Rapport etter mottatt studentstipend, Vannforeningen

Studentens navn:	Ingrid Aamodt
Tittel på oppgave	Arctic Future Pathfinders
Beskrivelse	Jeg fikk studentstipend tildelt av Vannforeningen for å dekke utgifter knyttet til flybilletter til Canada og fra Alaska, for å kunne delta i emnet MNF-3001 Arctic Future Pathfinders som ble holdt av UiT med undervisning i felt i Canada og Alaska. Emnet skulle opprinnelig bli undervist om bord skipet Statsraad Lehmkuhl under seilferden gjennom Nordvestpassasjen. Etappen jeg skulle være med på var andre etappe fra Iqaluktuuttiaq i Canada til Anchorage i Alaska. Emnet skulle innebære forelesninger fra flere faglige disipliner knyttet til nåværende problemer og mulige fremtidige scenarioer for arktiske områder. Alle studentene skulle også bidra som toktmannskap på skipet i 8 timer per dag. På grunn av isforholdene i nordvestpassasjen dette året var det ikke mulig å gjennomføre seilingen gjennom nordvestpassasjen, og skipet måtte snu før det hadde startet seilingen gjennom passasjen grunnet sikkerhetshensyn. Emnet ble likevel gjennomført i Canada og Alaska, men i et annet format enn først planlagt. Emnet ble holdt over 3 uker på land i Iqaluktuuttiaq, Nunavut, Canada og i Anchorage, Alaksa, USA, i stedet for over 5 uker om bord Statsraad Lehmkuhl. Det faglige innholdet i kurset var svært godt gjennomført, og jeg lærte mye om klimaendringer, urfolk, geopolitikk, og sosioøkonomiske utfordringer i arktiske områder. Undervisningen besto av en kombinasjon av formell undervisning, forelesninger, og uformell undervisning. Den uformelle undervisningen besto av «storytelling circles», møter med Inuit Elders med fortellinger om «residential schools», jakt og tradisjoner, og fikk smake tradisjonell mat, flere museuumsbesøk i Anchorage, samt møter med politikere og oranisasjoner, med mer. Jeg fikk også en bedre forståelse av hvordan det å bo i et slikt lite avsidesliggende arktisk lokalsamfunn som i Iqaluktuuttiaq av å være der i over en uke, enn jeg tror jeg ville fått dersom vi kun hadde vært der en formiddag før vi gikk om bord på skipet. De andre studentene og foreleserne som deltok i emnet var alle fra ulike faglige bakgrunner, og det var svært lærerikt å snakke med og diskutere ulike temaer og problemstillinger med en gruppe folk som kunne veldig mye om sitt fagfelt. Det var lange dager, ofte med undervisning fra kl. 09 til 21, men jeg er veldig glad for å ha fått muligheten til å delta i emnet og lære mye nytt om mange spennende problemstillinger. Jeg fikk også lært en del om vann og avløpssystemet i Iqaluktuuttiaq ved å stille spørsmål til lokale innbyggere, og en av personene som er ansvarlig for CHARS (Canadian High Arctic Research Station) hvordan de gjorde det med vann og avløp der, ettersom de forsøker å finne bedre løsninger for avløpsrensing i arktiske klima. Per dags dato transporteres både vann og avløp i tankbiler til husstandene siden permafrost og ekstrem kulde om vinteren gjør det vanskelig å legge rør i området. Dette fører til at vannet er mer utsatt for forurensing og må kokes får det kan drikkes. Vanntilgangen er også usikker ettersom bilen til tider er forhindret å transportere vann og avløp på grunn av uvær. Avløpet behandles i «Sewerage Lagoons» men renseeffekten av den biologiske nedbrytingen og sedimenteringen er for det meste utilstrekkelig,

	ettersom temperaturen i lagunene er for lav til å få en renseeffekt 10 av 12 måneder i året. Den endelige vurderingen i emnet var en hjemmeeksamen der vi leverte en portefølje bestående av ulike refleksjonsoppgaver og loggbøker fra turen. Jeg legger ved besvarelsen min av den ene refleksjonsoppgaven ettersom den viser mye av læringsutbyttet jeg hadde fra undervisningen. Refleksjonsoppgaven er tredelt og handler om å først sette seg inn i nåtidens kontekst for å deretter kunne se for seg ulike fremtider for arktiske områder, og til slutt reflektere rundt betydningen av disse mulige fremtidsscenarioene. Jeg legger også ved et par bilder fra Iqaluktuuttiaq og Alaska. Tusen takk for studentstipendet som bidro til at jeg fikk den kjempekule muligheten til å bli med på turen til Iqaluktuuttiaq og Anchorage!

Imagining Arctic Futures

Understanding Context

This text will focus on past changes and current challenges in Iqaluktuuttiaq and the surrounding area and will not touch on the Arctic as a whole, even though many of the trends seen in Iqaluktuuttiaq can also be seen across the Arctic ecosystems and communities.

Over the past decades there has been large environmental changes in the Arctic due to climate change and global warming. One of the most notable ones are the decrease of sea ice. This has led to an increase in tourism, which in turn has led to increased pollution in the area. There have also been negative impacts on the ecosystem by new pathogens having been introduced to the species in the area. For an instance it is suspected that the parasite that caused the muskox population near Iqaluktuuttiaq to die out was introduced to the animals by a cruise ship illegally dumping sewerage in the area.

There has also been both environmental and socio-economic impacts of the indigenous people in the area starting to live in “civilization”/permanent settlements, in towns. This was both due to Canadian policies encouraging permanent settlements, and due to work and settlements being built by the Canadian and American defence as the DEW-line was being built and maintained during the 1950s to 1970s. The Arctic area was a very important geopolitical area during the cold war, and this was a driver of socio-economic change and development in the area. These new permanent settlements also led to a higher instance of concentrated pollution, as people were no longer living a semi-nomadic lifestyle. The issues with sewerage and waste management that has not been fully figured out to this day.

The development of a permanent settlement/ a town in Iqaluktuuttiaq (partially due to the DEW line being built there) lead to an increase in living standards for Inuit in the area. However, the Canadian education and health policies also had some negative impacts on indigenous people, and Canada has a dark history of residential schools and forceful tuberculosis checks of Inuit people. Residential schools caused a large decrease of the amount of people speaking the Inuktut and Inuinnaqtun language, and the number of people speaking Inuit languages are still to this day decreasing (Indigenous Services Canada, 2023). There are people that are currently working hard to reverse this trend by teaching the language. Traditional indigenous knowledge was also lost due to residential schools, and a generation losing the teaching of their elders, however there are people working hard to pass on important elements of the culture and traditional way of life to younger Inuit; like drum dancing, hunting, how to survive out on the land, and how to preserve and prepare traditional sustenance food.

Socio-economic issues are prevalent in Inuit communities, with a higher-than-average prevalence of suicide, domestic violence, unemployment, incarceration and poverty (Indigenous Services Canada, 2023). There are also a housing crisis and food insecurity(Indigenous Services Canada, 2023; Inuit Tapiriit Kanatami (ITK), 2018). Some of this can likely be linked back to intergenerational trauma, and underdeveloped governmental services and systematic inequality (Indigenous Services Canada, 2023). The limited housing and high cost of living is difficult to improve, as building houses in the area is very expensive as all materials must be transported from the south by boat during the period when

the North-west passage is ice free, or by plane. The limits in means of transportation and vast distances are also the reasons for high cost of living, high food prices and food insecurity.

The environmental changes and socio-economic issues are interwoven, as the people in Iqaluktuuttiaq and other Arctic communities, especially indigenous communities, are often dependent on the environment for sustenance, and a lot of the issues that they are facing with sustainable development that are making improving the socio-economic issues difficult are also due to the location, remoteness, and extreme climate in the Arctic.

References:

Indigenous Services Canada. (2023). An update on the socio-economic gaps between Indigenous Peoples and the non-Indigenous population in Canada: Highlights from the 2021 Census. Government of Canada. https://www.sac-isc.gc.ca/eng/1690909773300/1690909797208#chp4

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Imagining Futures (in Iqaluktuuttiaq, Canada)

PRESENT

1. What visible signs connect this community to the wider Arctic (environment, infrastructure, livelihoods, global markets)?

A sign of the environment that is visible in the infrastructure is the raised houses. Houses cannot be placed directly on the ground due to permafrost. Another sign of the arctic climate is the water and sewage trucks driving around. The cold winters and permafrost make laying pipes underground extremely challenging. There are also signs of the global markets visible in town, like the local KFC and the supermarkets filled with the same brands that you find further south, just with much higher prices here up north. The high costs of groceries are common across large parts of the Arctic. The day we were walking around in Iqaluktuuttiaq, there were a large parade by the B2Gold cooperation, which was a visible sign that mining was a growing industry and livelihood in the area. There were also cruise-ships in the bay multiple days during our stay in Iqaluktuuttiaq, and tourism and selling their traditional crafts to tourist is also a part of the livelihood for many people in the community.

2. How do you see the impacts of climate change (and other global drivers) in the local environment?

As a visitor, it is difficult to see exactly what the signs of climate change and other global drivers in the local environment are.

However, one change that I noticed is that there is no muskox around the Cambridge Bay area anymore. This, we were told, were due to the muskox population in the area having gotten a parasite that is assumed to have been introduced to the area by cruise ships emptying their sewerage tanks in the bay even though they are not allowed to empty it at all while in Arctic waters due to regulations imposed by the Canadian Government in the Arctic Waters Pollution Prevention Regulations (AWPPR) (Government of Canada, 2012). The regulation is difficult to enforce, and illegal deposits of waste like sewage, still happens.

Another change that I noticed were the cruise-ships, and how cruise ship tourism has become common and a part of the livelihood for many people here. This is not a very recent change, but it has been a gradual increase as global warming causes there to be less sea ice in the passage. In 2007 the passage was ice free from the Pacific to the Atlantic for the first time in recorded history. After this there has been an increasing amount of cruise ships crossing the passage during the months with ice free or very limited ice coverage in the passage.

Another sign of increased focus on Arctic research, both with regards to climate change but because of the geopolitical importance of the region, is the research station that has been built in Iqaluktuuttiaq. The station was opened in 2019 and is a sign of large and recent changes in the community due to global drivers.

3. What colonial legacies are still visible in institutions, housing, or infrastructure?

A sign of colonialism that I noticed where the churches in Iqaluktuuttiaq. Around town most signs are also written in English on buildings and institutions. This also shows the colonial impact of the Canadian/British. It is also a legacy of residential school which increased the prevalence of English in the community and caused many of the indigenous kids to lose their native language.

4. Where do you notice resilience, innovation, or adaptation to Arctic conditions?

A sign of innovation is the raised houses. Placing the houses on stilts is an adaption to the arctic climate, that allows the permafrost below the houses to stay frozen to avoid structural damage to the houses from changes in the earth when the permafrost melts.

A sign of resilience I noticed were the fact that there are still so many signs in Inuktut and Inuinnaqtun. The fact that the language is still alive, spoken and used by the people in Iqaluktuuttiaq, even after the history with residential schools, are a proof of the resilience of the people living there. It is not strictly resilience towards the Arctic conditions, but resilience towards the conditions that have been imposed upon Arctic indigenous people throughout history.

Another sign of resilience against Arctic conditions is the town itself, and the community there. The fact that people are living there, and has been living there for generations and generations, is in itself an act of resilience against the harsh climate, extreme temperatures, and limited resources. The way community is valued and how experiences and knowledge is shared from elders to young people are also a sign of both how the community has managed to be resilient to the arctic conditions, and how they have been able to adapt to them.

I also noticed how people use all available resources from the animals that they hunt. Clothes made from everything from wolverine to seal fur, to small pieces of antler that were carved and sold. This I saw as a sign of how people have adapted to living of the limited resources available that far up north, and how they are now adapting to new opportunities by selling some of their crafts to tourists.

FUTURE

5. Imagine standing here in 25 years. How might Arctic communities look and feel if climate change (and any other global driver) accelerates? How this specific community might feel?

In order to limit the question a little, a am choosing to focus on how Iqaluktuuttiaq might look and feel in 25 years if climate change accelerates.

If all multi-year long sea ice disappears it could lead to the increase in shipping through the northwest passage, which in turn could lead to an influx of new industries as well as an increase in existing industries like mining and cruise tourism. This in turn could lead to an influx of workers to the area, and an expansion of the town with new buildings and infrastructure being built to accommodate the new industries and workers. Iqaluktuuttiaq could look like a much larger town.

If seasonal winter sea ice is reduced in thickness, and not stable enough to travel on safely, this might also isolate the community further during the winter months. This could have negative impacts on the community and make the community more isolated during the winter season. Iqaluktuuttiaq might end up with a lot of seasonal homes, as few workers would want to stay there during winter, and might end up feeling empty and isolated during the harsh and cold winter months.

Accelerated climate change could also lead to increased temperatures and more extreme weather. It is also likely that the weather and seasons would become more unpredictable, which could make being out on the land or sea either hunting and fishing, more dangerous and high risk. This could lead to a loss of cultural traditions and knowledge, and might lead to more deaths while out on the land. Hunting and fishing could become very uncommon hobbies.

Climate change causing changes in ecosystems and the food chain, as well as other stressors like persistent organic pollutants and contaminants of emerging concern, light and noise pollution, etc., could lead to large changes in the biological diversity and populations of wildlife. This could impact

the amount of traditional Inuit sustenance food like seal, arctic char, caribou, etc. This could lead to very strict regulation on hunting and gathering, which could result in more food uncertainty for poorer people in the community who might not afford to buy groceries at the store. Social differences might become much more visible, and poverty more extreme. Traditional food could also end up becoming a commodity, or something only eaten very occasionally. Strict hunting regulations could also lead to a high amount of illegal hunting and fishing, and a large black market.

6. What would a desired Arctic future look like: socially, environmentally, politically?

A desired Arctic future for Iqaluktuuttiaq would be shaped by Inuit and their values, and it would be considerate and protecting of the vulnerable ecosystems and environment. It would also be sustainable, equitable and innovative.

A desired future would keep traditions while encouraging development. Keep the identity, language, and culture of the Inuit. while improving healthcare, and social issues that are common amongst indigenous people like domestic violence, drug and alcohol abuse, poverty etc. A desired future would also be a place where the kids growing up can see a future for themselves there, which would result in less brain drain. In a desired future there would be an increase in the amount of people that has profession specific training or higher education, and it would be an increase in the education options available locally, potentially through online learning and other virtual solutions. To improve the socio-economic issues there would probably be need for economic development, which likely would mean increased industrial and infrastructural development. In a desired future this would include technological innovations that are designed especially to improve life in the Arctic, and technology that makes the economy more circular and reduces the load on the environment.

Politically, a desired Arctic future would have Inuit voices and opinions as the ones carrying the most weight when decisions about the future of the Arctic and the Inuit lands are being made. Environmentally, the desired Arctic would be sustainable and have a circular economy. Socially a desired Arctic future would be equitable, with the most vulnerable voices in the community being amplified and respected to the same extent as the others, and there would be systems that take care of the people struggling the most.

7. How might Arctic peoples (in this case, Inuit) shape Arctic futures on their own terms? How would such an Arctic future look like in this specific place?

In order for Inuit (and other Arctic peoples) to shape Arctic futures on their own terms, there needs to be a greater extent of local self-governing, with less decisions being taken on national level and more decisions being made on a local and regional level. The Inuit population should be represented in all levels of governance where decisions about their future are being made.

It is difficult for an outsider to know or imagine how an Arctic future on Inuit terms would look like, as I am only to a limited level familiar with Inuit values, traditions and culture. However, I would imagine a future on Inuit term in Iqaluktuuttiaq would be built on Inuit values. It would mean keeping their Inuit culture, traditions, language and identity. It would also include a large degree of teaching from Elders, and in this way keep the knowledge of traditional practices like hunting, fishing, gathering, making and storing traditional Inuit food, making traditional clothes, singing traditional music and drum dancing. It is also likely that there would be more options for elderly care and hospices in the local community, as the Elders are so important and highly valued in the community. I would imagine an Inuit led arctic future would not include any great expansion due to heavy industrial development, but a more developed small and thriving community, with the industrial

development being balanced against environmental consequences in order to achieve socio-economic improvements without losing the highly valued nature.

8. How might local changes (in energy, food, culture, demography, infrastructure) connect to global Arctic futures?

Iqaluktuuttiaq are more similar to other remote arctic areas than to the more southern part of Canada. The changes that are occurring in Iqaluktuuttiaq are the same as in Alaska, Greenland, other parts of Arctic Canada etc. A lot of the challenges the community faces are also shared across the Arctic region. Climate change makes it difficult to predict how the Arctic will be in the future. The area is predicted to see some of the larges changes due to global warming in the world, and it is uncertain how this will affect ecosystems, sea currents etc. There are also changes due to other drivers, like the global trends of globalization, capitalism and resource exploitation, and the increasing geopolitical importance of the Arctic. This makes it safe to say that the area is likely to face international pressures and conflicts of interest in the future. This also increases the importance of Arctic sovereignty and cooperation and collaboration in the future in order to be able to figure out solutions to the shared challenges.

BRIDGING

9. What strengths visible today could serve as building blocks for Arctic futures?

The strengths I noticed during my time in Iqaluktuuttiaq that I think could serve as building blocks for Arctic futures where the strong sense of community and camaraderie amongst the people in Iqaluktuuttiaq. There is strength in helping each other, sharing and generosity. The tradition of learning from elders and respecting and valuing the knowledge from Elders is also something I think could be really good when building the Arctic future. This learning from Elders includes passing down values which would likely be integral in taking care of the nature, environment and resources, while also taking care of the people in the community. There are also a lot of resilience which is important to be able to deal with the Arctic conditions, and the Arctic conditions of the future. There is also a thought that everything is always changing and there seem to be a great will to adapt to the conditions and circumstances that appear.

10. What present vulnerabilities, if un-addressed, might put in danger those futures?

There are multiple present vulnerabilities that could put in danger a desired Arctic future. One of them are the socio-economic issues. If these are not improved, or we continue down the path that caused them, then a desired Arctic future is unattainable.

Decisions being made above the head of the Inuit and local communities, because of geopolitical pressure, international interest, and the economic interests of big corporations, is also one of the main threats to a desired Arctic future.

A current vulnerability that could endanger the desired Arctic futures is young inuit people moving away for education and not returning, so called “brain drain”, which could lead to loss of indigenous identity, language, traditions and knowledge.

Another vulnerability is the environment. If climate change accelerates, the imagined desired Arctic future might not exist, and the future Arctic might look very different to the current one. The

dystopian Arctic future novels that were talked about in the literature lecture in Anchorage where the Arctic were a place for climate refugees, and one of the most attractive living spaces because of the mildly cold climate might not be too far off.

11. How could interdisciplinary approaches (our group's combined knowledge) contribute to just and sustainable Arctic futures?

A group with knowledge from many disciplines can see things from many sides and together balance many different considerations. In our group there are people who mainly focuses on specific sides of the environmental and socio-economical system. An interdisciplinary approach should be approaching Arctic issues from multiple points of view through cooperation and collaboration, with a focus on both the people living in the communities, technological and industrial development, biodiversity and environment, and indigenous knowledge. In this way you achieve a more holistic view of the issues and can create scientifically grounded solutions. Working with across multiple disciplines and fields of study allows each person to weave connections and see the larger picture, even though everyone is seeing it from their point of view. This interdisciplinary way of weaving knowledge in order to work together towards a common goal is attempted shown in Figure 1.

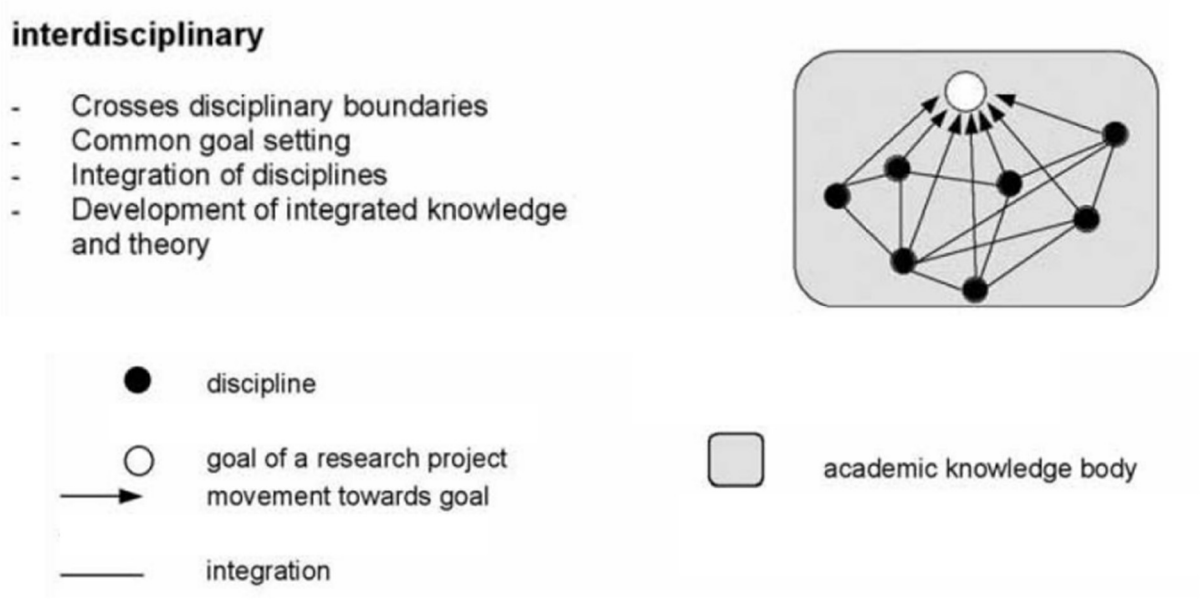

Figure 1: Source: Tress et al. (2006).

MIX

12. What governance structures do you see? What would Arctic self-determination and sovereignty look like in 25 years?

I saw local governance in the form of the mayor of Iqaluktuuttiaq, as well as regional governance in the farm of the premier of Nunavut. I also heard about the Hunters and Trappers Organization which operates on a local and regional level, and the Kitikmeot Inuit Association which operates on a regional level. There are three regional Inuit associations in Nunavut. There is also an unofficial governance structure in the community itself with what the elders decide and say carrying a lot of weight. There were also signs of Canadian national governance as the Canadian government funds CHARS, has funded the building of the local water treatment station etc.

In 25 years, the governance will hopefully be more local and regional governance, and less national governance, especially when it comes to mayor decisions for the region. The Arctic faces different challenges than the more southern regions of Canada, and most people currently making the big national decisions have no experience with the Arctic. In the future, indigenous people will hopefully have a place on national environmental boards, and have a say for their region when decisions about environment is made. I think the Canadian government giving Nunavut the right to decide over their own resources where a step in the right direction, and hopefully all arctic regions will have more of this kind of sovereignty in 25 years, regardless of country.

13. How is the ocean environment present in daily life here? How Arctic marine ecosystems might look like in 25 years?

The ocean is present in traditional food and practices. Fish and sea mammals are an important part of sustenance food for Inuit. Fish is also an important export, and the fish export business employs a lot of the Iqaluktuuttiaq community.

Inuit people have traditionally lived in close connection with the nature both sea and land. Talking with elders, especially hunters and gatherers, they have already noticed lots of changes in populations and ecosystems. This is very likely to only increase during the next 25 years, and as there are so many different factors and stressors impacting an ecosystem it is very difficult to predict how it will look like in 25 years. It does to a large degree depend on which species handles the environmental changes and stressors the best. Some of the environmental changes that will impact the ecosystems are loss of sea ice, changes in zooplankton patterns and increase in temperature. There are also stressors that will impact the ecosystems, like noise pollution, light pollution, persistent organic pollutants, microplastics, etc.

14. How do land and climate conditions shape everyday life? What transformations (permafrost thaw, ice loss, new resources) could redefine this place and the Arctic?

Land and climate conditions shape every part of everyday life in Iqaluktuuttiaq. It shapes the consumer patterns (with regards to food, clothing etc.), as all materials that cannot be found in the area has to be delivered by either ship or airplane. The shipping is also dependent and on the climate conditions, as the shipping routes are only ice free or relatively ice-free during parts of the year.

The ice does however also serve as transportation and traveling routes in winter. During winter, Iqaluktuuttiaq is less isolated from the nearby communities as it is possible to travel on the ice from one community to another. Iqaluktuuttiaq is however, entirely cut off from global shipping routes, and deliveries must be delivered by plane in winter.

The Arctic conditions also limit infrastructural development, as building the needed infrastructure is costly and often difficult. The roads built are limited, the housing is limited, etc.

In the future, ice loss, permafrost thaw and new resources may change this drastically. If there are no more ice in the northwest passage during the summer months, it would mean that a new low-risk and dependable global shipping route would open. This could lower cost of living and change consumer patterns. It could also make building houses and improving and expanding infrastructure cheaper. Thawing of permafrost could also make mining easier, and new industry could be established in order to extract previously untapped resources, like metals, rare earths and similar.

Both possibilities for new industries and the increased possibilities for shipping would likely result in more international interest in the area. It is likely that the small arctic communities in the area along the northwest passage would face pressures from a lot of fronts, and will have to make difficult

decisions where they will have to choose between environmental considerations and traditional values, and industrial and economic development which could increase standard of living.

15. What economic activities connect this place to the global Arctic economy? What would a sustainable Arctic economy look like in 25 years?

Currently the main economic activities that connect Iqaluktuuttiaq to the global economy are mining of valuable minerals and metals like gold, export of fish, research, and cruise ship tourism.

A sustainable economy in the future must be more circular and self-sufficient/self-reliant. To have a sustainable economy, the community would need to produce more of their everyday consumer goods locally. For an instance, a solution like growing fresh fruit and vegetables, at least during parts of the year, from nutrients that have been recycled/retrieved from sewerage would be a good circular solution. This however requires that the technology is improved to the extent that it can be ensured there are not contaminants of concern like pharmaceuticals bioaccumulating in the produce.

16. How are human and non-human well-being and multiple knowledge systems supported? What would a flourishing Arctic community look like in 25 years?

In Iqaluktuuttiaq indigenous knowledge/traditional knowledge and the knowledge of elders are highly valued in the community. Indigenous knowledge is not seen as opposite of scientific knowledge. The knowledge has often been passed down in generations by spoken stories, not written down, and has historically been disregarded by scientists and the west. The inuit also value non-human knowledge and believe the animals are the only expert on the specific animal. We were also told to be like a seal, when we were encouraged to stay aware of our surroundings when we were outside in the Arctic. However, as there are generations worth of knowledge about the nature, wildlife, ecosystems and environment, the climate change is very noticeable by the indigenous people and it is having a large impact, as the long-known knowledge of how it usually are in the area might not apply anymore.

A flourishing Arctic community would have a symbiosis of traditional and scientific knowledge. It would also centre the Inuit values and traditions, taking care of the environment and every person in the community. Local industries that have minimal impact on the vulnerable environment provides the economy need to develop having sustainable communities and improve the socioeconomical issues a lot of the arctic indigenous communities often face.

ADDITIONAL QUESTIONS

1. How do different groups coexist and share responsibility for this desired future?

For different groups to be able to coexist and share responsibility for this desired future it is necessary with understanding of each other, mutual respect, consideration and forbearance. This is necessary if collaboration on shaping a desired future for all will be possible. Collaboration also creates shared responsibility. The required respect, understanding, consideration and forbearance is made possible by building connections between people from different groups by sharing experiences and spaces, but also by making sure all the different voices are heard, and amplifying voices that are often overlooked.

2. What would it mean for the Arctic to be a place of mutual flourishing, rather than a place where one group's well-being depends on another's loss?

The Arctic being a place of mutual flourishing, rather than a place where one group's well-being depends on another's loss would mean that all voices are being heard and considered to the same degree, so that all groups are considered. This would include amplifying voices that are usually overlooked, so that not only the most powerful and loud voices are being heard, as has often been the case. This would also require that people of all groups are represented where and when the decisions are made.

3. How can reconciliation and collaboration coexist in your desired future?

For reconciliation and collaboration to coexist in my desired future it is necessary with education of the history for both sides in order to create understanding of the challenges that exist and the wrongs that cannot be erased. However, it is also necessary to look forward and to treat all others with mutual respect and consideration, while also being sensitive to the difficult things that have happened previously. If we can build understanding, respect and consideration while also accepting and appreciating differences, then we can create a good space for both collaboration and reconciliation.

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https://tc.canada.ca/en/marine-transportation/arctic-shipping/arctic-waters-pollution-prevention-act-awppa

Reflecting on Meaning and Implications

The following text attempts to answer many different questions and therefore touches upon many different topics. Overall, the text includes personal reflections around the imagined desired Arctic future and the meanings and implications of the imagined future.

To me, envisioning the future revealed how wrong it feels to be people of a lot of different rich nations going to Iqaluktuuttiaq and imagining their future. Through all the reflections I was also realizing what an outsider and visitor I am in the Arctic, and especially in an indigenous Arctic community. I was left with a feeling that the future of the Arctic, and specifically the future of Iqaluktuuttiaq, is not mine to decide but the people that lives there. The people that have seen the environmental changes, felt the socio-economic issues and that are still fighting for their culture to live on. The future vision also revealed the importance of collaboration, as this was something I came back to repeatedly on many questions. Collaboration and shared values and visions are integral to create a desired future for all. To make a desired future in the Arctic possible for the people that live in the Arctic, it is necessary with collaboration with people with specific knowledge in their field to be able to create new good solutions. However, the people in the Arctic should be a part of shaping these solutions and creating the knowledge that is needed for the future, and they should have the last say when determining which and how solutions are implemented in their communities. They should also have a larger role through the entire process of creating solutions than what they usually have today.

Reflecting on a desired future for the Arctic revealed both strengths and vulnerabilities in the present and also helped me see some current trends. Some vulnerabilities and trends in the present that might hinder a desired Arctic future is an increasing capitalism and focus on economic growth in order to raise the standards of living, to the detriment of the environment. This is a difficult dilemma, as it is desired with a higher standard of living, work and livelihoods for the people in the community, while it is also likely that the economic benefits might not be directed into the local economy, but might rather go to enriching the corporations behind the large-scale industries. However, there were also some strengths and positive trends in the present that is moving the community towards a desired Arctic future. One of these trends were the passionate people teaching Inuinnaqtun and reviving the language. There were also traditional activities like weekly drum dancing during the winter, which are strengthening the sense of community along with strengthening the Inuit identity. The main positive trend in the present is how every Elder and person we talked with were looking to the future with positivity and a sense of possibility, and desire for a good future for the younger generation. The desire for a good future for the younger generation seemed to be a common goal for the entire community, regardless of if you were talking with the mayor, a young person, or an Elder.

I have learned a lot about drivers of change through this course. As I see it, drivers of change are either positive like a desire for something better, or negative like a need to change something that's bad/causing pain. Both kinds of drivers of change can either lead to desired or undesirable futures, even though intentions are likely to be good. Some drivers of change in the Arctic are the effects seen by climate change and changes in ecosystems. Others are the socio-economic issues, and a need to improve these for the betterment of the community and for the better of the younger generations.

Which paths are taken in order to shape a future is dependent on both knowledge, values and level of reflections about consequences and considerations and implications. Envisioning a future can help decide which things needs to change to be able to get there, and in that way be a driver of change in itself.

One assumption I had was that the people of Iqaluktuuttiaq would be negative towards the establishing of a gold mining company in the area. However, I had not realised the extent of how dominating the socio-economic issues in the community was as a driver of change. The knowledge of the potential environmental consequences takes second row when they are put up against the desire to improve the future of the younger generation, creating a new workspace and more housing. And to be honest, I would have prioritised the same way if I was a citizen of Iqaluktuuttiaq. It is easy as an outsider to say that this is not a step in the right direction towards a sustainable future in the Arctic, but for the people that are living there now it is possible work for their kids and a promise of more money into a struggling local community.

I had not before realised the extent that the environmental, social, economic and cultural dimensions are intertwined, and dependent on and affected by each other. The dimensions exist in a nexus. A good solution to a problem in one of the dimensions, can have positive implications on other dimensions as well. However, it is common that one or two of these dimensions, often economics, are prioritised to the detriment of the other dimensions, like the environment, causing multiple new issues for each one solved. To improve this and create solutions that are overall good, it is necessary to have a more holistic view. It is necessary with collaboration and discussions across fields and between groups that might have conflicting interests. To create solutions that are beneficial across multiple dimensions, it is both necessary with people who are specialised in one field as well as people that have been trained to see connections between fields and help weave together the larger picture.

Situations where knowledge producers from different fields can interact, share ideas and thoughts, and collaborate, like the interdisciplinary AFP-course, can be integral to create these solutions that are beneficial across multiple dimensions. These interdisciplinary spaces broaden the participants perspectives and raise the focus from each participant's individual field to the broader focus of the group. This makes it possible for the participants to remove themselves a little from the firmly divided fields of study where they usually only see their topic alone and outside of the broader context. Interdisciplinary spaces and courses can hopefully create a bit of a broader understanding of the large interwoven picture that is our society and environment. Interdisciplinary spaces can also be a good arena to solve larger issues together, as different fields of study sees the problems from different points of view, and by collaborating solutions might be created or found.

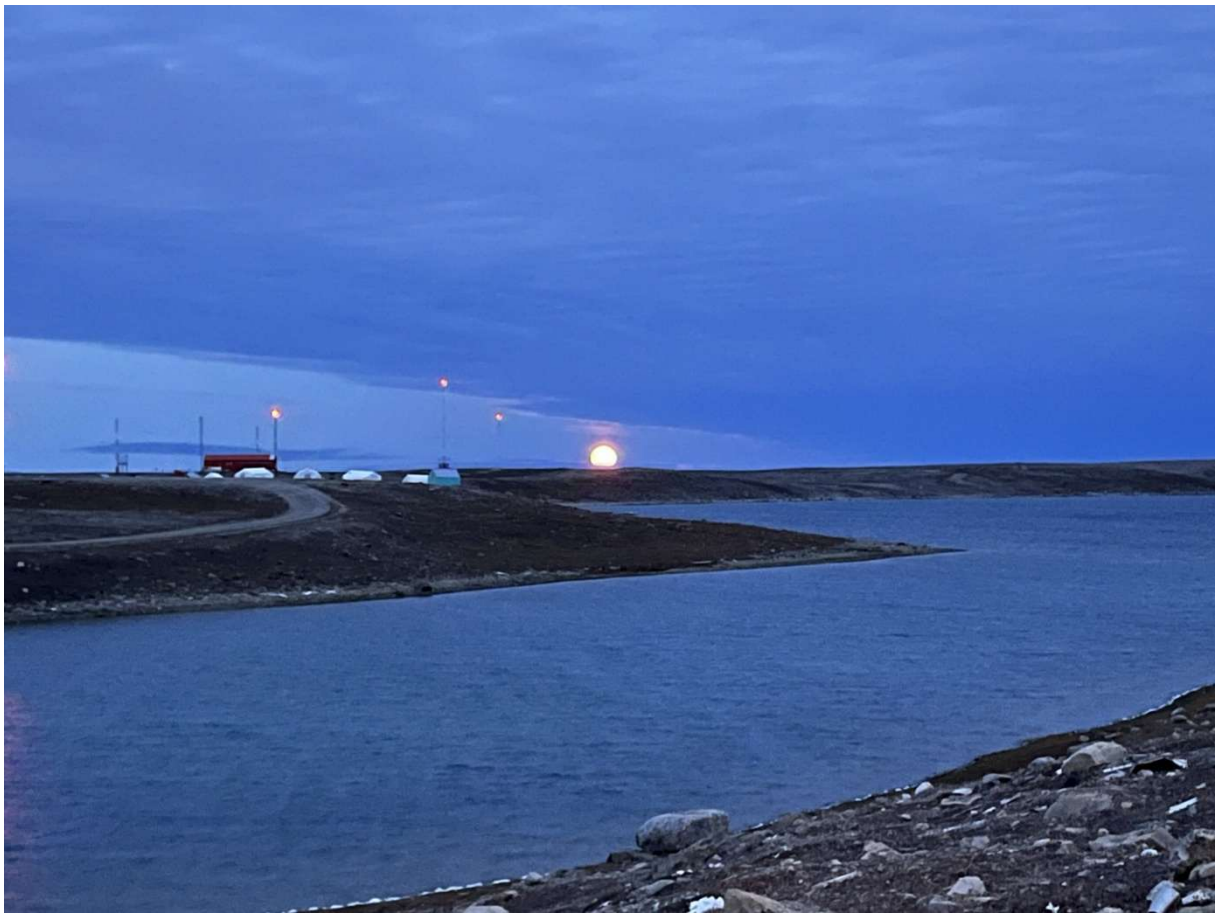
This kind of exercise with reflections about what a desired future looks like for our shared society could be beneficial to have for all making large decisions that will impact the lives of multiple people. Deciding on a shared vision could help shape strategies, policies and research moving forward, by ensuring that each action is a step in the right direction. I think everyone could benefit from asking themselves questions that involves a future further away than the short term for which we often plan. This could be beneficial to do on a small scale by individuals to imagine what their impact towards the broader vision could be, as well as on a large scale to determine the steps forward for a community or nation.

I see my roles as a professional and a citizen, and I think I can contribute to a desired future by choosing what I work on and being aware of other people's perspectives. I, as a professional, can choose to work for companies that share my values and visons about the future. I can continue bringing with me the perspectives I got during the course, also in regard to development of sustainable societies outside of the Arctic. I can make sure to hear different perspectives, work interdisciplinary etc. I imagine having the role as a person being curios of other people's fields and thoughts and ideas and how we can collaborate to create better solutions. As a citizen in society, I feel more of a responsibility to be aware that my perspective is not the only one, scientific

knowledge is not the only one, and there are many perspectives that are often overlooked and voices that should be amplified. I can also contribute by trying to create more of the desired future I would like to have.

Figur 1: Havnen i Iqaluktuuttiaq, Canada.

Figur 2: Tradisjonell inuitt mat: rått kjøtt av reinsdyr, arctic char (fisk) og narhval.



Figur 3: Teltene vi sov i ved havnen i Iqaluktuuttiaq.

Figur 4: Utsikten fra teltleiren, tidlig på morgenen, når jeg gikk bjørnevakt.

Figur 5: Utsikten fra det Ovayok mountain litt utenfor Iqaluktuuttiaq. I forgrunnen av bildet er det en Inukshuk som er blitt bygget for å markere et utsiktspunkt og fungere som et landemerke.

Figur 6: Bilde fra en tur i naturreservat i Alaska.