

Arctic Corridors and Northern Voices

GOVERNING MARINE TRANSPORTATION IN THE CANADIAN ARCTIC

ULUKHAKTOK NORTHWEST TERRITORIES



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PARTICIPANT BIOGRAPHIES

Tony Alanak is a father of four and a trapper and hunter. He loves the land and will continue this life.



John Alikamik is a Hunters and Trappers Committee (HTC) board member and has been a member since the 1970s. He and his wife have done seal monitoring for 2.5 months each summer for the past 25 years. He has a family and attends many meetings such as the Beluga Summit held in Inuvik in January 2017. He has always lived in Ulukhaktok.

Joseph Haluksit is a harvester, a long-time member and current HTC board member, and has been on the Game Council. He has always lived in Ulukhaktok except when he went to school in Cambridge Bay for 3 years. Joseph has many kids, grandkids and great-grandkids.



Isaac Inuktalik was born at Fish Lake. He grew up as a hunter and trapper and first shot a rifle (.22) at the age of 4 or 5. He has his 1st year carpenter certificate, has hunted around town his whole life, and hunts for subsistence and takes enough for food. He is married and has 3 boys and 1 girl. He hopes the results of this study will work out for the future of his people.



Joseph Kitekudlak Sr. is a harvester. He is retired now and used to do construction. Joseph has a family, and runs Kitekudlak Bed and Breakfast in Ulukhaktok, with his wife. His phone number is 867-396-3371.



Laverna Klengenberg is the mayor of Ulukhaktok, wife to Ross, and mother of 5 children.



Adam Kudlak is a harvester from Ulukhaktok. He has been a teacher for many years. He teaches kids from kindergarten to grade 12 and also teaches in the shop and out on the land. He loves being out on the land. Winter is his favourite time of the year because he gets to be out on the ice and tries to find seal holes. He is also an aspiring blacksmith.



David Kuptana is a full-time harvester and big game outfitter. He is a tourism operator and an Inuvialuit Land Administration Commission member. He harvested a hybrid grolar bear in 2010. He is the owner of the taxi company. He is a father and soon to be grandfather to a 14th grandchild.



Travis Kuptana

Roland Notaina is a harvester and travels in all seasons. He travels mostly for food and in the winter time, to earn money. He has been a Canadian Ranger for 14 years. He completed his high school diploma and attended school in Kugluktuk for 3 years because there was no high school in Ulukhaktok. He has two boys and except for when he was in school, has always lived in Ulukhaktok.





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 Inuvik 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 of Arctic waters, animals, and people;
 - behavioural changes in wildlife, and destruction of animal habitat, and specifically impacts on caribou migrating between Victoria Island and the mainland;
 - increased food insecurity and increased dependence on store-bought food;
 - increased incidences of dangerous ice conditions for local travel, and decreased security; and
 - increased local travel costs, and only limited employment and income opportunities.
- Disruption of sea ice formation by icebreakers and marine vessels is especially disruptive to:
 - caribou migration and may lead to potential food insecurity; and
 - Inuit and Northerners' ability to use local travel routes safely, and hunt successfully.
- Existing oil spills/groundings response capacity is not sufficient – locally, federally, and on vessels.

COMMUNITY-IDENTIFIED RECOMMENDATIONS INCLUDE...

- Seasonal no-icebreaking and no-winter-shipping zones;
- Stronger regulations against sewage and waste disposal in community-identified significant areas;
- Ships anchoring at least 200 feet from shore during fishing season;
- Increased presence of Canadian Coast Guard to decrease spills and groundings response time;
- Improved communication between government, regional and territorial organizations, vessels and Ulukhaktok, and within Ulukhaktok e.g., Department of Fisheries and Oceans Canada (DFO); Government of the Northwest Territories Department of Environment and Natural Resources (ENR); Environmental Impact Screening Committee (EISC); Inuvialuit Regional Corporation (IRC); Inuvialuit Development Corporation (IDC); Inuvialuit Land Administration (ILA); Inuvialuit Game Council (IGC); and Fisheries Joint Management Committee (FJMC);
- Making real-time vessel tracking available in communities so residents know where ships are prior to their arrival; and
- Increased community capacity to respond to spills.

The results of this study should be shared widely in the south, in neighbouring communities in Nunavut and the Inuvialuit Settlement Region, and with the territorial government departments responsible for transportation and research contracts, permits and licensing so that these perspectives can be understood. Inuit and Northerners must be and wish to be included on an on-going basis in the development and management of the Low Impact Shipping Corridors.





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 Ulukhaktok 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.

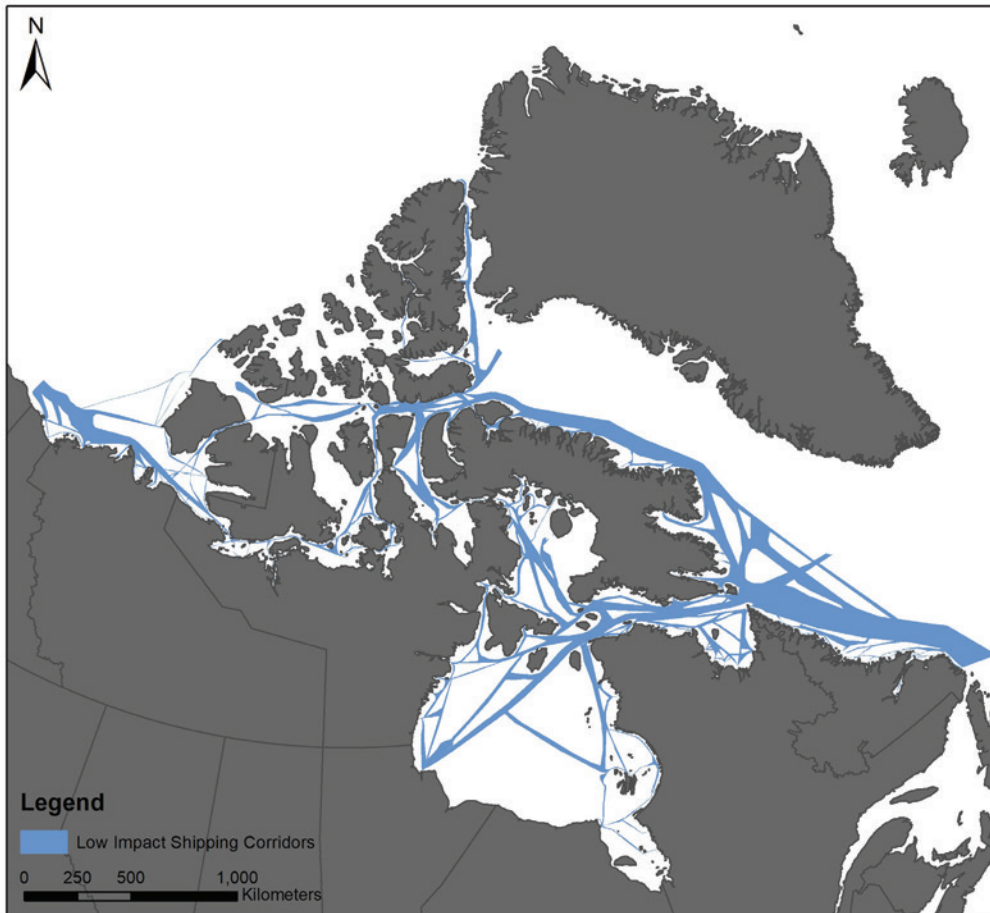


Figure 1. Example of Low Impact Shipping Corridors

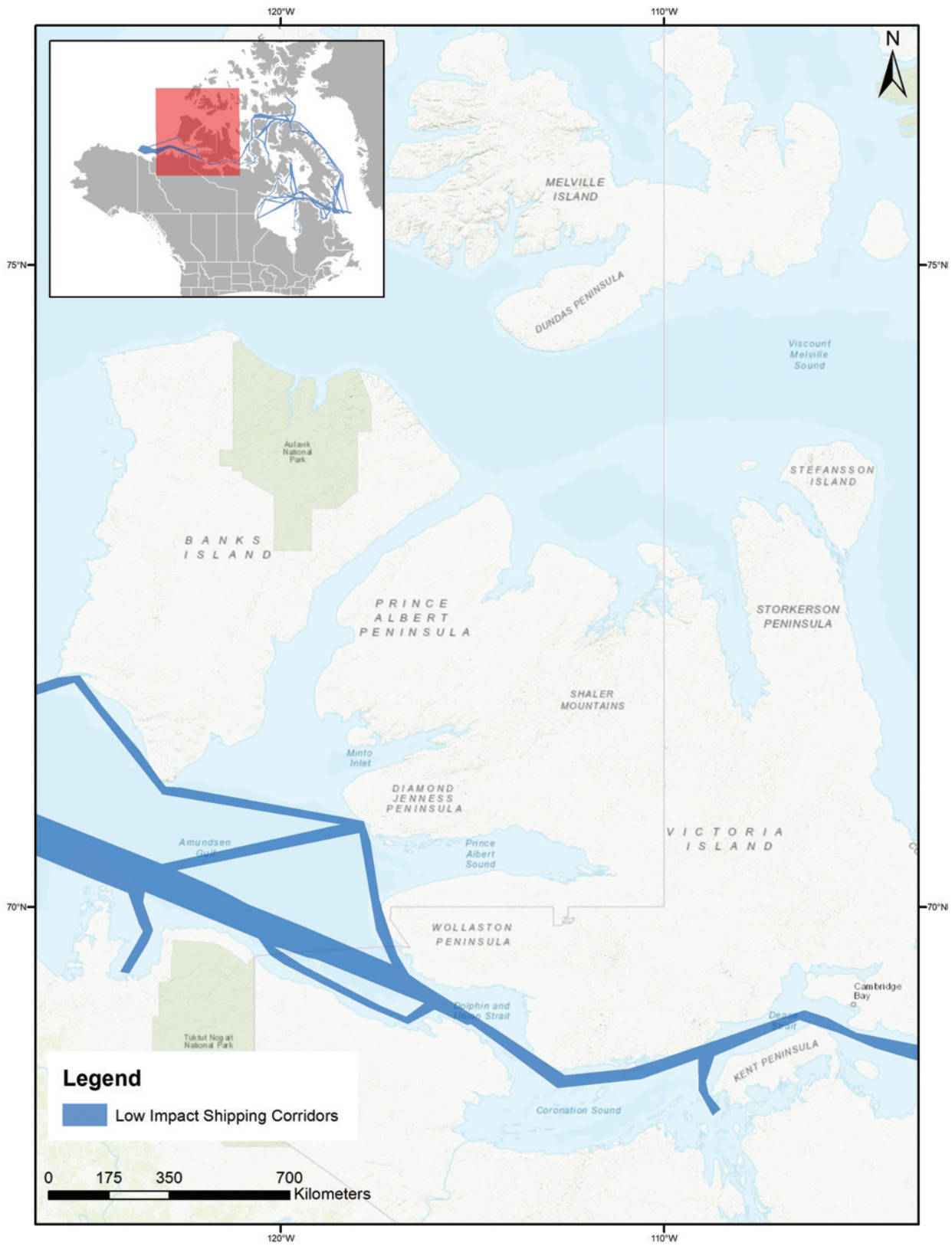


Figure 2. Example of Low Impact Shipping Corridors near Ulukhaktok, Northwest Territories



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; Ulukhaktok experienced a 203 km increase, the second smallest increase in the Inuvialuit Settlement Region (Figure 4).¹

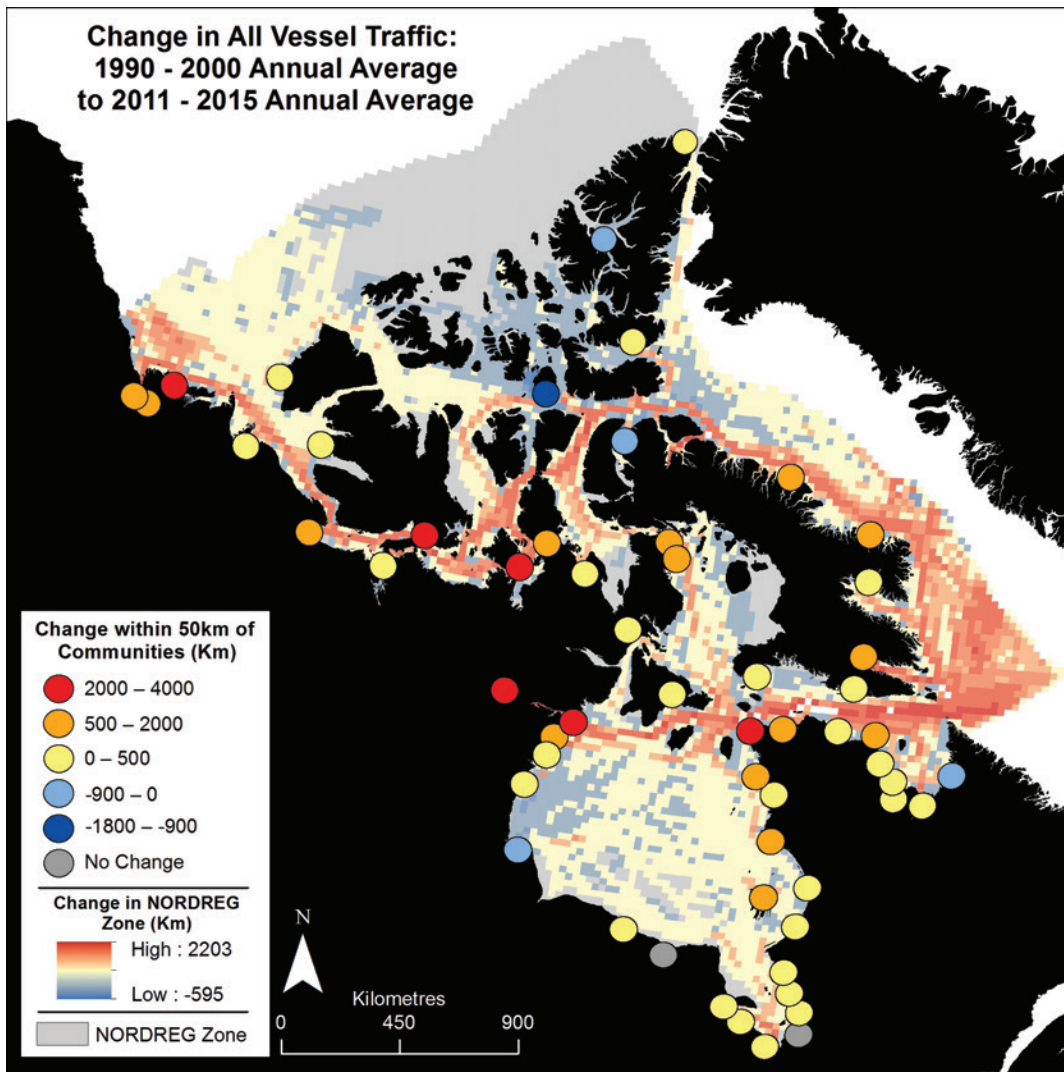


Figure 3. Change in shipping activity (km) in the Canadian Arctic: 1990–2000 annual average compared to 2011–2015 annual average¹

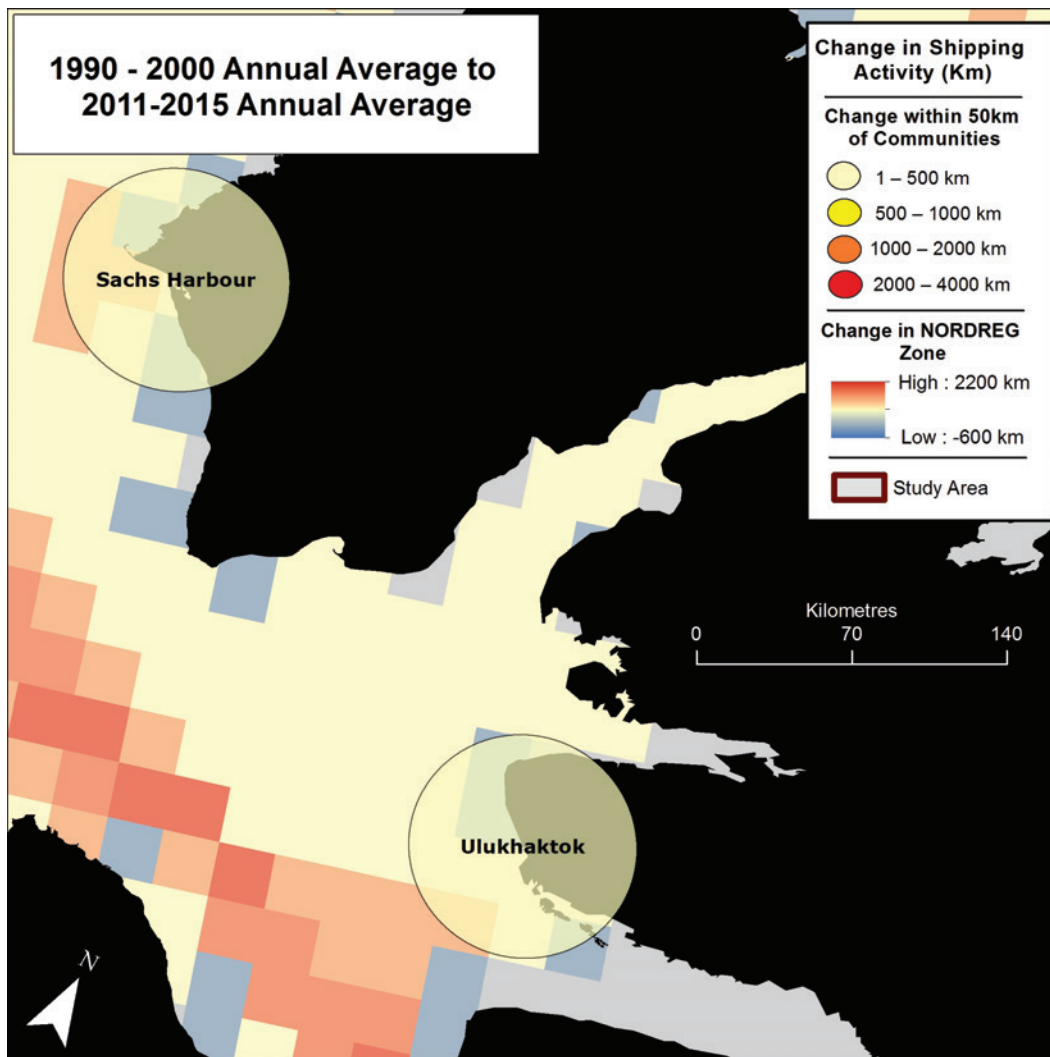


Figure 4. Change in shipping activity (km) near Ulukhaktok, Northwest Territories: 1990-2000 annual average compared to 2011-2015 annual average¹

FOUR SEASONS

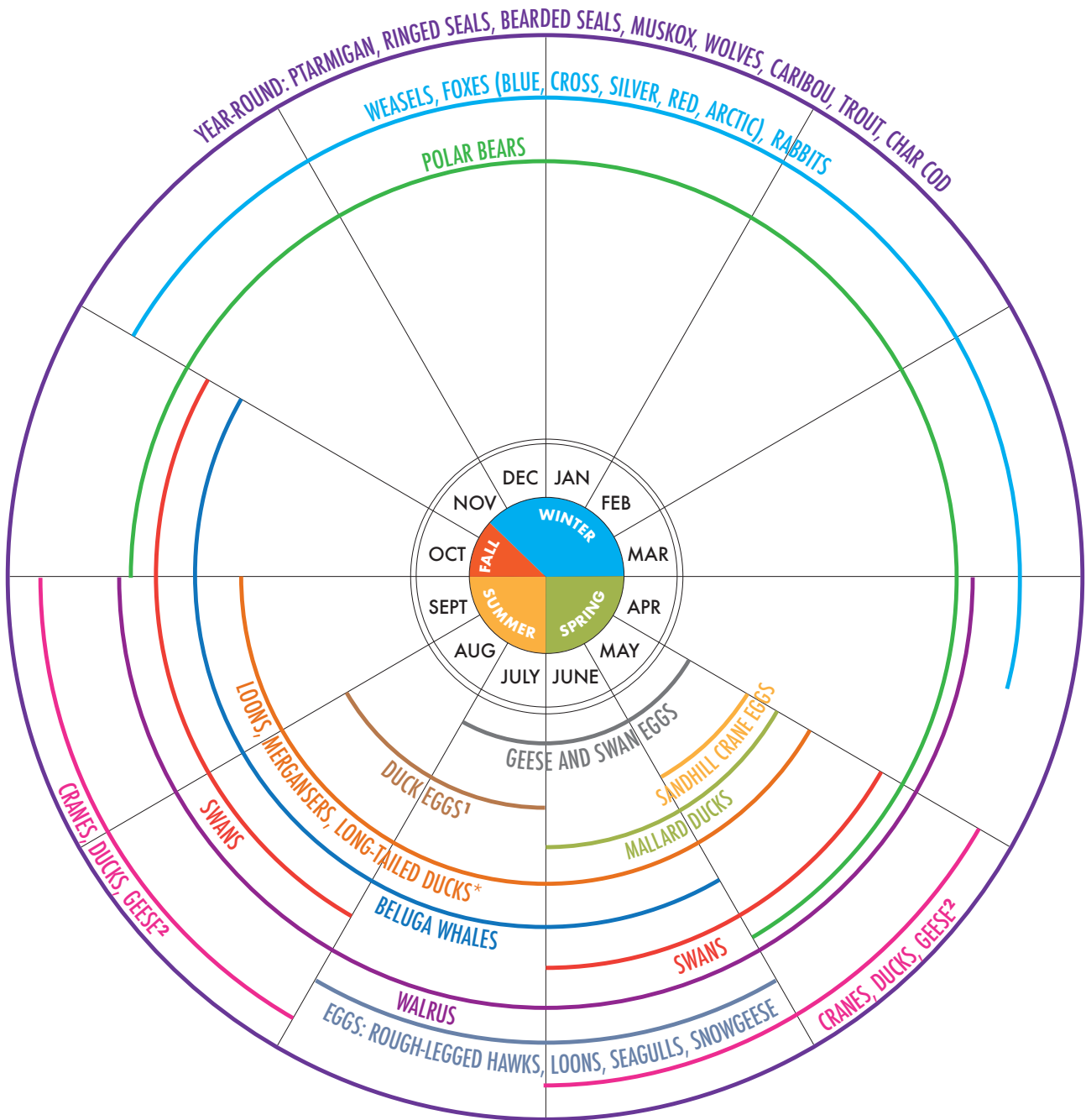
There are 4 main seasons in Ulukhaktok, Northwest Territories. The seasons are weather and ice dependent; therefore, the months each season happens in can be different each year. However, in general the seasons are:

SEASON	MONTHS IN WHICH THEY HAPPEN	OCEAN CONDITION
Summer (when ice disappears)	Beginning of July, August, and in some years, September	Open water
Fall	October through mid-November	Open water and sea ice freeze-up in November
Winter	Mid-November	Frozen
Spring	April through June	Frozen and sea ice break-up in June



SEASONAL HARVESTING CYCLE

Harvesting happens according to seasons and follows an annual cycle.



¹ DUCK EGGS: King Eider, Common Eider, Long-tailed*

² CRANES, DUCKS, GEESE: Sandhill Cranes, King Eider Ducks, Goose, Common Eider Duck, Canada Goose, Snow Goose

* People referred to Long-tailed ducks by the old, no longer used name of Oldsquaw.

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



MAPS OF CULTURALLY SIGNIFICANT MARINE AREAS

Maps include:

1. Location and behavioural activities of terrestrial and marine mammals, fish, and birds/eggs;
2. Location of community members' activities as well as camps and cabins, and dangerous areas; and
3. Local travel routes.

Maps will be available at www.arcticcorridors.ca and in Ulukhaktok at Olokhaktomiut Hunters and Trappers Committee.

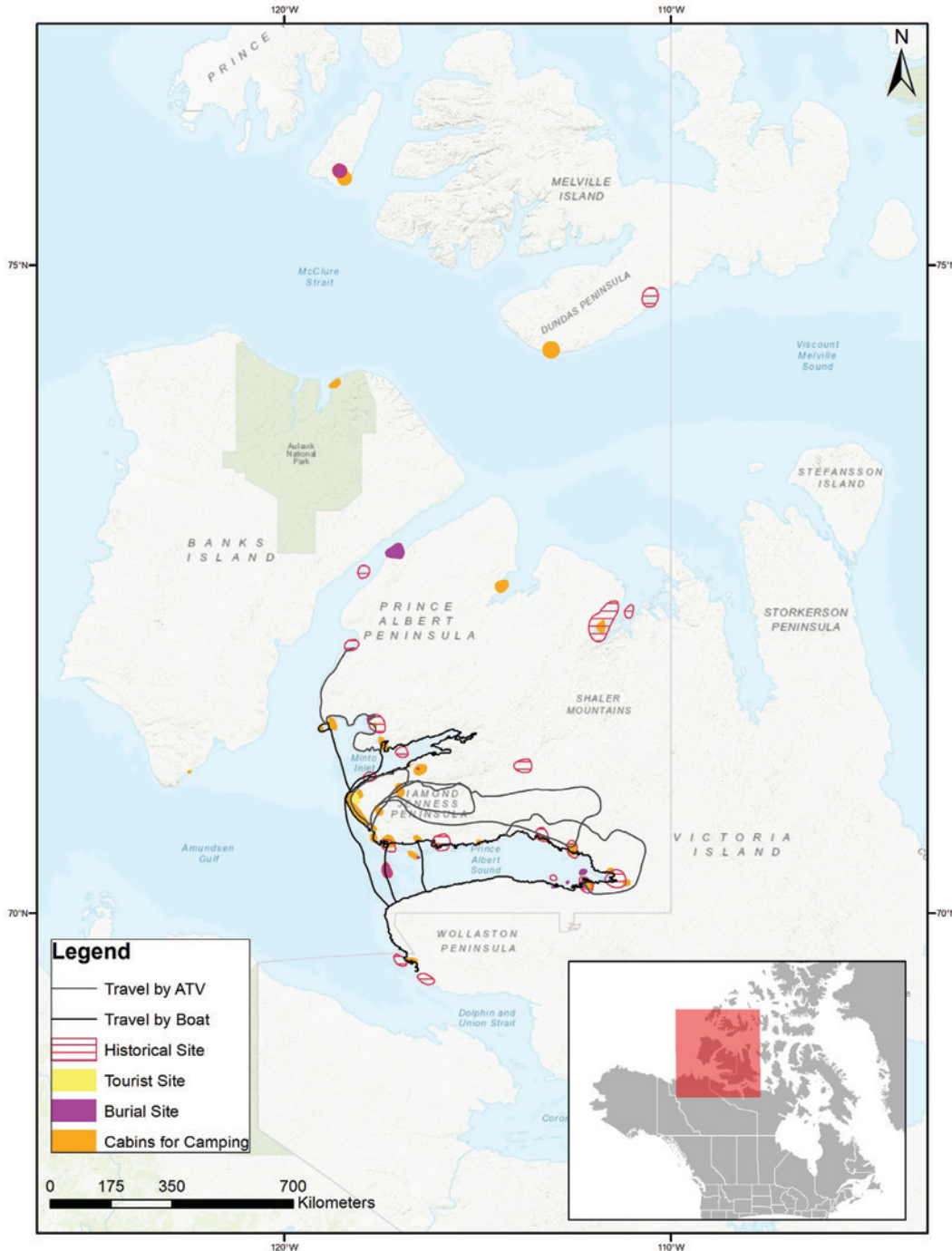


Figure 6. Location of community members' activities around the time of sea ice break-up

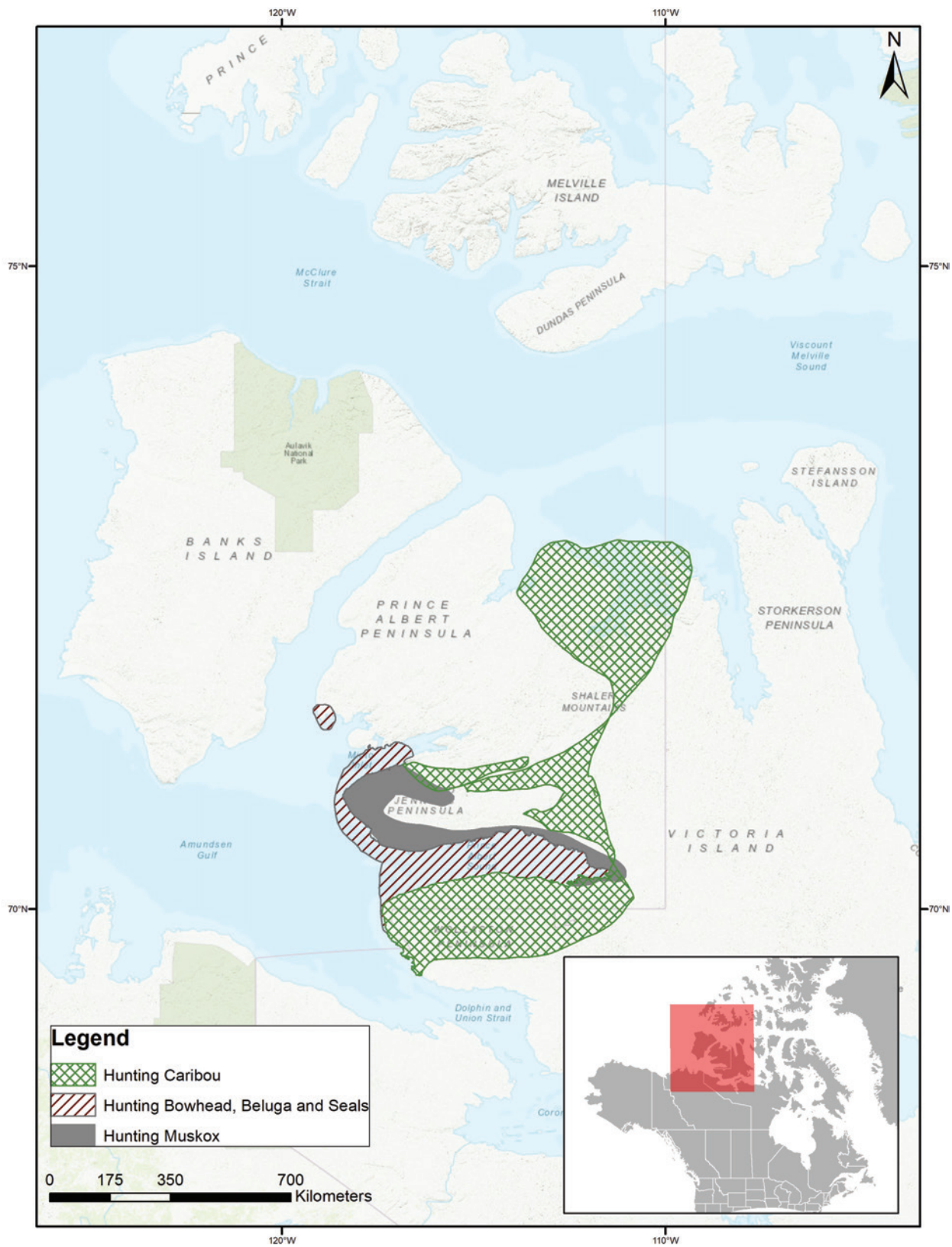


Figure 7. Location of community members' activities around the time of sea ice break-up

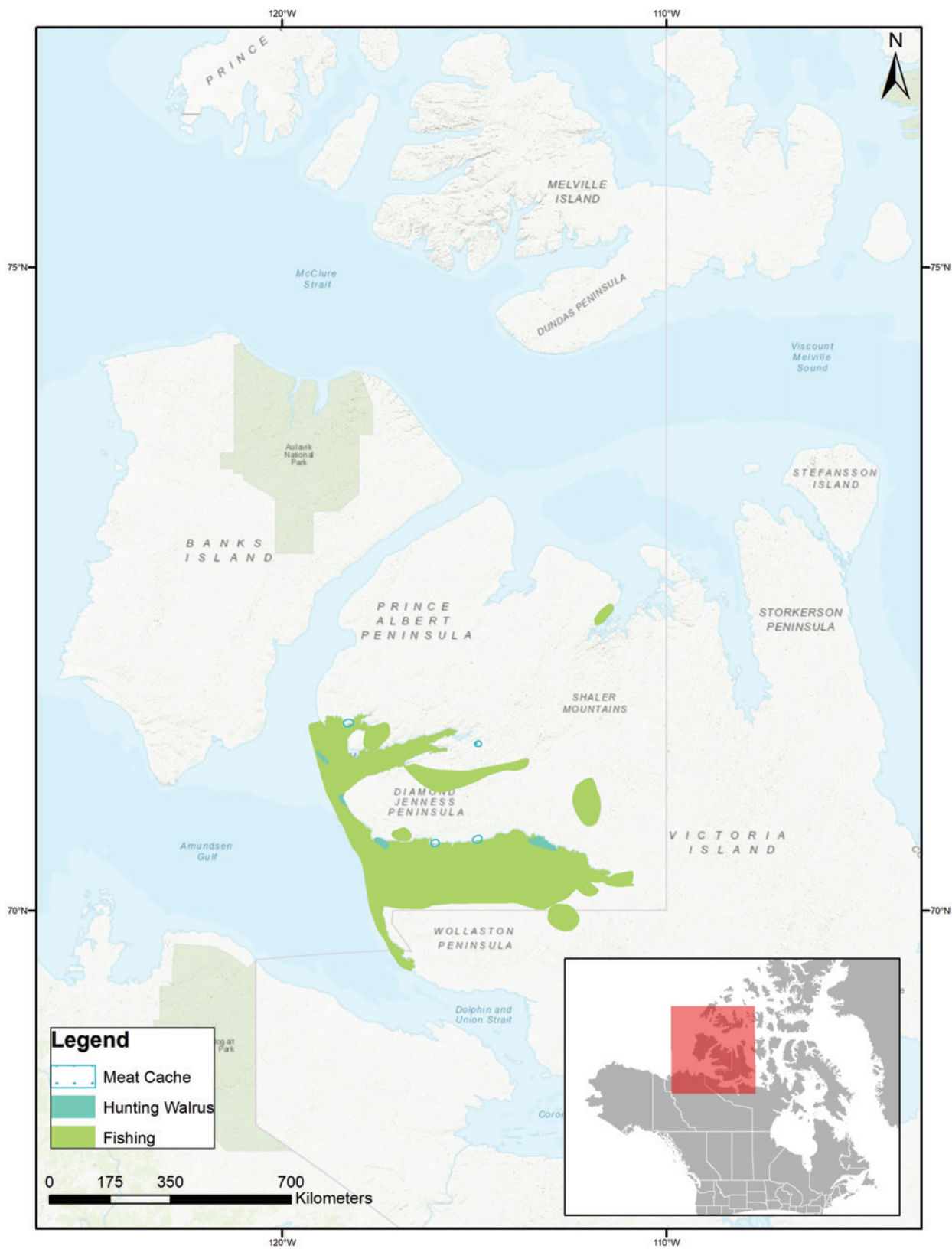


Figure 8. Location of community members' activities around the time of sea ice break-up

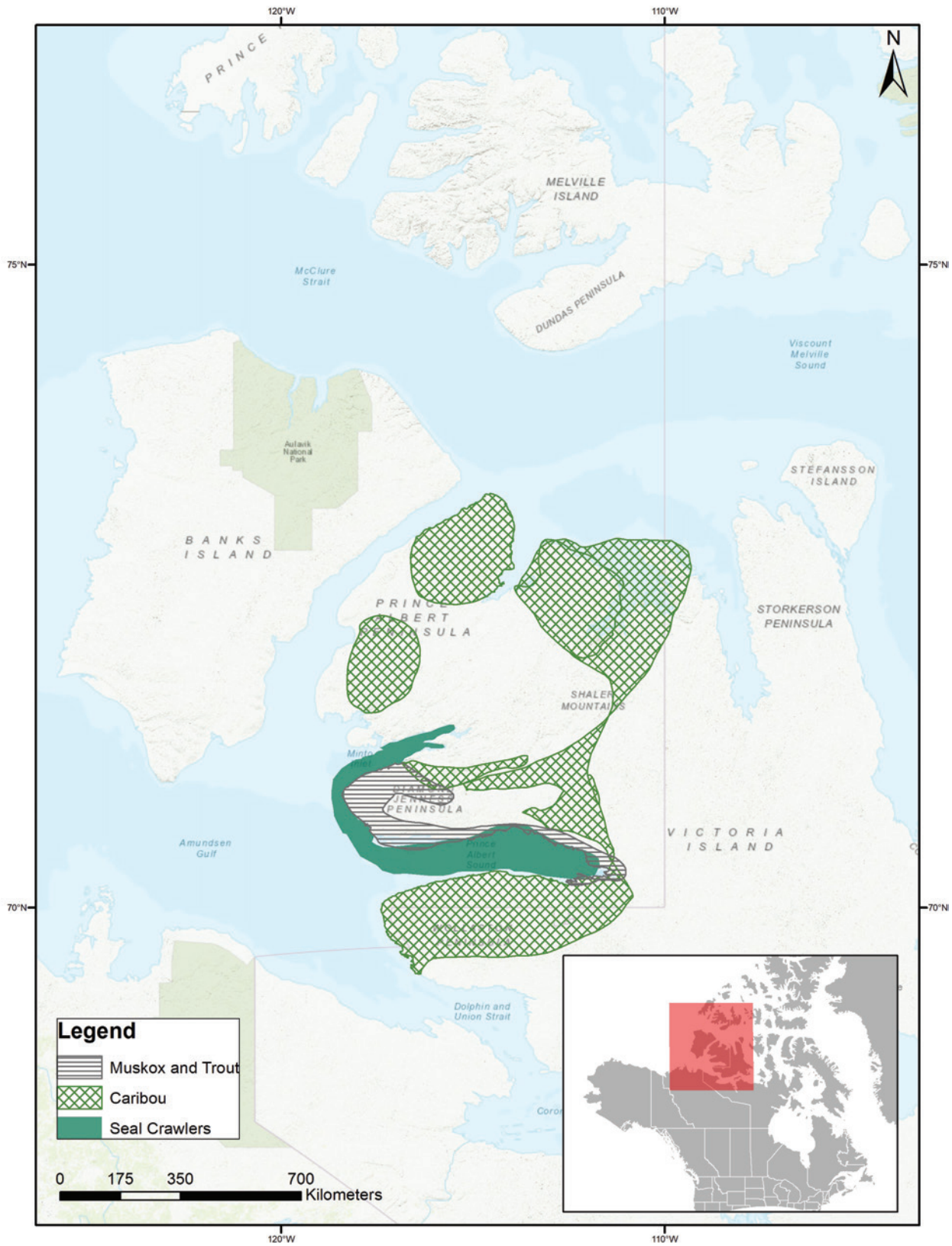


Figure 9. Location of wildlife around the time of sea ice break-up

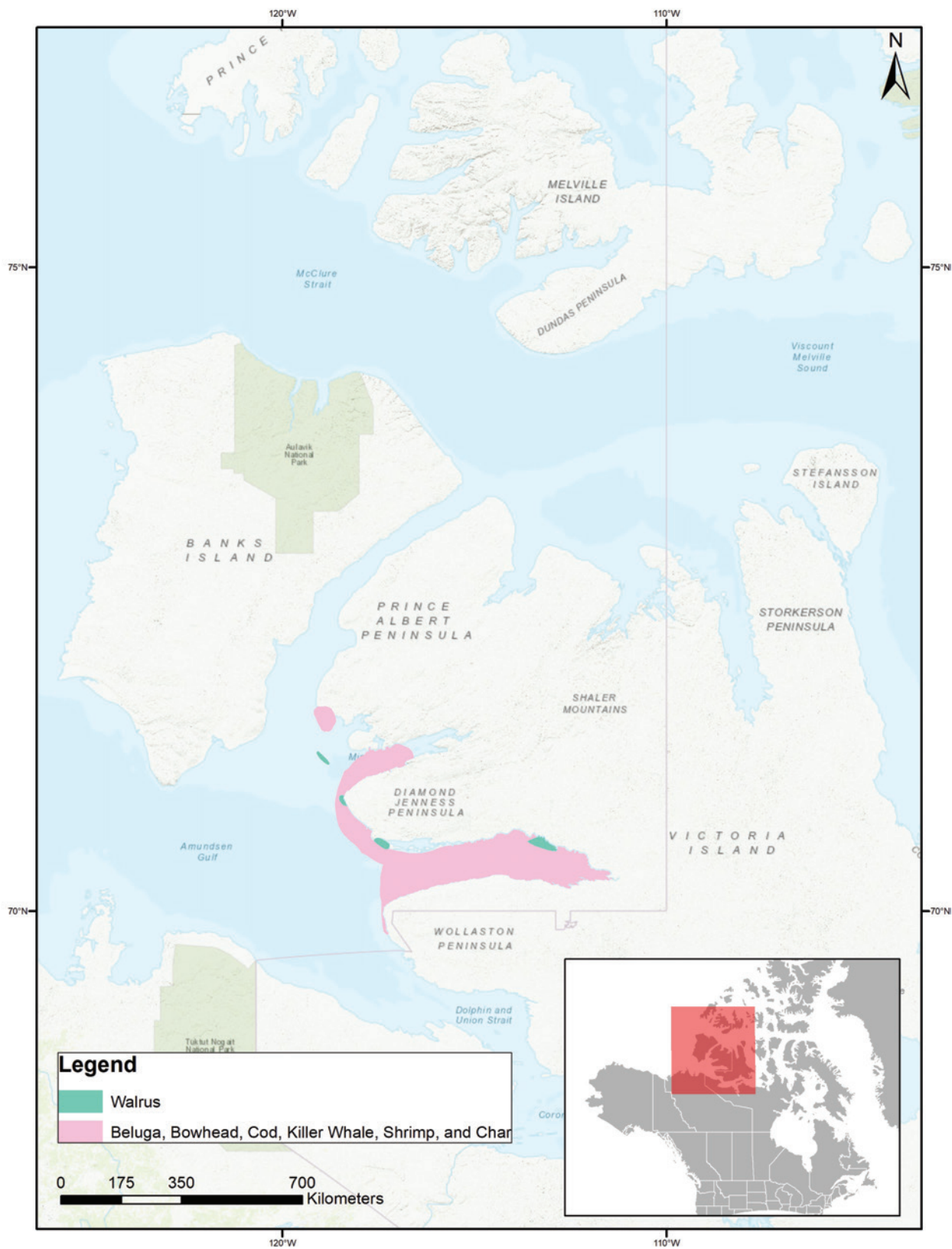


Figure 10. Location of wildlife around the time of sea ice break-up



Figure 11. Location of wildlife around the time of sea ice break-up

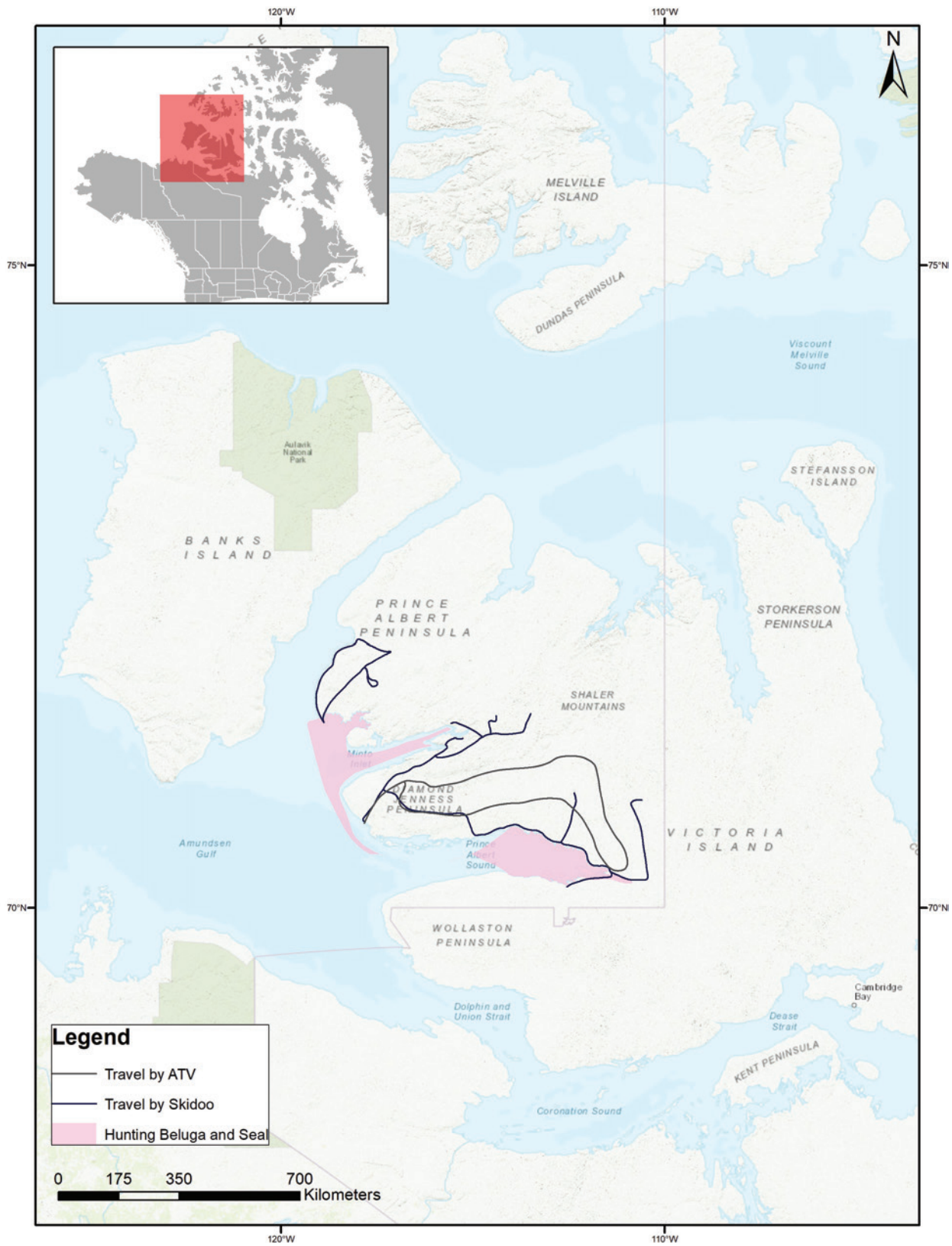


Figure 12. Location of community members' activities during open water

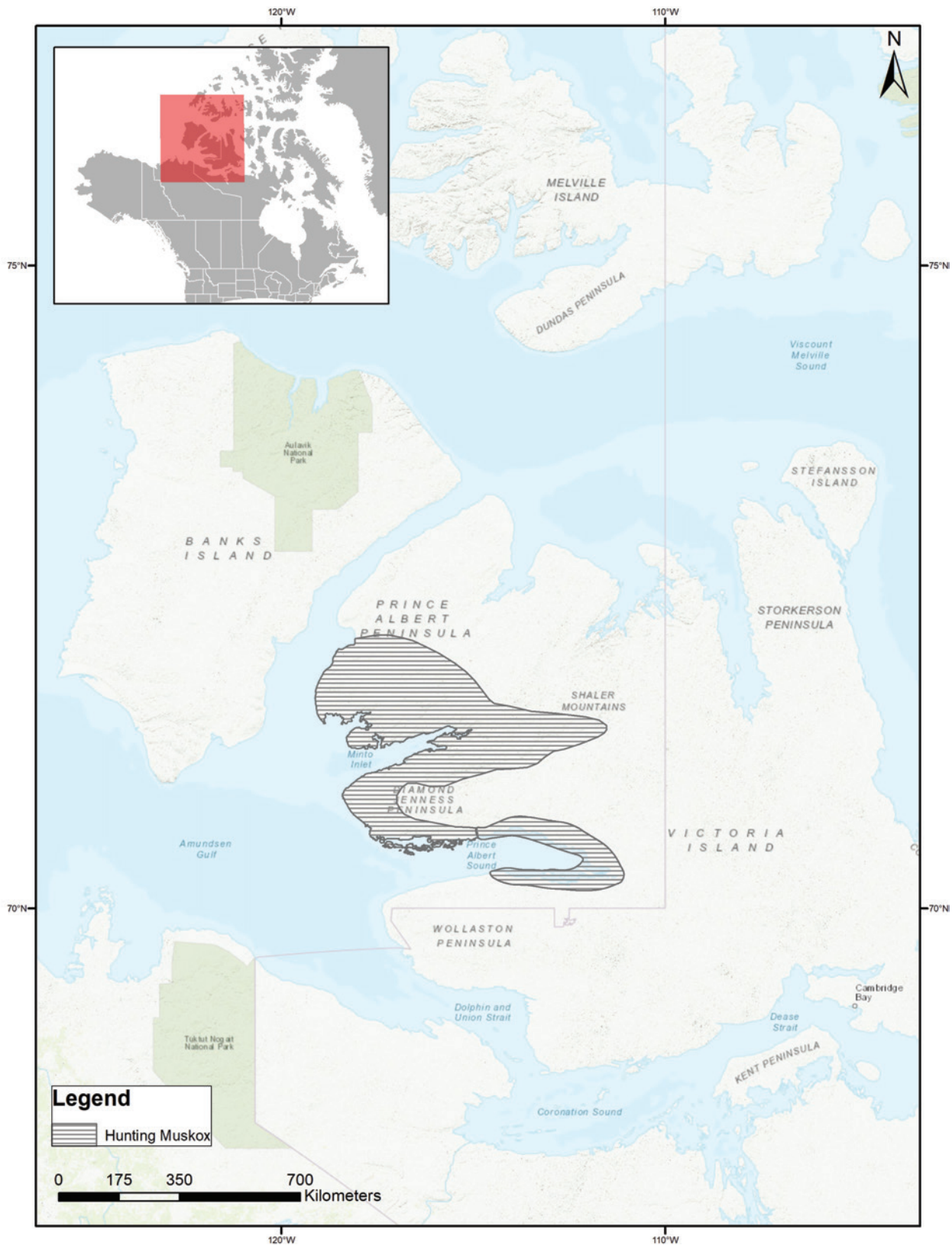


Figure 13. Location of community members' activities during open water

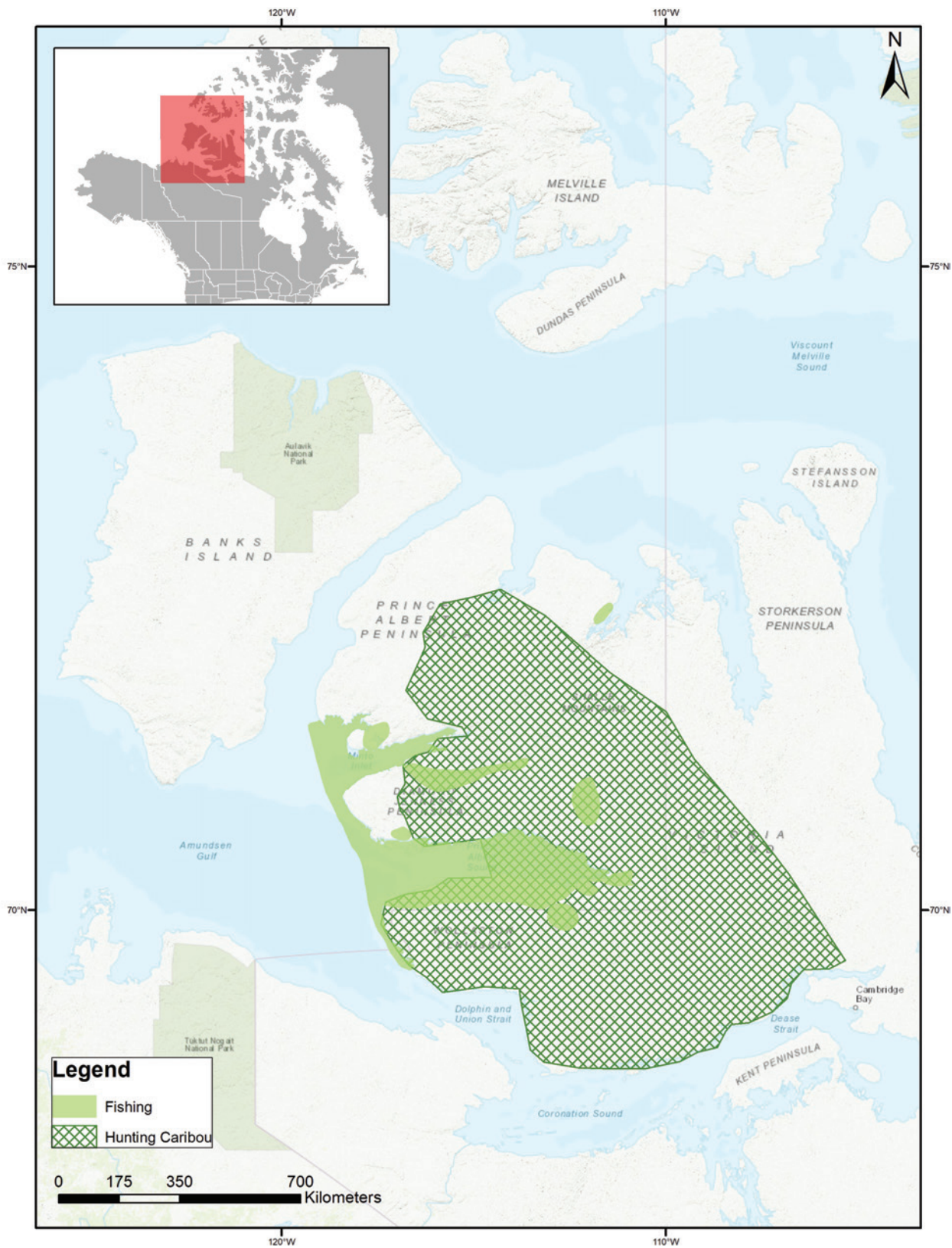


Figure 14. Location of community members' activities during open water

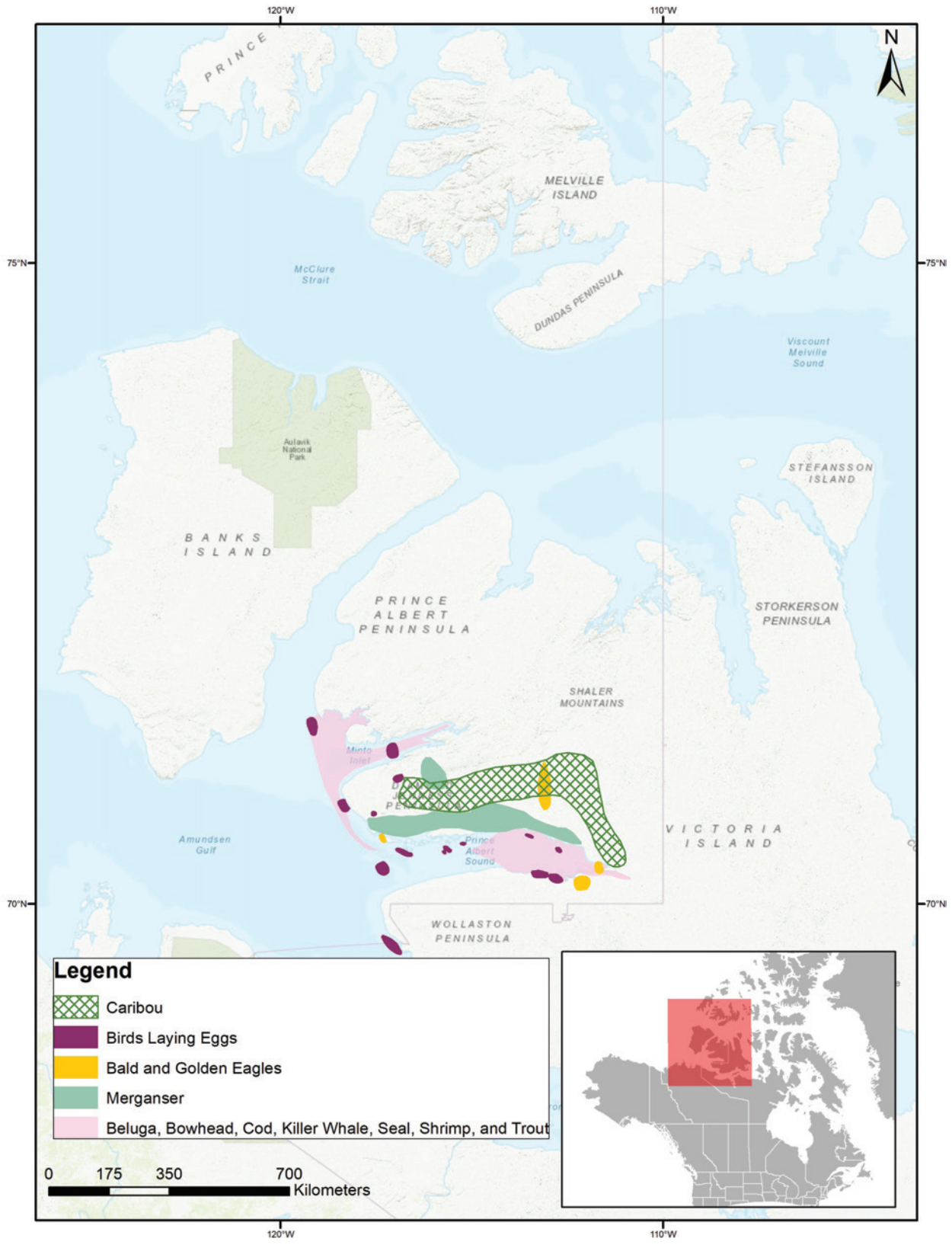


Figure 15. Location of wildlife during open water

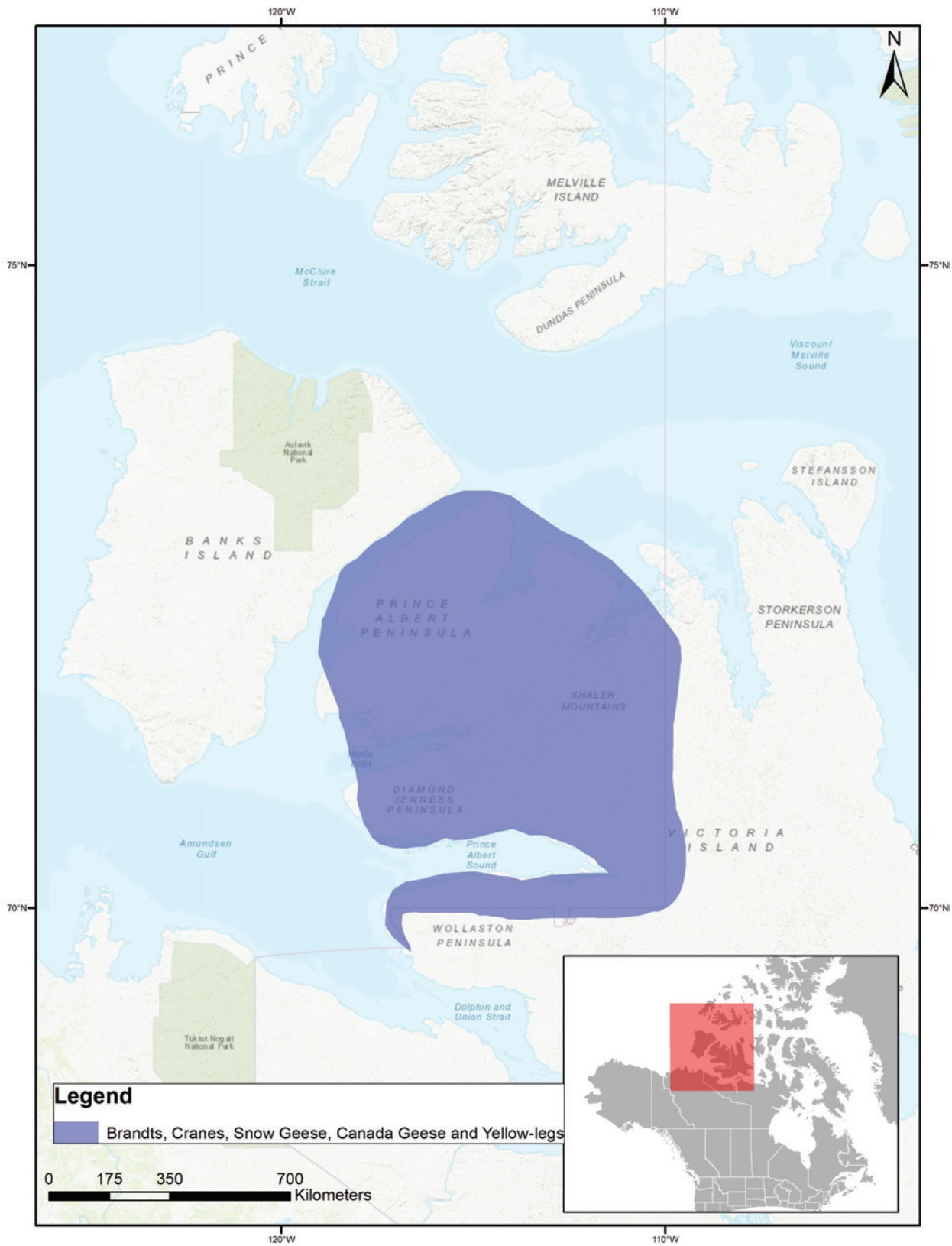


Figure 16. Location of wildlife during open water

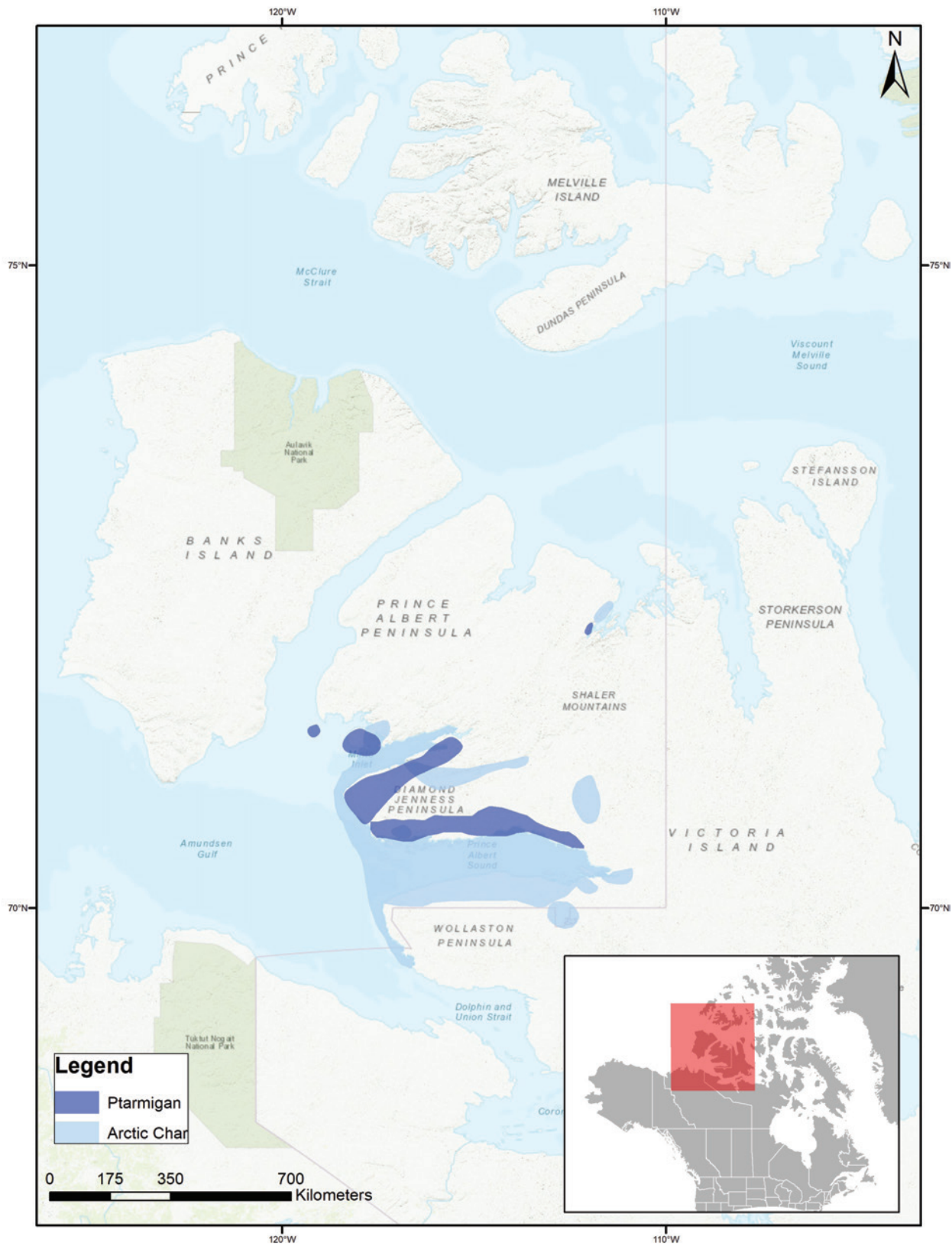


Figure 17. Location of wildlife during open water

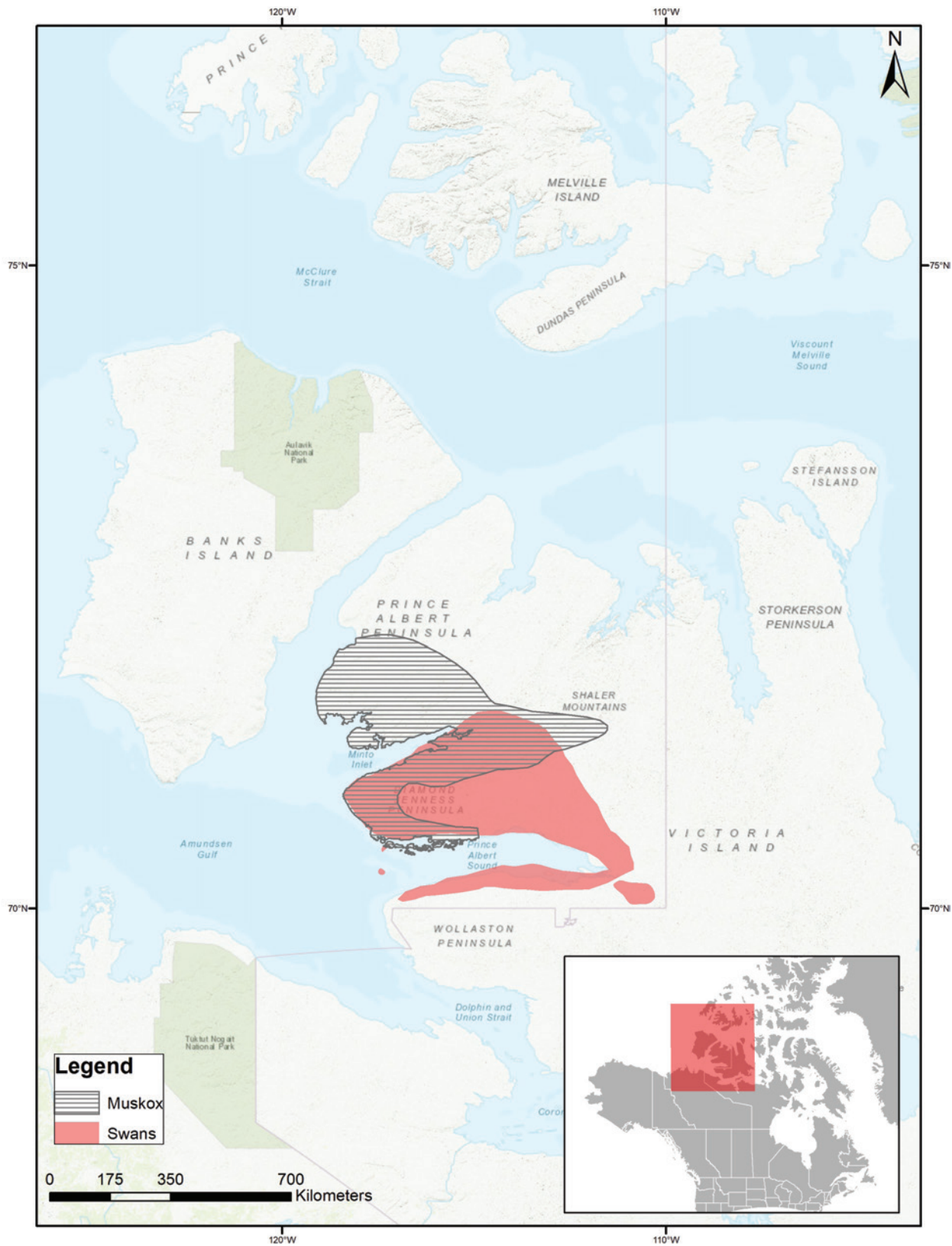


Figure 18. Location of wildlife during open water

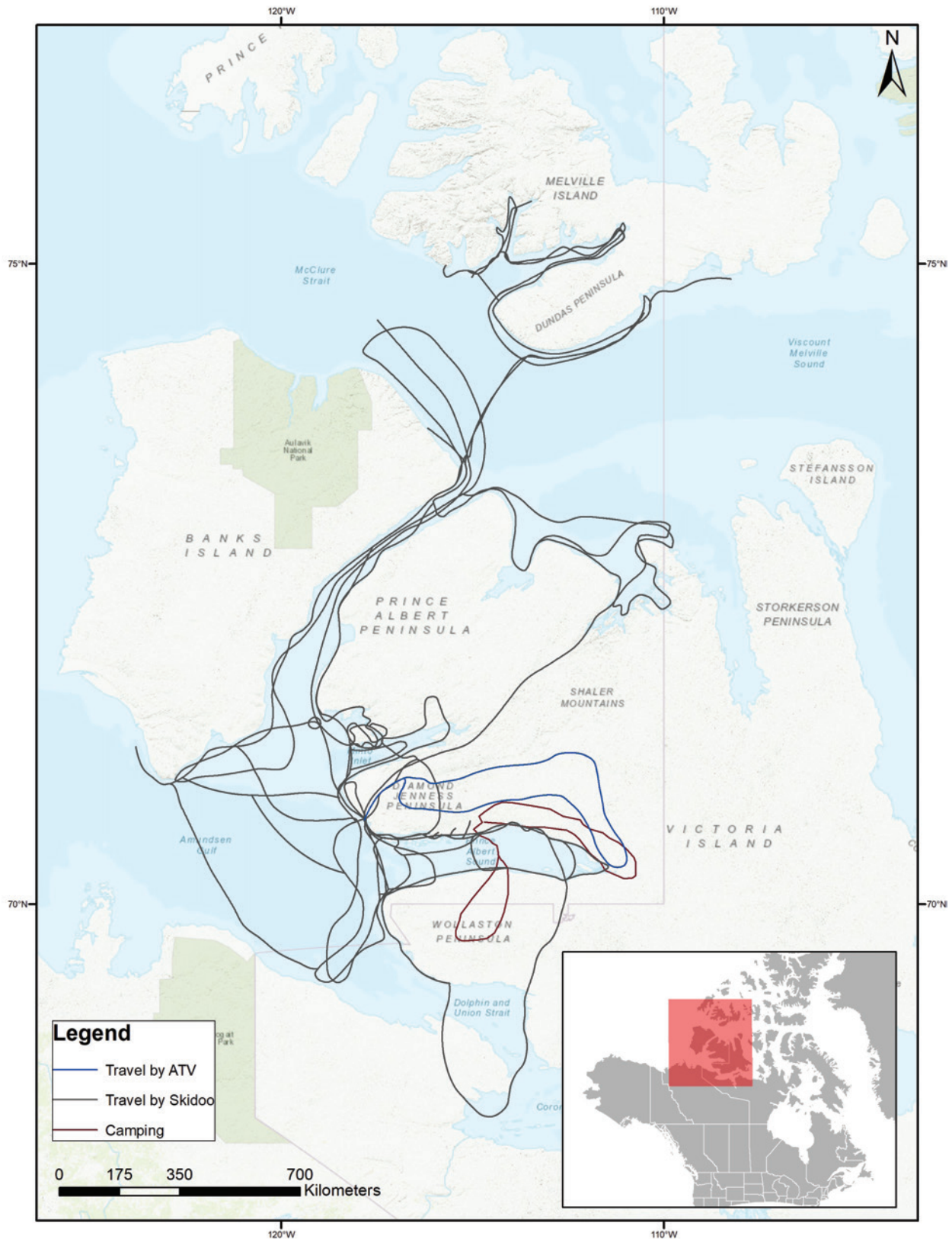


Figure 19. Location of community members' activities around the time of sea ice freeze-up and when the ocean is frozen

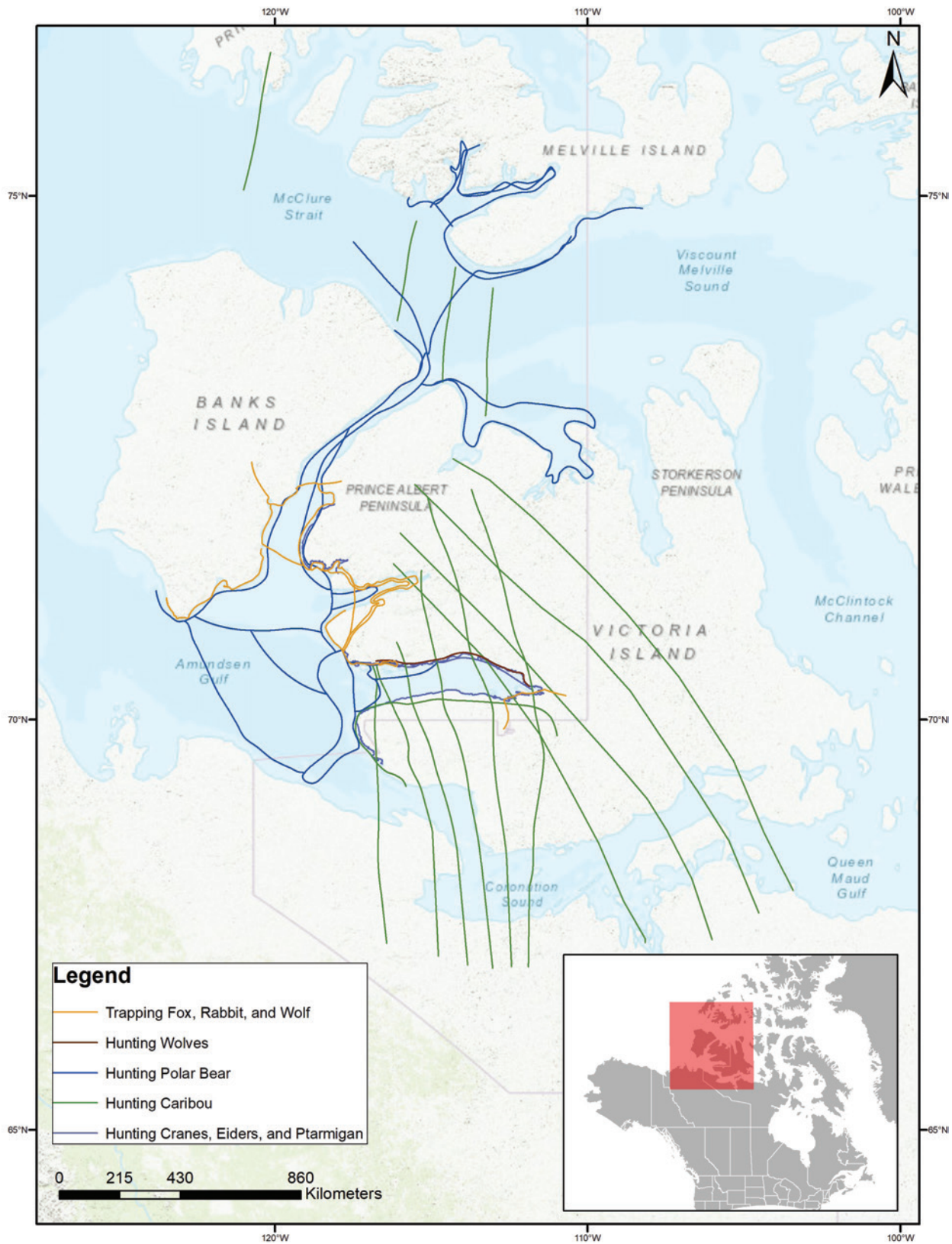


Figure 20. Location of community members' activities around the time of sea ice freeze-up and when the ocean is frozen

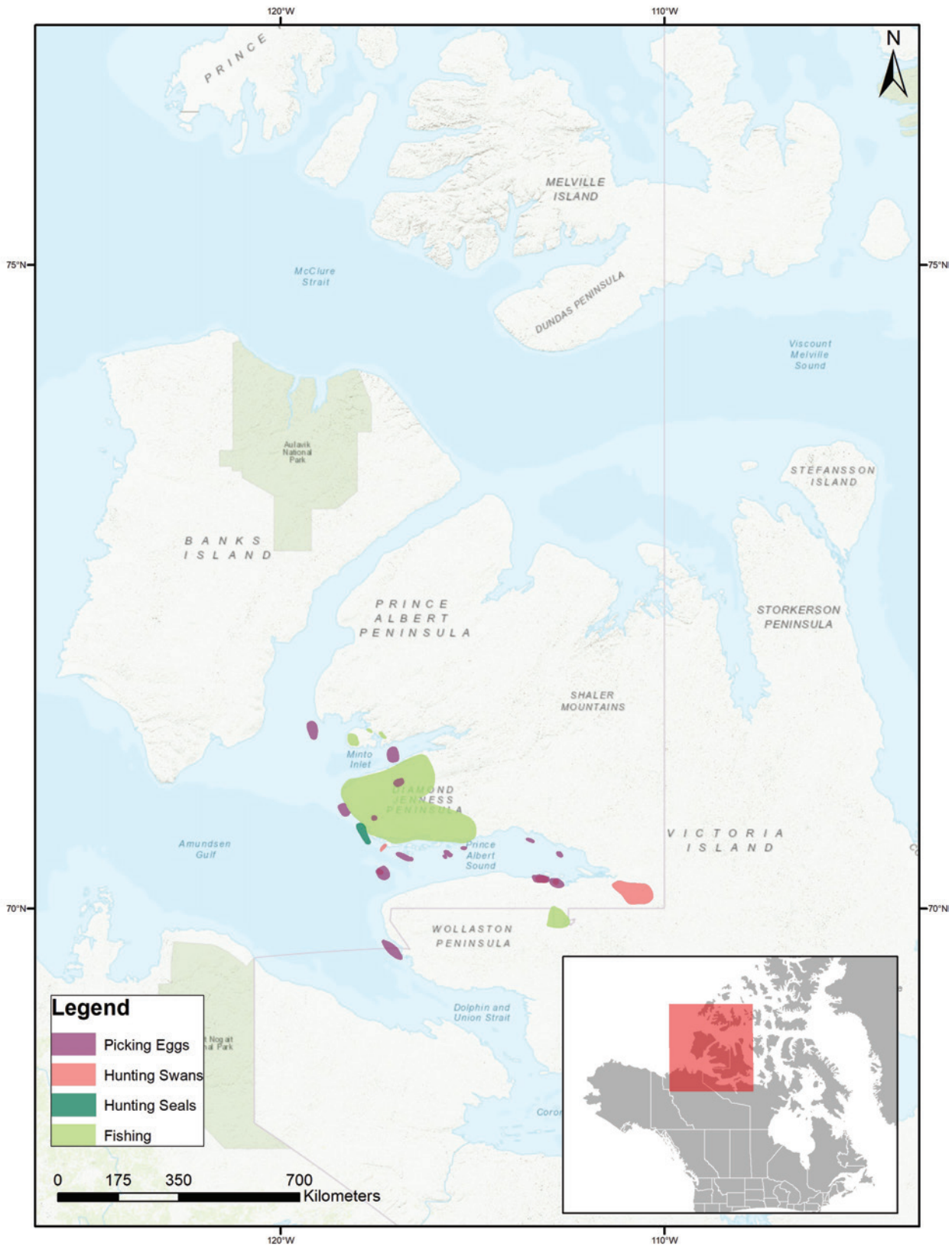


Figure 21. Location of community members' activities around the time of sea ice freeze-up and when the ocean is frozen

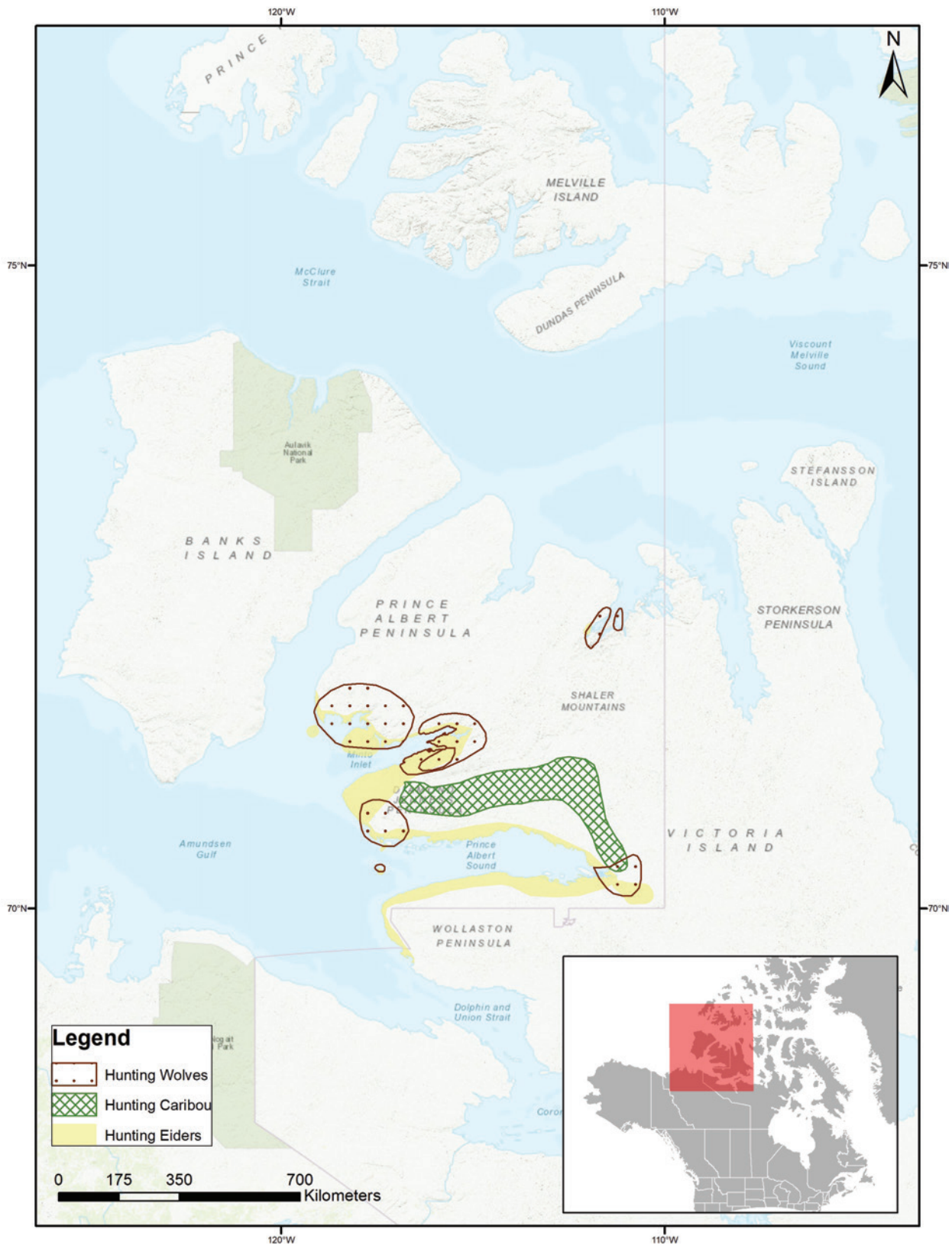


Figure 22. Location of community members' activities around the time of sea ice freeze-up and when the ocean is frozen

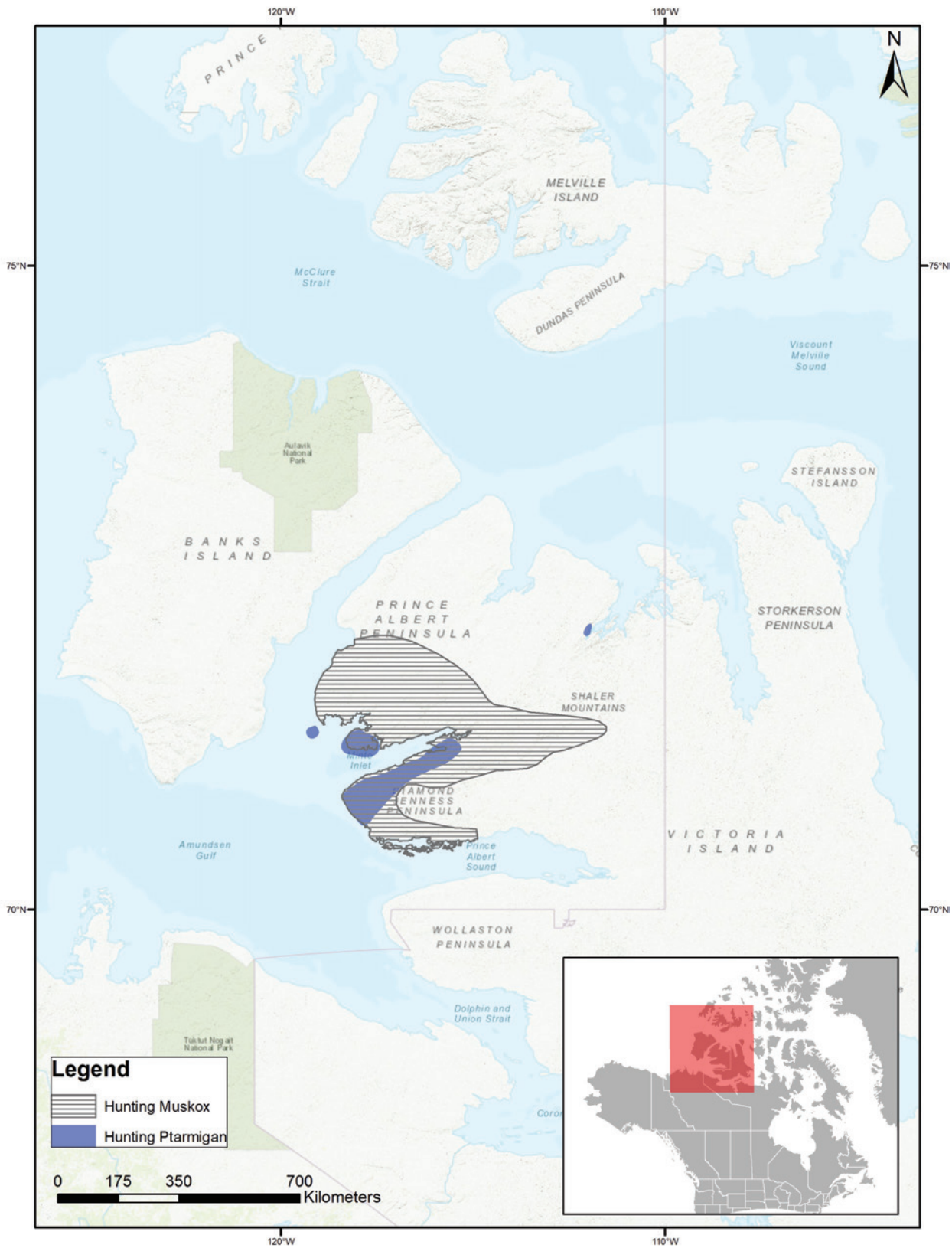


Figure 23. Location of community members' activities around the time of sea ice freeze-up and when the ocean is frozen



Figure 24. Location of community members' activities around the time of sea ice freeze-up and when the ocean is frozen

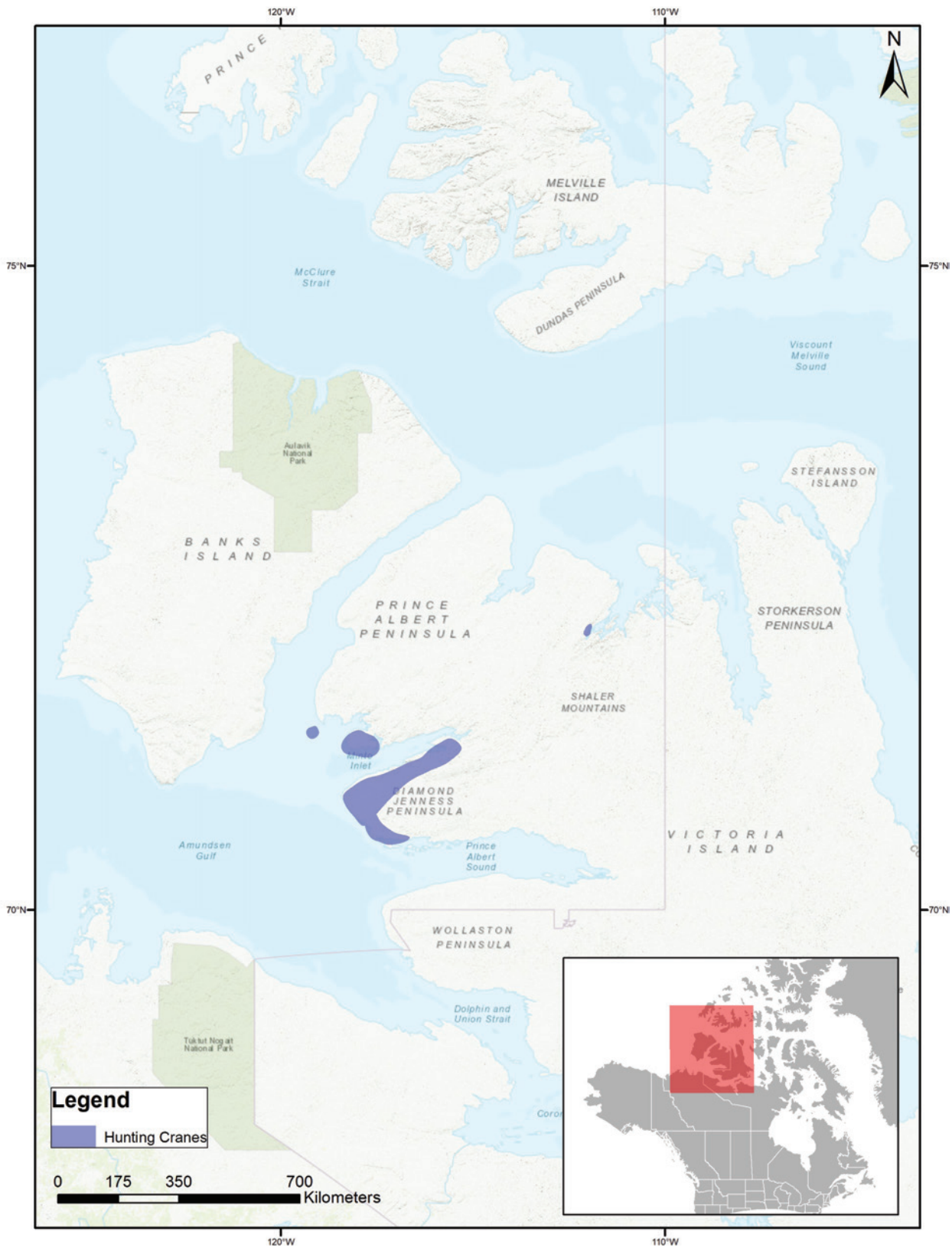


Figure 25. Location of community members' activities around the time of sea ice freeze-up and when the ocean is frozen

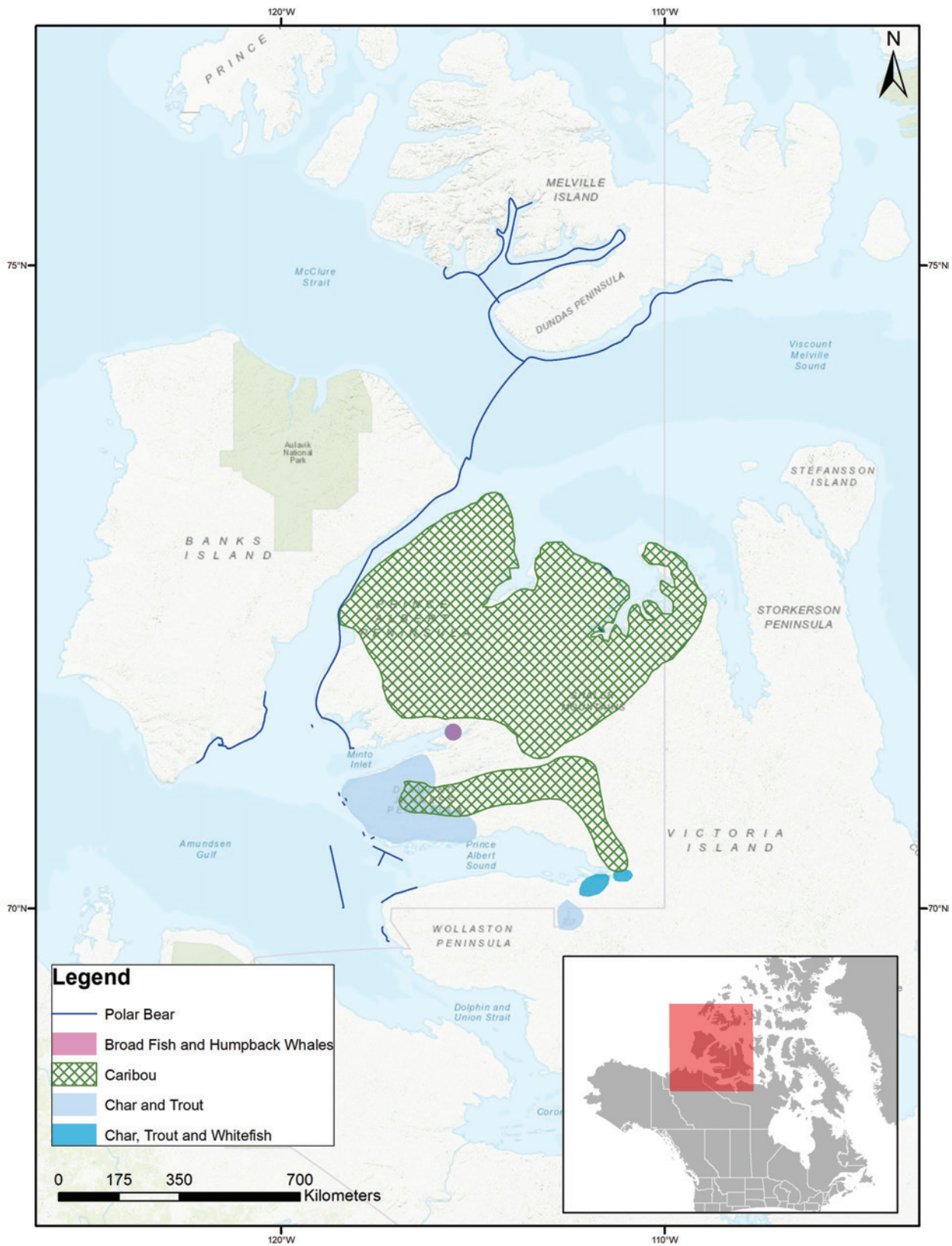


Figure 26. Location of wildlife around the time of sea ice freeze-up and when the ocean is frozen

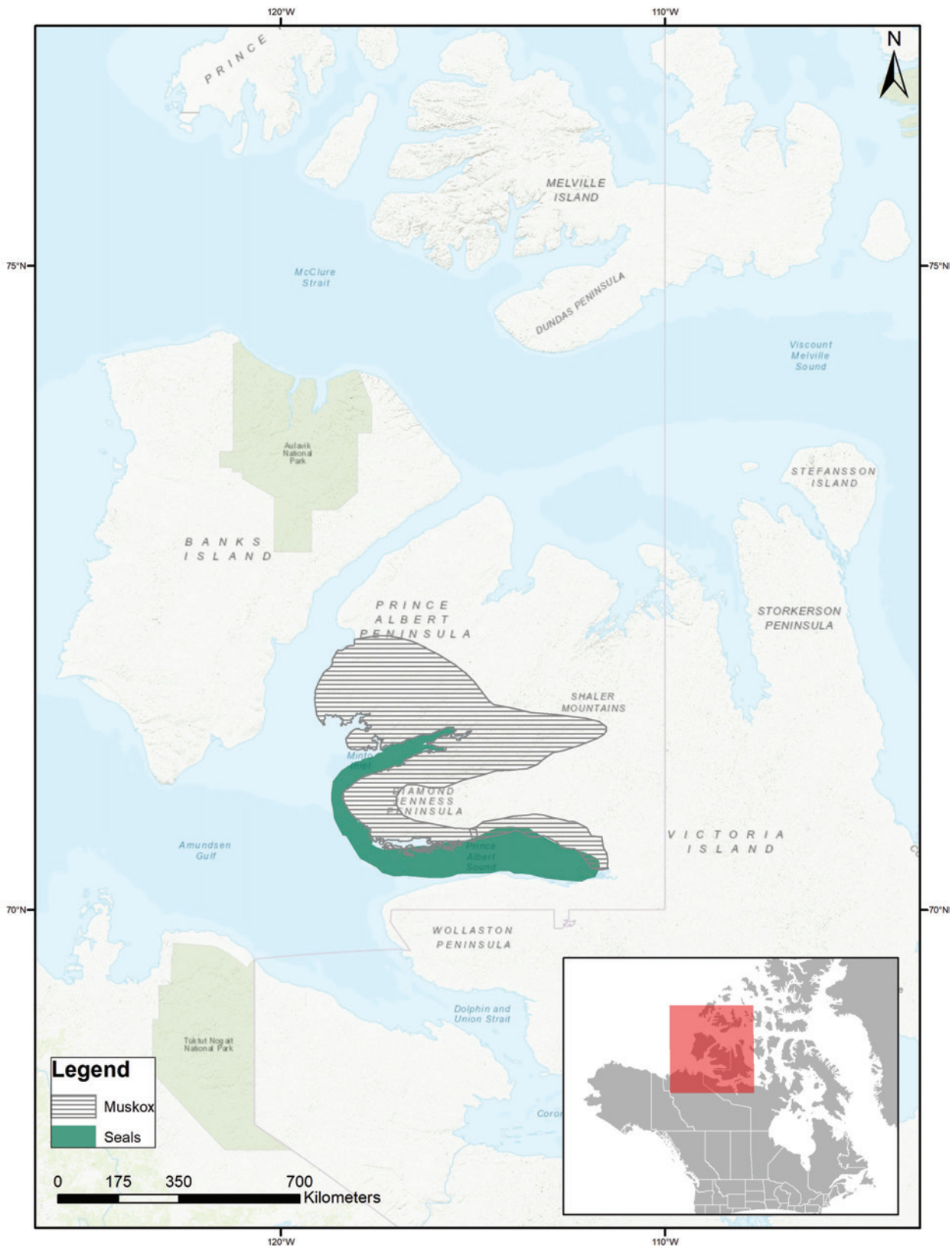


Figure 27. Location of wildlife around the time of sea ice freeze-up and when the ocean is frozen

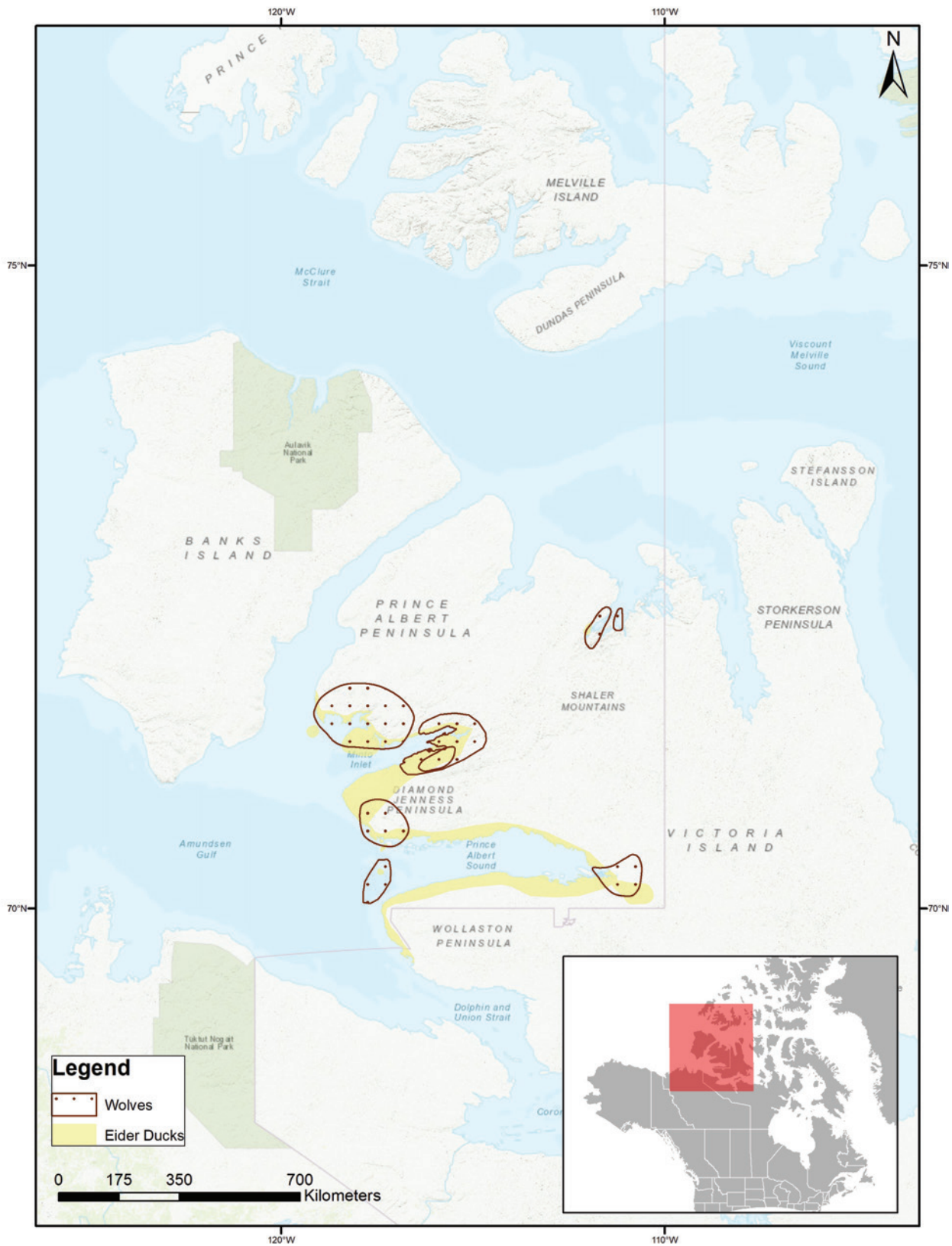


Figure 28. Location of wildlife around the time of sea ice freeze-up and when the ocean is frozen

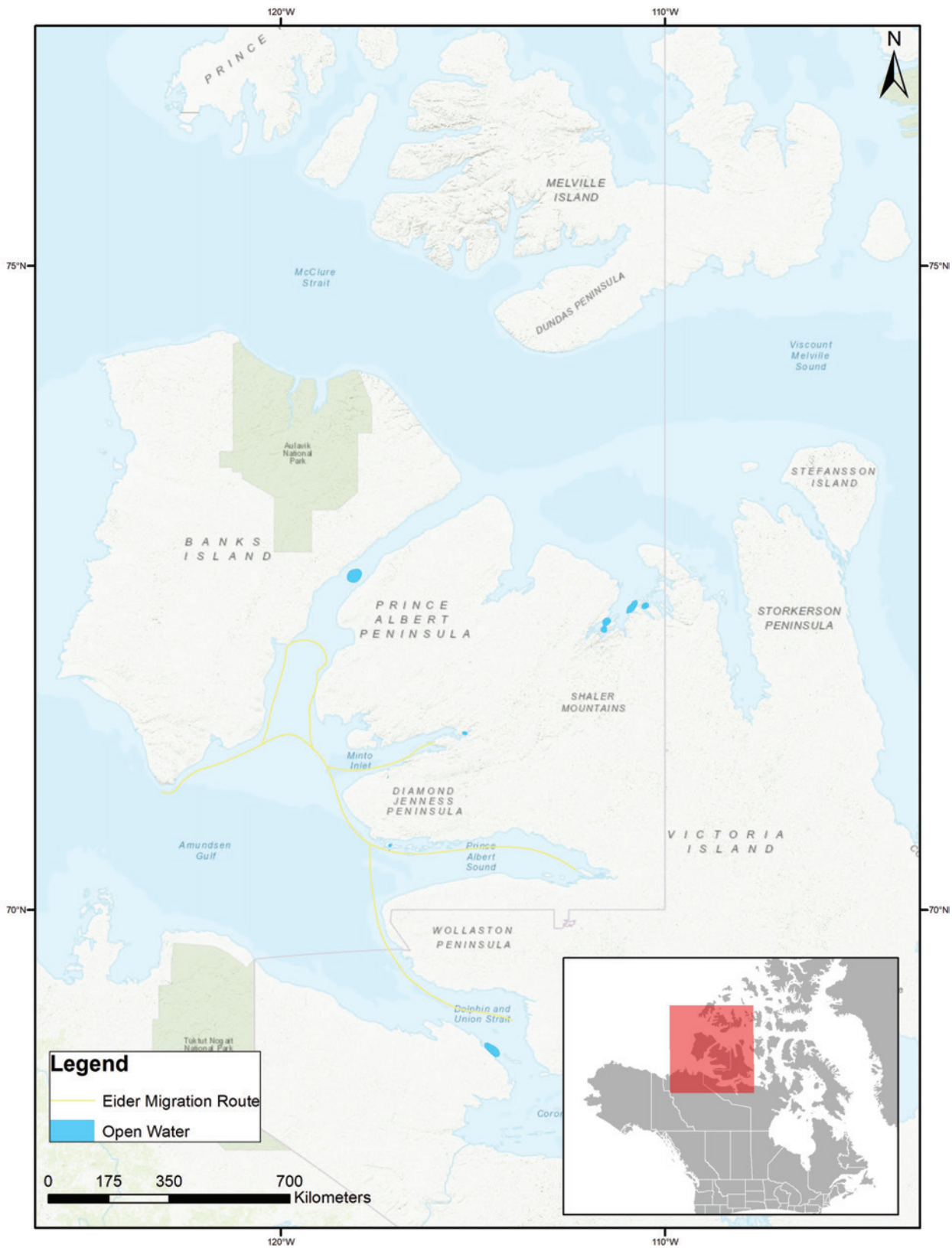


Figure 29. Location of wildlife and significant marine features around the time of sea ice freeze-up and when the ocean is frozen



POTENTIAL IMPACT OF MARINE VESSELS

Icebreaking and year-round shipping (Table 1), and waste, noise and traffic (Table 2) from vessels travelling through the Low Impact Shipping Corridors may impact community members, the ecology, and wildlife. Community members are concerned about oil spills, groundings, and security (Table 3) and about cruise ships, pleasure craft, helicopters, and small planes (Table 4). Additional communication and community involvement are needed (Table 5). Related recommendations are provided in each table.

Table 1. Potential impacts of icebreaking and year-round shipping

POTENTIAL IMPACT	WHEN IT MAY HAPPEN	RELATED RECOMMENDATION
Icebreaking before or during caribou migration will disturb the caribou migration. This is the most important concern because caribou can not cross! If there is open water instead of sea ice on their migratory route, they may go in the water since they can swim. But they will drown or freeze within the water because they cannot get out of the water and back onto the ice. Same with if they fall through thin ice forming after an icebreaker goes by. Or caribou may not go in the water and may starve because unless they can see where they are going, they will not even attempt to try. They know the migratory route over land and ice, not through water.	Freeze-up and frozen October 1 through June 30 Especially first freeze-up: October, November, December Thaw: April through June	The federal government should set stronger regulations and timelines for when icebreakers and ships can and cannot travel, and listen to Inuit about when migration happens. No ships at freeze up. No icebreaking or shipping in Prince of Wales Strait, Coronation Gulf, Dolphin and Union Strait, Dease Strait and Amundsen Gulf, from October 1 through June 30 (Figure 30). No year-round shipping in Prince of Wales Strait, Coronation Gulf, Dolphin and Union Strait, Dease Strait and Amundsen Gulf, even if a mine opens.
The noise from icebreaking may scare polar bears further away. Polar bears already avoid areas where there are a lot of snowmobiles, so they will avoid an icebreaker as well.	Freeze-up and frozen: October 1 through June 30	No icebreaking or shipping October 1 through June 30 (Figure 30).





Table 1 (continued). Potential impacts of icebreaking and year-round shipping

POTENTIAL IMPACT	WHEN IT MAY HAPPEN	RELATED RECOMMENDATION
<p>Icebreaking will affect the trails for hunters that are going out. Even as much as a little break up can have a big effect. Hunters may not be able to get out because the ice would be very rough or too thin when it re-freezes, or there may be open water. An icebreaker passed by once near Nelson Head when community members were sport hunting polar bear. It created a delay when they had to find a safe way to cross where the ice was frozen solid enough and not jumbled. That took more time and cost more money because they had to drive further. When traditional trails are impassable it may result in fewer successful hunts; therefore, less country food and less income from outfitting and sport hunting.</p> <p>In a storm when visibility is poor and when there is low light, it would be especially dangerous for hunters following known trails because they would not be able to see thin new ice, jumbled ice, or open water until they are right at it. Snowmobiles might tumble over when crossing the wake and hunters could break their limbs or backs.</p>	Freeze-up and frozen: October 1 through June 30	No icebreaking or shipping October 1 through June 30 (Figure 30).





Table 2. Potential impacts of marine vessel waste, traffic and noise

POTENTIAL IMPACT	WHEN IT MAY HAPPEN	RELATED RECOMMENDATION
<p>Ships dumping waste, grey water, sewage, garbage, dead batteries, and cigarettes in the bay, contaminate the ocean, the marine mammals and fish. Then people eat those animals and may be contaminated too. Radiation from ships may be the cause of the wolves, polar bears, and caribou that have been seen that have loose hair and less/different textured hair than normal.</p>	<p>Year-round</p>	<p>Community members wish to know what the regulations are for dumping, and if ships are dumping waste in the bay. Stronger government regulations are needed about ship waste disposal. No dumping of anything in the ocean.</p>
<p>Ship engines are loud. Animals in the water hear and steer away from the noise. Polar bears, caribou, seals, and whales move away from ship noise to new areas making it harder for hunters to find them, resulting in</p> <ol style="list-style-type: none"> 1. fewer successful hunts and further travel; 2. increased dependence on expensive store-bought food or community exchanges; and 3. potential food insecurity. <p>Community members would have to find another source of food. It would be pretty hard to convert to eating reindeer. The younger generation is already less interested in hunting (many prefer video games). If wildlife moves away, the younger generation and future generations may not even bother trying to hunt if it becomes too hard to find wildlife and too expensive to search for them. The community will have no more hunters. The community will have no more culture.</p>	<p>Freeze-up and frozen: October 1 through June 30</p>	<p>Strengthen programs for youth and middle-aged people (25–50 years old) who are often left out, in order to increase harvesting skills and opportunities.</p> <p>Find out more about the impacts of underwater noise on animals (e.g., work done by Tom Smith, Stephen Insley in the area).</p>
<p>Fewer char (75% less) are seen near the community when there are big ships anchored in the bay, right where people put their fishing nets. Cruise ship Zodiacs going back and forth in the bay really disturb community members trying to get their summer fish.</p>	<p>Open water: June, July, and August</p>	<p>Ships should anchor at least 200 feet from town during fishing season. They should come after fishing season (July, August, and September) is over. They should come later in September like the barge.</p>
<p>Salmon follow ships. The salmon population may increase too much and dominate the char population. Then the char population may decline, and communities will not have enough char to eat.</p>	<p>Open water: July, August, and September</p>	<p>Undertake research on increasing salmon numbers (e.g., Minto Inlet, Fish Lake, Kuuk River, Quunnguok Lake, and Kagloryuak River).</p>



Table 3. Oil Spills, Groundings, and Security

POTENTIAL IMPACT	RELATED RECOMMENDATION
<p>Oil spills and groundings would affect the community and the region. The area is very rich in seals. Harvesting of seals for food and income would no longer be possible. It would be pandemonium if there were a spill.</p>	<p>Vessels should have double-hulls according to the regulations and should be in good condition. Spill equipment should be on ships.</p> <p>Increase community capacity to respond to spills. Community members should be trained in emergency response for spills and groundings. This could be done as part of Canadian Coast Guard (CCG) Auxiliary training. As first responders, the community should have spill kits for large spills and multiple large vessels. It is unacceptable that it takes CCG days to get to the area to respond. They need to be closer, i.e., in the Arctic so they can arrive quickly. Paid training should be provided for more people and for larger spills, with funding provided by operators transiting Beaufort waters.</p> <p>Create a joint venture with ships and communities to plan training and create a spill response plan.</p>
<p>Security is a concern. Ships might throw some radiation in the water system. "They should keep the Russians and Chinese out of here and further north. They probably have underwater U-Boats (as seen by previous generations) but we do not know. We do not know what they are doing. (e.g., Tuktoyaktuk people did not even know there was a Bombardier coming from Russia across the ice near Tuktoyaktuk)." – <i>Ulukhaktok community member</i></p>	<p>The government needs to communicate with the community about what is happening in this area (phone, email, and fax to Hunters and Trappers Committee (HTC), Hamlet and Community Corporation). Local organizations need to communicate with the community by posters around town, and on Facebook. Passengers and crew on all ships of any type, should be screened (not just customs) for the peace of mind of community members.</p>
<p>Community members are unaware if other countries are doing things in Arctic waters. They do not if know if ships are dumping waste or what they are doing. Community members are worried about them being here. Community members do not have any control and require more security.</p>	<p>Elders and the community need to be informed. Ships need to communicate (phone, email, and fax to HTC, Hamlet and Community Corp) with the community about what is happening in this area. Local organizations need to communicate with the community by putting up posters around town, and on Facebook.</p> <p>Hire observers from the NWT and Nunavut communities to record observations aboard the ship and share them with community organizations.</p>
<p>If there is a grounding or a sinking, there is not enough infrastructure to deal with that many people in the community.</p>	<p>Have an evacuation plan for rescuing and accommodating people in the community.</p>



Table 4. Cruise Ships, Pleasure Craft, Helicopters, and Small Planes

CONCERN	RELATED RECOMMENDATION
<p>The trade-off between if a disaster happened (oil spill or grounding) and the amount of crafts people are buying is almost not even worth it</p> <p>“Passengers seem to come here just to look at us, rather than to spend money. We understand the benefits of the sea barge and sea lift bringing supplies to the community, but not cruise ships and pleasure craft.” – <i>Ulukhaktok community member</i></p>	<p>The number of passengers on shore should be limited (around 150–200 passengers at a time).</p> <p>Continue the economic development partnership of ships with the community to provide training and employment.</p> <p>Ships should carry their own supplies for the whole trip and not rely on community resources (e.g., fuel) except in emergency dockings.</p>
<p>Pleasure crafts come from other countries and stop in the bay with no permission. Community members worry that they are dumping waste in the bay.</p>	<p>Pleasure craft operators must seek permission to visit. Community members wish to know what the regulations are for dumping, and if pleasure crafts are dumping waste in the bay. Stronger government regulations are needed about ship waste disposal.</p>
<p>No one is watching cruise ship passengers to see where they stop and if they are disturbing the land or taking artifacts.</p>	<p>Cruise ship passengers should be stopped from going on land without permission. They need to come and consult with the community when planning cruises through our area. An environmental monitor should be with them at all times to ensure they do not disturb anything. As soon as a file is opened at EISC (a ship applying to come here) the community should be told – not told by the ship 2 days before it arrives. A detailed itinerary and route map should be provided, not just “Sachs Harbour to here.”</p>
<p>Helicopters and small planes (conducting muskox monitoring) disturb caribou and muskox even though they are not allowed to be here in the summer time. Community members are not informed when aircraft are in an area, so harvesters travel all the way there to hunt only to find the animals have moved from their usual areas.</p>	<p>Get permission and inform the HTC about where they are going and when they are going to be there so hunters know to avoid those areas. Then, HTC needs to communicate with community members by putting up posters around town and on Facebook.</p>
<p>We do not know which ships are coming through, or when to expect them.</p>	<p>Have ships provide an itinerary.</p>





Table 5. Need for increased communications and community involvement

CONCERN	RELATED RECOMMENDATION
<p>Community members used to have really good communications when working together with Nunavummiut about land claims and projects that crossed the Northwest Territories/Nunavut boundary. Community members wish to re-strengthen those relationships so that HTC's and Hunters and Trappers Organizations (HTOs) can communicate about cross-boundary projects and about hunting on both sides of the boundary. The federal and territorial governments give out contracts for projects and community members do not get information about them.</p>	<p>Community members want to be informed by the government about projects and contracts that involve cross-boundary work in Northwest Territories and Nunavut. Somebody from Ulukhaktok should be there as part of the project if they are at the boundary.</p>
<p>"We live up here all the time! People from elsewhere just come up here for a short period of time and disturb our way of life. Our way of life is here all the time. They should respect that we live here all the time, and these are the animals that they are disturbing for our harvest." – <i>Ulukhaktok community member</i></p>	<p>People should be respectful and learn about the local way of life.</p>
<p>Community members worry that their recommendations will not be respected because money has too much power. They feel they can never stop ships from coming but they can have a say and some control because this is their land and ocean.</p>	<p>Community members want these and future recommendations to be included in the Low Impact Shipping Corridors and to be respected by marine vessel operators.</p> <p>Community members want the ability to reject applications.</p> <p>An Inuit observer from communities in the Northwest Territories and Nunavut should monitor waste disposal, management and compliance with recommendations based on training for monitoring of ship activities.</p>

MAPS OF RECOMMENDATIONS FOR THE LOW IMPACT SHIPPING CORRIDORS

Maps (Figures 30, 31, and 32) include:

- Areas where there should be no shipping or icebreaking October 1 through June 30;
- Areas where there should be no shipping or icebreaking during the spring and fall caribou migration.

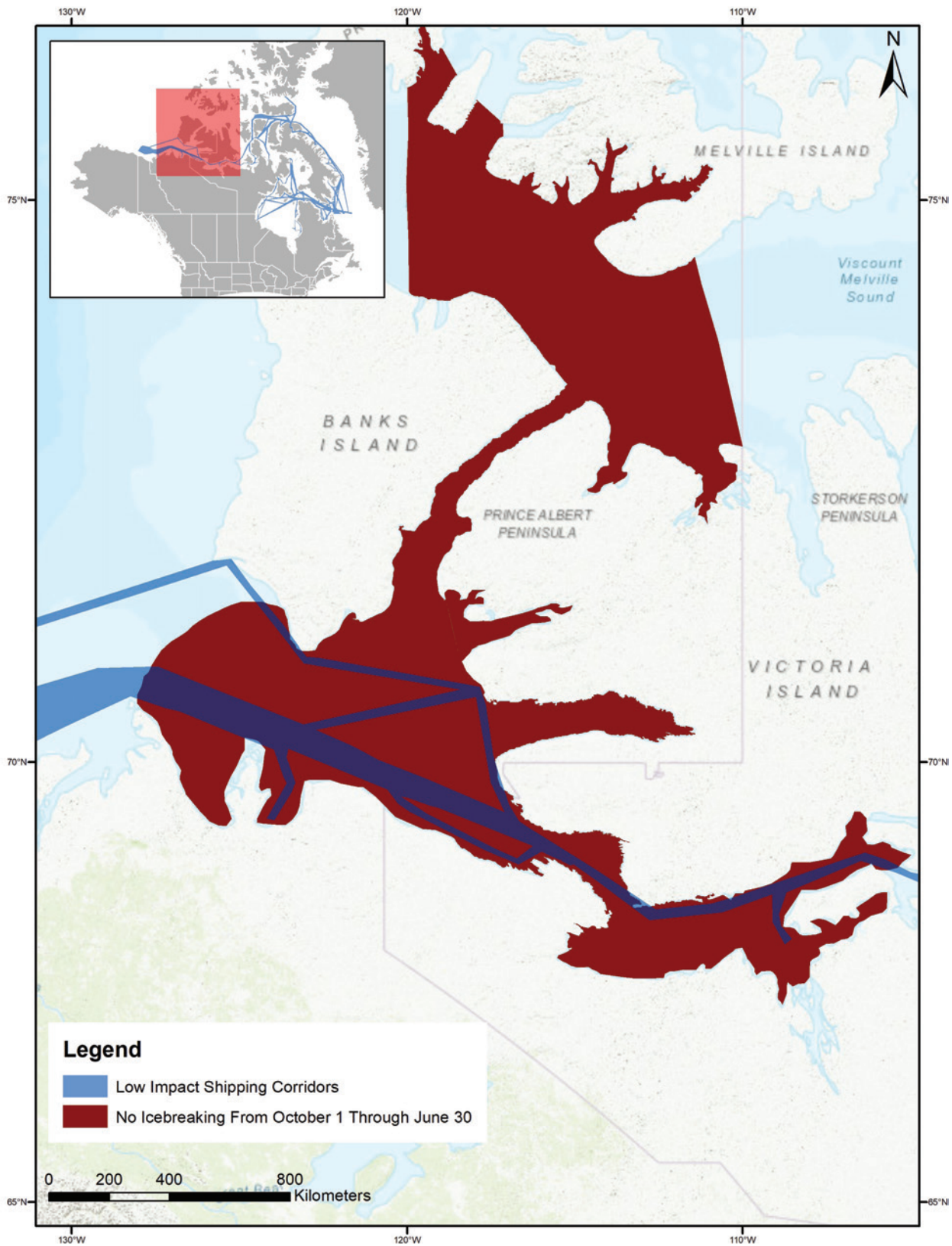


Figure 30. Recommendations for Low Impact Shipping Corridors – No icebreaking from October 1 through June 30

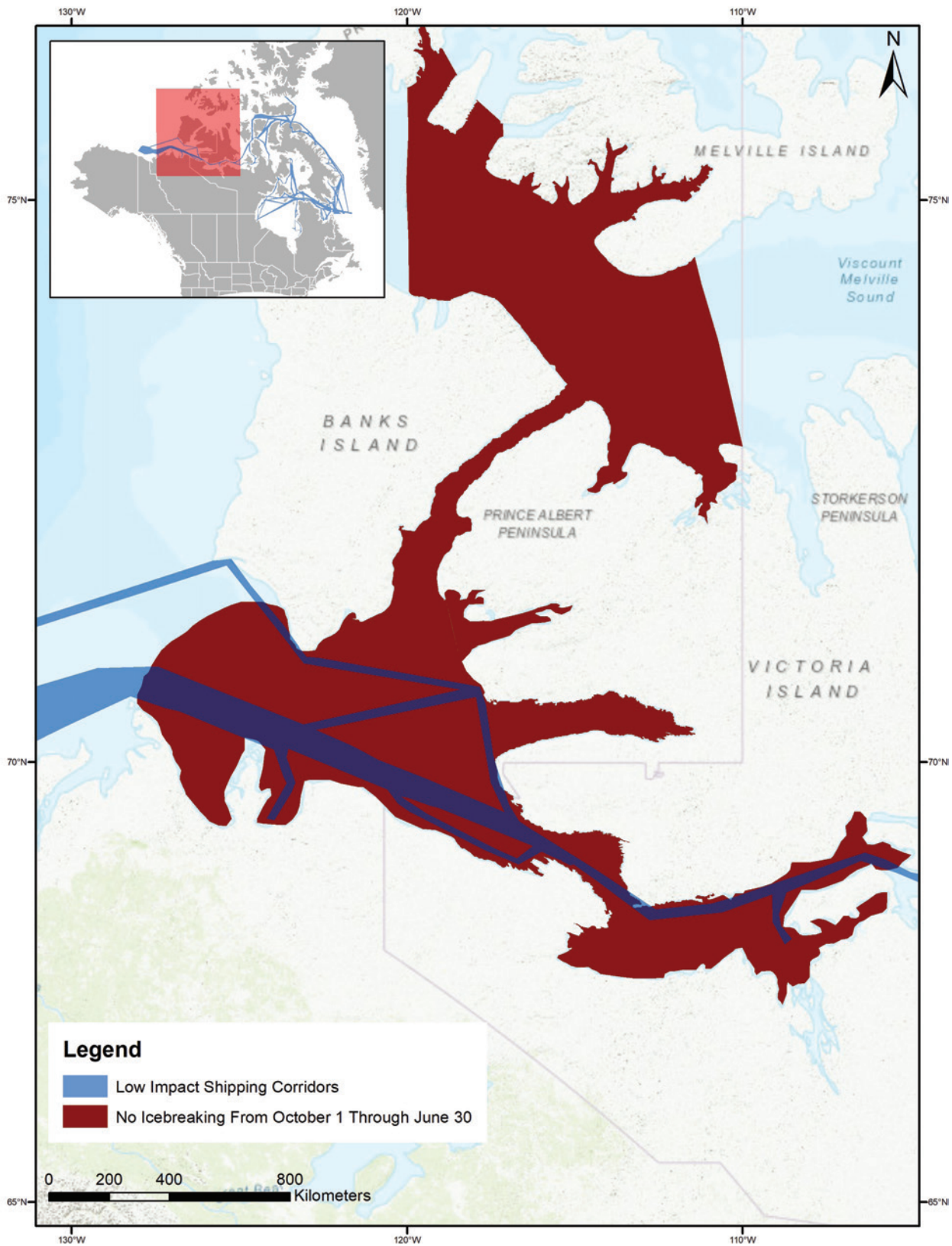


Figure 31. Recommendations for Low Impact Shipping Corridors – No shipping from October 1 through June 30

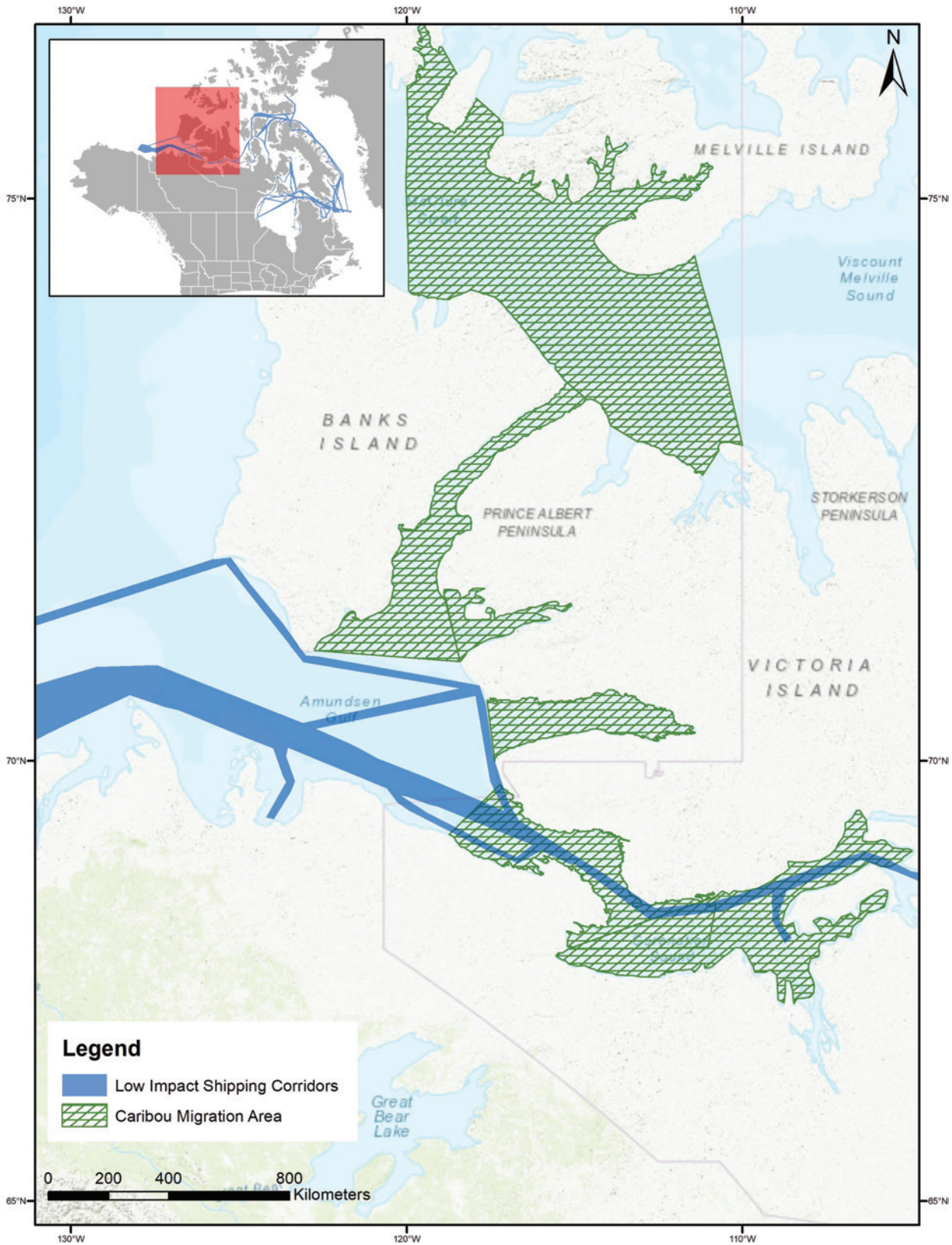


Figure 32. Recommendations for Low Impact Shipping Corridors – No ships or icebreaking during fall and spring caribou migration



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. Ulukhaktok 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, are located in the heart of the Northwest Passage in Dolphin and Union Strait, and in Prince of Wales Strait – 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 Ulukhaktok 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 Ulukhaktok 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>.

