hardship in the community. Store-bought food is prohibitively expensive. Country food cannot be replaced with store-bought food. Elders who are used to having country food all the time will be particularly affected. Store-bought food is not as nutritious as country food so health problems will occur. Country food is what people prefer.	June to November (open water)	1) No ships in culturally significant marine areas during harvesting season (Figure 21). 2) Alaska shuts down industries in September when the fall whale hunt happens. The community of Aklavik should be able to communicate with ships to tell them to avoid certain areas the same way Alaska does. 3) Ship operators should call the Hunters and Trappers Committee (HTC) to find out if anyone is harvesting in the corridors then detour around. 4) Marine mammal observers should be on every vessel and have a way to contact the community. 5) Increase communication about shipping activity between • Ships and HTC; • HTC and community members on the land; • Aklavik Community Corporation (ACC), Hamlet and HTC; and • Environmental Impact Screening Committee (EISC) and HTC.
Icebreaking would impact polar bears and seals, and therefore impact hunters. Icebreaking impacting the ice will: 1) impact polar bear and seal habitat thus they will move away from the coast; and 2) impact seal denning. Polar bears will move away if there are less seals (their food source). Impacts on hunters include: 1) buying gas and grub to hunt but if unsuccessful, then also have to buy store-bought food; 2) loss of revenue if no pelts to sell; and 3) unsafe ice that people travel on, can result in death by going through the ice	Freeze-up and frozen: October 1 through June 30	Icebreakers and Canadian Coast Guard (CCG) should communicate with the HTC about ice-breaking activities, in case people are out harvesting. CCG should contact the HTC when entering Canadian waters (approaching from the west) and when passing Tuktoyaktuk (approaching from the east). CCG should be taking out the markers earlier in the year (e.g., September after the last barge and before freeze-up). No ice-breaking in polar bear hunting areas during harvesting times (Figure 21).

Table 1 (continued). Potential impacts of marine vessels using the Low Impact Shipping Corridors and related recommendations

POTENTIAL IMPACT OF MARINE VESSELS	WHEN IT MAY HAPPEN	RELATED RECOMMENDATION
If an oil spill occurred, water quality would be impacted. Reduced water quality impacts fish, whales, birds, and waterfowl that people rely on for subsistence. This has negative consequences for food security.	Year-round	1) North slope Distant Early Warning (DEW) Line sites should be outfitted with spill response equipment that can be used in the event of coastal oil spills. (Figure 23) 2) Aklavik residents should be provided with spill-response equipment and training before a spill happens. 3) A community member from Aklavik should be hired to monitor refuelling at north slope DEW Line sites. 4) A safety boom should be used when north slope DEW Line sites are being refueled. 5) The HTC should be notified one month ahead by letter when ships are coming to DEW Line sites to refuel.
If pollution occurred, water quality would be impacted. Pollution in the ocean impacts fish, whales, birds, and waterfowl that people rely on for subsistence. This has negative consequences for food security.	Year-round	No dumping of garbage, greywater, detergents, or ballast water anywhere in Canadian waters. Ships must carry those substances to their final destination. Do not rely on community infrastructure to offload waste.
Aklavik residents do not have enough search and rescue training and currently use their own equipment for search and rescue. People in the community would be the first responders in case of an oil spill or rescue operation.	Year-round	CCG should provide search and rescue training and equipment, and equipment maintenance. They should work with first responders in Aklavik to do maintenance which in turn provides more training. First aid training should be provided for oil spill and search and rescue first responders by the same people who are providing oil spill and search and rescue training.

MAPS OF RECOMMENDATIONS FOR THE LOW IMPACT SHIPPING CORRIDORS

Maps include:

- minimum distances to maintain from shore and marine mammals; and
- areas where oil spill equipment is required.

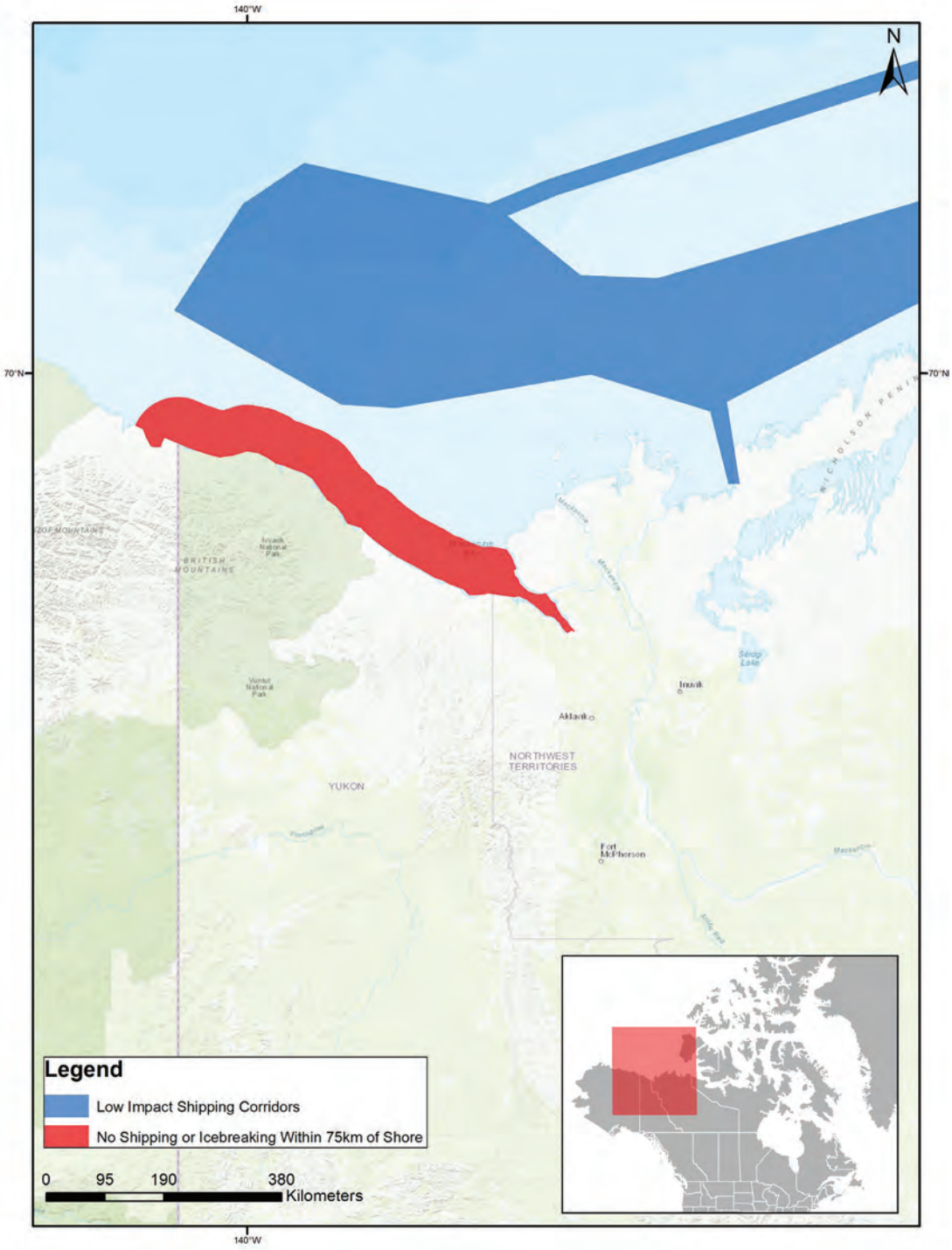


Figure 21. Recommendations for Low Impact Shipping Corridors – no shipping or icebreaking within 75 km from shore

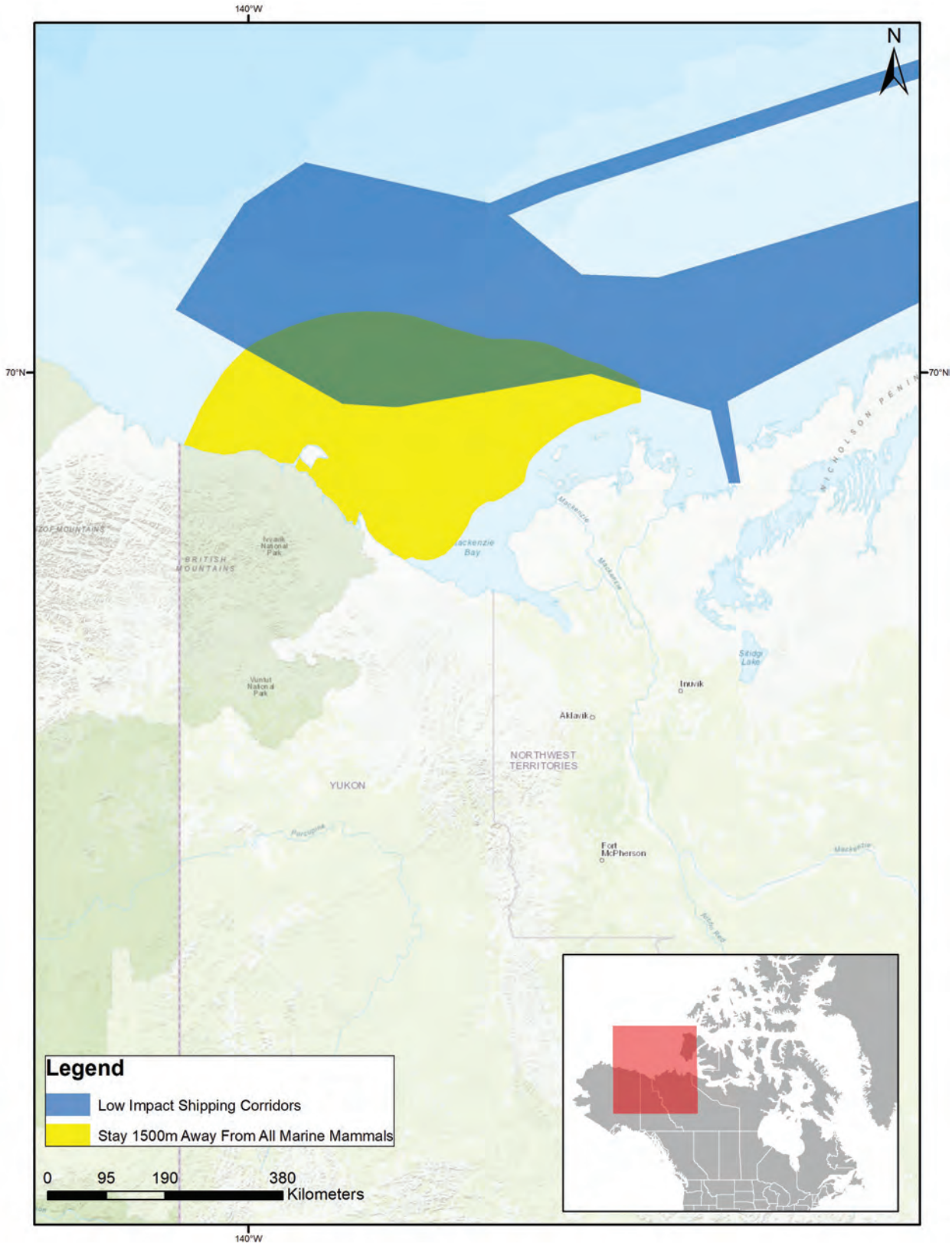


Figure 22. Recommendations for Low Impact Shipping Corridors – stay 1500 metres away from all marine mammals

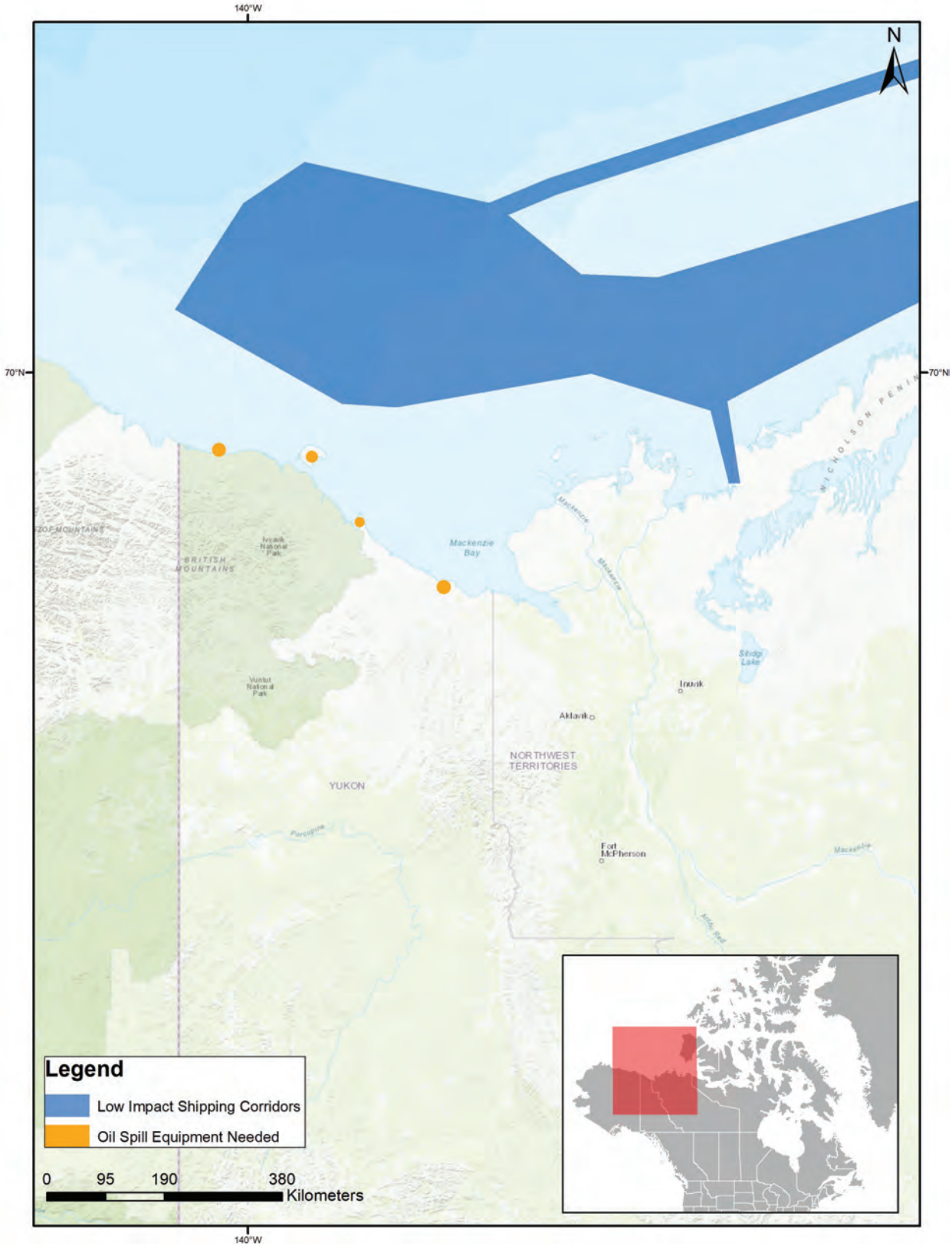


Figure 23. Recommendations for Low Impact Shipping Corridors – areas where spill equipment is required

ADDITIONAL RECOMMENDATIONS AND REQUESTS

- Fly customs officers to cruise ships before cruise ships enter Canadian water from another country; and before anyone steps foot on land. At the same time inspect ships to ensure they have equipment for oil spill response and safety equipment, and charts to travel the Northwest Passage;
- Helicopters, including Canadian Coast Guard, should not fly under 1000 feet unless the weather makes it necessary;
- Aklavik harvesters should continue to carry VHF radios to communicate with ships;
- Seismic activity should continue to only be conducted for maximum 6 weeks per year. Seismic operators should notify the HTC by phone if they are changing their plan, and avoid harvesting areas;
- The Aklavik Community Corporation should continue to look into how the community can be best prepared to maximize revenue from cruise ships especially Crystal Serenity;
- Outfitters taking tourists to Herschel Island, and any tourists, should not consider the HTC cabin as their Plan B for emergencies. Outfitters should be self-sufficient;
- HTC should continue to discuss having safety rafts with domed covers on Herschel Island or Shingle Point to be able to transport people when there is flooding or high winds; and
- The results of this work should be shared with students and the newly formed youth council.

All ships should:

- Stay 1500m away from marine mammals including polar bears. Underwater noise is loud and travels far underwater and drives away whales, seals, polar bear and fish;
- Consult the community when planning a visit or passage. Tell HTC arrival dates one year ahead and also a few days before arrival; and
- Tell HTC when they are going to be travelling near harvesting/use areas.

All cruise ships should:

- Have marine mammal observers on board who keep a log to give to HTC for each trip;
- Continue to welcome rangers on board to educate the crew and passengers about Herschel Island but include cultural hosts from Aklavik as well (paid for by Yukon Parks);
- Continue to use specific trails at Herschel Island;
- Continue to respect the Park Plan limit of 50 people on Herschel Island at a time;
- Continue to pay land use permit fees to Parks just as any tourist outfitter has to pay (for day use); and
- Have drummers and dancers go out to cruise ships (as suggested in the Park Plan and as paid for by Parks or cruise ships).

The Herschel Island Territorial Park Plan should include:

- Having cooks, storytellers, interpreters, and cultural hosts to share history and culture, and a wildlife monitor, in addition to Park Rangers, when cruise ship passengers are visiting; and
- Extending the park season or have someone police and restrict access to the park, until the end of September so that the park is monitored throughout the boating season.

CONCLUSION

The number of marine vessels in Canadian Arctic waters continues to grow.[1] At the same time, the Northwest Passage is receiving unprecedented international attention related to sovereignty, interest from tourism operators, and the immense cost savings that a commercially navigable Arctic route would present. Aklavik, located inland on the Peel Channel, has experienced a moderate increase in marine vessel activity in recent decades. However, the marine areas that are most significant to community members' subsistence harvesting and livelihood activities, including Herschel Island Territorial Park (a popular cruise ship and pleasure craft destination), are located in Mackenzie Bay, in the Northwest Passage – exactly where ship traffic has increased. Given community members' concerns about this attention and growth, and its implications for the ecology, environment, and Inuit way of life, the perspectives of Aklavik community members and all communities, should be a fundamental consideration during the implementation and management of Low Impact Shipping Corridors. The consequences of a marine incident would have deep, lasting, and potentially irreversible ecological, environmental, and cultural impacts. Combining scientific and Inuit knowledge will provide the most effective approach for pro-active vessel management through a corridors approach. Infusing Inuit and Northerners' voices in the continued development of Low Impact Shipping Corridors is critical to ensuring safe marine transportation near Aklavik and throughout the Canadian Arctic.

[1] Dawson J., Pizzolato, L., Howell, S.E.L., Copland, L., & Johnston, M.E. 2018. Temporal and Spatial Patterns of Ship Traffic in the Canadian Arctic from 1990 to 2015. *Arctic 71*(1).15-26. https://doi.org/10.14430/arctic4698.

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