NRF Report

Theme Project Group 5: Climate Change – Northern Security/ies

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Three themes emerged:

1. Human security issues in the Arctic due to climate change: real, diverse and already happening

Two speakers provided us with perspectives from indigenous communities in Alaska. Using powerful pictures, **Patricia Cochran** showed us visually the very real human security issues already being faced by communities in the Northern and coastal areas of Alaska. The people have a strong relationship to ice, and the ice is changing. Their homes are quite literally falling into the sea. In Shishmaref, this has garnered much public attention, and the community now attracts more visitors per year than it has residents. This changes interactions in the community and adds further strains. Already, $150 million has been spent trying to prevent erosion in this community but to no avail: it will likely need to be moved. In Barrow, infrastructure is also threatened, and in Nome, 200 year storms have become almost yearly events. All over the province there is more lightning and more forest fires. Clearly, there are many challenges to face: an ice free ocean will mean increased transport, tourism, fishing, industry, pollution (including noise pollution which adversely impacts marine mammals), species/habitat disturbance, and increased need for search & rescue. There are also opportunities for human development, such as increased traffic, which leads to increased sales, jobs, import, industry revenue, and training. She ended with a powerful pair of images of a group of elders and group of smiling girls, and the question, how to balance the knowledge of our grandmothers with the needs of our youth?

Caleb Pungowiyi spoke of real impacts to food security in the north, where food stocks of marine mammals, seabirds, fish, and caribou are all decreasing. Trend of less ice every year will affect community food security. Walrus harvest in Gammel is declining – not necessarily because of less walruses, but shorter ice season means hunters can't reach them. Hunters are also noticing changes in body conditions of seals, which will eventually affect populations and therefore harvest. Fledgling seabirds harvested from nests in cliffs are now skinnier and stunted, reflecting less food. Sightings of dead birds such as puffins also reflects a lack of food. Krill populations are down which effects whales. The Western Arctic caribou herd went from 490000 to 360000 in 8 years due to a decline in lichen. Also, winter rain freezes on top of snow and the caribou can't dig through. Permafrost changes mean that ice shelters traditionally used for food storage no longer work: it's like having your refrigerator break. Major frost slumps in rivers effects sediment where fish spawn, causing them to move spawning areas. Species distributions are also shifting, salmon are moving into the Arctic Ocean, where they are an invasive species and will negatively impact whitefish and other fish species. Climate change also carries a direct economic impact. Less ivory, the closing of commercial fisheries, and huge increases in energy prices all act to restrict people's ability to get out and harvest. This leads to people moving to urban areas like Anchorage where it is cheaper to live. Ultimately, there is no safety net, no plan B for if these trends continue.

Dessislav Sabev spoke of adaptation among reindeer herders he encountered as he traveled across Finnmark by dogsled 1489km from Jakobselv in winter 2007. Observing and interacting with various reindeer herding traditions, the key theme was "what is functional survives". Culture and nature are not seen as separate and distinct; instead, climate and social change go hand in hand. His IPY project group looked at current levels of climate change and what it means for communities and stakeholders. Reindeer herding practices vary greatly in foraging (for example, whether winter feeding is used), intensity, migration level, and how busy reindeer herders are, and thus adaptation to climate change will differ. Cultural practices are heavily influenced by environment, and are more than just discourse and storytelling. Climate change tends to be thought of in terms of the last 10 years. Noticeable events include increased fall and winter precipitation; rain, esp. in

January, results in a “locked fridge” for the reindeer by forming a hard layer of ice over the snow and lichen. Spring migration is also happening earlier by about a month to a month and a half. However, herders perceive the greatest change to be social, stemming from the government, rather than climate. Increased reindeer predators are attributed to government policies and wildlife protection. Slaughterhouses are also a big issue, as new EU regulations are (ironically) very restrictive to Norway. Political borders and technology changes such as mass consumption, snowmobiles, binoculars and mobile phones also impact practices a lot. Overall, the herders feel they live in nature, not over nature, and thus have the knowledge to survive.

Rear Admiral Gene Brooks and another representative from the **US Coast Guard** provided a different perspective on human security and climate change but with similar themes. The role of the coast guard role in the north has historically been episodic and superficial – not prepared to deal with fisheries enforcement, oil spill or a major vessel accident (e.g. ecotourism cruise ship). Emergency response and sea ice retreat (and future shipping routes) are big issues. Oil is not as much of a national security issue as some think, since all known oil is in someone’s exclusive economic zone (EEZ). Still, 22% world’s undiscovered oil and gas is in the US EEZ. Increased ecotourism means there are 150000 tourists on cruise ships around Greenland, but there is no safety net and the US coast guard is not prepared for a disaster, as response time could be as much as 3 to 6 days. Fish stock migration northwest is also an issue, and there are no studies of what the level of stocks are in the US EEZ. The challenge is increased by the lack of funding and support from Washington, which doesn’t even think of the US as an Arctic nation. But what does it really mean to be an arctic nation? Ownership of land, water, and resources in the Arctic, but also, an obligation to indigenous people and the fragile ecosystem when developing these resources. How to balance these is a challenge, and there is no structure yet in place. We must try to understand the north before something bad happens. An example of the type of culturally sensitive engagement the Coast Guard is aiming at was given about how to achieve boating safety in the Arctic. First they wondered if they should bring up civilians to teach communities? But they realized they need to adapt programs to the reality of the North, with the aim of "do no harm". So, they sent teams to

villages in northern Alaska to talk to elders who traditionally do the teaching, and who were not convinced boating safety education was needed. It was decided to adapt the programs for north, and teach it through schools, which are already an accepted way that southerners can teach in communities.

2. Communicating Climate Change: the Challenge and Mandate of the North

Deborah Williams and another representative of **Alaska Conservation Solutions** spoke to us about their work teaching lay people about the impacts of global warming, in particular Americans from the lower 48 states. A revealing and noteworthy fact is that loss of arctic sea ice this summer rivaled that of the record low in 2007, even though as any Alaskan will tell you, this summer was not warm. Over 70% of Arctic sea ice is now first year ice. Alaska and the Arctic are the tip of the iceberg melting, which provides both the opportunity and responsibility to tell others about the dramatic, costly, real changes happening, and be a world leader in addressing global warming. It is important not only to take mitigation but also adaptation measures. Climate change is not just a physical threat, it threatens culture. For example, communities in Alaska are facing inundation due to rising sea levels. There are also national security issues, for example, early warning detectors have to be shut down. The Northwest Passage and northern sea route have been open since 2007, and at www.durham.ac.uk/ibru you can see how states are carving up the Arctic. Ecosystems of pollock are threatened, and there are also many questions about oil and gas development, and human and environmental costs. We all need to be ambassadors in our own countries and communities. And remember, always give a judge 10 arguments for the same cause, as the one that works may not be what you expect (for example, effects on duck populations sway some, costs are key for another).

Shirley Roburn spoke of using storytelling (through the film "Being Caribou") to communicate the plight of the porcupine caribou herd and proposed drilling in the Arctic National Wildlife Refuge (ANWR). During the 109th congress nine attempts were made to open ANWR to drilling, all of which failed largely due to the success of this example of grassroots organizing in a globalized age. Local stories of the caribou and the

filmmakers mixed with international policy and highlighted the importance of process in how stories are shared. The film begins and ends in Old Crow, Yukon territory, Canada, and portrays the perspective of caribou as the filmmakers travel with them for 6 months on their annual migration. In making film, the filmmakers got permission from communities, talked to government, parks, fish and wildlife. They provided updates by satellite phone which were published in community newsletters and on websites. Afterwards, they also went to Alaska conversation week in Washington, where they felt very ineffective and decided there was a need for a grassroots movement. There was a call to organize video parties, and action kits were provided. Over 400,000 people participated/saw the film between 2004-2005, mostly through being asked by friends and neighbours. This created a groundswell of phone calls that changed votes in congress. There were over 1000 groups active across 50 states. The process was very important, for example watching film communally, followed by dialogue and discussion. Also, Alaska is part of a national myth, the last wilderness frontier. This case study highlights the importance of storytelling to reach across great divides. People do care and will take action.

Also addressing the question of education, **Lia Slemons** spoke about communicating climate change to a Christian congregation in Washington state. It is important to culturally frame climate change science appropriately for the identified audience. For example, when speaking of oceanography and the importance of ocean chemistry to climate change, a metaphor like "oceans are the quarterback" can be helpful. The implicit assumption is that we need to teach people, but knowledge does not necessarily translate to action. Barriers to civic engagement can be psychological/cognitive, social, political, other (structural or economic), either in daily life or in more abstract ways. Scientific community norms such as hypothesis testing, emphasis on technical complexities and uncertainties, and movement from broad to specific do not necessarily resonate with people. People respond to things they can touch, so strategies such as hands on ice experiments engage people, as does starting at local impact, then moving to global issues, and to action; the congregation conducted a survey to calculate their individual and congregational footprints. Lia also encountered the question of a "moral gap", where a

majority of US citizens agree that “scientific research these days doesn’t pay enough attention to the moral values of society”. A common sense of responsibility to future generations can link geographically disparate communities. She ended with a quote from Robert Olsen (1995, "Sustainability as a Social Vision")" “the future may well be decided by the images of the future with the greatest power to capture our imagination and draw us to them”.

In further discussion, new media was discussed as a potential avenue for communicating arctic issues. Again, the process of technology matters. For example, the Canadian Inuit didn’t want normal television, but instead asked for a way of communication with each other, and APTN (the Aboriginal Peoples Television Network) was born. Storytelling can also be a powerful tool, but it may only be one side of the story.

3. The Importance of Acting Now verses Later

Representing the state of Alaska, **Jackie Poston** spoke of designing a strategy for climate change: How fast is it happening? How warm will it get? What will be the consequences? What is the role of state government? They have established an Immediate Action workgroup that reports to the Governor’s sub-cabinet on climate change, looking at what the needs are of communities already facing climate change. The workgroup got $50 million in funding for projects such as construction and relocation. There is also a workgroup for mitigation, looking at assessing footprints and involving industry. There is an adaptation advisory group looking at issues such as threatened fishing resources, and threatened infrastructure of economic drivers like oil and gas, and has representatives from communities that are being effected. All information from working groups is available on the web at www.climatechange.alaska.gov. After her presentation, the question was asked, "wouldn't doing something earlier have been cheaper?" And the answer is, of course, but the government couldn’t be convinced any earlier. Institutional and regulatory restrictions are also a barrier: cannot get investment in a non-sustainable community, nor a community without a minimum number of people.

Preliminary Directions for the NRF; or, What can the NRF can take to the Arctic Council?

- Get the Arctic story out to the rest of world: need a strong outreach and education mission, as there is no time to lose: climate change is not just a theoretical or hypothetical problem
- Importance of forming alliances beyond just the Arctic.
- Need to engage people around the story, not just tell them about it but build community around it.
- Remember the message extends beyond physical impacts: changes are also geopolitical, psychological, and involve shifting security paradigms. Discourses need to move from traditional concept of security to human security.

In summary: climate change is happening and impacting human security; spread the story, and act now.