

Immanent threats, impossible moves, and unlikely prestige: Understanding the struggle for local control as a means towards sustainability

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Sustainability, social science, and Shishmaref

Shishmaref, Alaska - population 608- faces massive flooding and increased erosion every fall when storms coming off of the Chukchi Sea hit the barrier reef island. These storms and the erosion that follows are making the island uninhabitable and causing immanent threat to lives and homes. The Inupiat people from Shishmaref who have inhabited the island for thousands of years are in planning procedures with the state and the federal government to secure funding for relocating and reconstructing the village in a discrete location on the mainland. These discussions have been on-going for at least 34 years, and funding for relocation is still elusive. Today Shishmaref is struggling to cope with hazards and potential disaster while planning for long term sustainability; though what sustainability for Shishmaref consists of, and - more importantly- who controls the discourse on future planning, has yet to be determined.

Sustainability has been defined in many different ways, predominantly influenced by the idea of ecological sustainability in the context of human exploitation of an environment. Valiela, et. al. have examined varying definitions of sustainability and claim, “the notion seems to involve at least two features: first, maintenance of yield or stocks within some range of values, across some time span, and second, avoidance of degradation of the target resource or of adjoining environmental units” (2000: 1007). In its application to other academic fields, sustainability theory incorporates these two features, particularly the concept of maintaining some variable or system without causing the degradation of another system.

The purpose of employing the sustainability concept in this paper is to consider the long term effects of changes to social, environmental and biological systems in the context of adapting to hazards in the village of Shishmaref, Alaska. How will Shishmaref - as a distinct cultural group - ‘sustain’ or maintain itself when faced with immediate threat of flooding while being cognizant of, and preventing degradation to, future systems?

For the social sciences, sustainability is a concept that should be dealt with cautiously. As with all terminology that implies an ultimate goal outside of a specific context - such as sustainable, resilient, non-violent, enlightened, free, saved, safe, etc. - there is the danger of

unending politicization. We, as humans, will never be ultimately 'sustainable', free from all vulnerability, and resilient to all hazard, in any practical sense; and we can foresee the potential political conflict among different parties when and if cultural or linguistic sustainability, for example, comes into conflict with economic sustainability.

What is perhaps most useful when thinking of social-ecological sustainability, for my purposes, is the general spirit of the UN Division for Sustainable Development's common dictum that promotes "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (UN-DES 2008). In the context of Shishmaref, I recognize competing values and cultural interpretations that are in constant negotiation for what the needs of the present are and what the needs of the future may be. Thus sustainability is not an end, but a negotiation of goals for the present, while keeping an eye on the future. This paper will demonstrate that when this negotiation is driven by outside actors, vulnerability increases.

At stake in Shishmaref, Alaska is the cultural integrity and group stability of the Native village as it faces immediate threat by rising sea-levels and increased erosion. The village of Shishmaref, located on Sarichef Island, now loses approximately 10 feet (3.04 meters) of land to storms and erosion every year. In 1997 a large storm took 30 feet (9.14 meters) of shoreline in a single night (Weyiouanna 2008). This is significant to an island that has only 2.48 square miles (4 square km) of land. Government agencies, non-governmental agencies, and the local population all acknowledge that permanent, year-round habitation of the island will be impossible in the near future, and the migration and/or relocation of people living on the island is imminent.

This paper will look at the social-historical context that gave rise to the vulnerability of Shishmaref, and demonstrate how contemporary relocation planning participants struggle to surmount deep-rooted ideologies concerning indigenous people, power, and disaster mitigation planning. The struggle for, loss of, and reclamation of local power and control, this paper argues, are essential in understanding how vulnerability in Shishmaref was constructed and how the Native village will sustain itself in the future.

The extent and costs of flooding in Alaska

Climate change in Alaska is, contemporarily, having dramatic and profound effects. To date, 184 out of 213 villages or 86 percent of Alaska Native villages experience problems with erosion and flooding (GAO 2003). A 2003 report notes that “while the problems are long standing, various studies indicate that coastal villages are becoming more susceptible to flooding and erosion due in part to rising temperatures” (GAO 2003). Alaska has over 33,000 miles (53,108 km) of coastline, most of which is inhabited by indigenous populations dependent on sea mammals and fishing to maintain livelihood and cultural integrity. Much of this coastline is currently threatened to varying degrees by severe erosion due to permafrost melt and increasing temperatures, thus exposing many indigenous communities to the uncertainties of a changing environment (Mason, et. al. 1997). Shishmaref can be seen as the beginning of a potentially much broader trend of coastal relocations, both in Alaska, in the Arctic, and in the world.

The Arctic experiences polar amplification, a greater over-all warming around the poles than in other areas of the globe during periods of global warming trends. From 1954 to 2003, the mean annual atmospheric surface temperature in Alaska and Siberia has risen between 2 and 3 degrees Celsius. Warming has been particularly salient in the winter and spring (ACIA 2005: 992). Along with warming, snow and ice features have diminished and permafrost boundaries have moved north, meaning that permafrost has melted, causing foundation problems for structures in Alaska and problems with erosion (ACIA 2005: 997).

For at least five Native villages in Alaska, erosion, flooding, and storm activity are creating immediate threats to human life and safety, and while sea walls and other forms of erosion protection are still being built, ultimately the people who live in these five villages will be forced to migrate or relocate. Kivalina, Koyukuk, Newtok, and Shishmaref have been identified by the federal government as immediately threatened (GAO 2000: 2), and the state of Alaska has added Shaktoolik to this list (Immediate Action Working Group 2008).

The villages in Alaska roughly correspond to tribal entities, and common land is owned by the Native village governments. While it has been suggested that tribal members should consider relocating to a more urban environment, complete reconstruction of infrastructure and relocation of the village to an uninhabited area is locally preferred (Schweitzer and Marino 2006, pers. comm. S. S. 2008). Relocation, however, is dauntingly, perhaps prohibitively, expensive. In Shishmaref, for example, relocation costs have been estimated at \$100-200 million USD for a village of just over 600 residents (US Army Corps of Engineers 2006).

Long-standing Shishmaref

“As for culture, our ancestors have lived here for thousands of years. The land itself here is part of life, part of our way of life” (David Sockpik 2005).

“The raging sea is tremendously powerful and needs to be respected. Shishmaref Island will need to be relocated from the sea and moved to a different location, in due time. The move needs to be closely tied to our hunting traditional cultural practices, we are sea mammal hunters. ... We can't go without seal meat and oil” (Herbert Nayokpuk 2005).

Relocating to a more urban environment, or merging Shishmaref into another Inuit village on the Seward Peninsula, is literally inconceivable for residents in Shishmaref. Historically speaking, the village of Shishmaref is relatively new, but the *Kigiqitamiut* people (a sub-group of the Inupiaq, literally island people), (Marino et. al. in press), the majority of residents in Shishmaref, have inhabited a discrete area with independence and relative autonomy for thousands of years.

Shishmaref is located on Sarichef Island, a barrier island just off the mainland Seward Peninsula. Shishmaref is primarily composed of Inupiaq families, with a small number of non-Native residents, most of whom work in the school. The local economy is a cash/subsistence mixed economy consisting of a few cash paying administrative and service oriented jobs including employment at the school, the tribal and municipal governments, the two small stores, and state welfare payments. Hunting, primarily seal, bearded seal and walrus, is an important feature of both cultural and economic systems. Caribou, fish, birds, berries, and greens are also hunted, fished, and/or gathered locally throughout the year.

Settlement patterns prior to the late 19th century/early 20th century were sedentary seasonal, with people relatively situated in one place from freeze-up through spring and moving inland during summer and fall to exploit land mammals and fish. Like other ‘nations’ (Burch 1988, 2006) on the Seward Peninsula, the *Kigiqitamiut* territory was made up of one large village (*Kiqiqtaq*) with a population of about 80 people, surrounded by smaller settlements (Koutsky 1981).

The former settlement of *Kiqiqtaq* is located in approximately the same place as the contemporary village of Shishmaref. Permanent settlement in the village superseded seasonal migratory patterns after the establishment of a government school in 1906 (Koutsy 1981). This is an important historical moment for understanding contemporary relocation issues. Elders in the village have told us that the ancestors of the *Kigiqitamiut* knew that the barrier reef island was continually in flux and that the island would eventually disappear (Schweitzer and Marino 2006). Prior to 1906 the island was only inhabited after the sea ice froze around the island, meaning any fall storm would meet with a natural buffer, preventing drastic erosion and flooding. Today it is fall storms that hit prior to freeze-up that are the cause of massive erosion and threats of flooding. This early development that ignored local knowledge of storm patterns and seasonality has greatly contributed to the present vulnerability of Shishmaref.

Early 20th-century missionaries and government administrators pushed for settled, western-style villages and with the pressure of forced schooling and infrastructure development, were successful in making Seward Peninsula tribes sedentary (Ray 1975). This moment marks a power shift in controlling the movement of people on the land. While certainly *Kigiqitamiut* people still travel over their territory for subsistence purposes, establishment of infrastructure is clearly a means of influencing movement, and ultimately creates vulnerability to the storm season.

Ignoring local knowledge, particularly local indigenous knowledge during government development is not unique to Alaska, nor to the past. Anthony Oliver-Smith writes

Increasing vulnerability to hazard continues relatively unabated today, largely because of the undermining of indigenous adaptations, based on long term experience in local environments, through direct government policies or political economic forces creating production systems inappropriate to local culture and environmental conditions (1996b: 315).

The top-down government policies regarding development in indigenous Alaska and disaster mitigation in indigenous Alaska continues to add to the vulnerability of Shishmaref to flooding and erosion hazards.

Past attempts to relocate

Local efforts to relocate the village have been on-going since the 1970s. In 1974, the Department of Community and Regional Affairs released a report on the Shishmaref relocation effort after a severe fall storm lead to extensive damage on the island (DCRA 1974). At that time, extensive planning by local residents and meetings between government representatives and local leaders occurred. These plans did not come to fruition. The estimated cost of this relocation was placed at 1 million USD (Mason et. al. 1997), compared to today's 100-200 million USD.

Local residents say that the decision to relocate was voted down by local majority in the same year. According to a number of sources, including the primary relocation advocate in 1974, Percy Nayokpuk, this decision was more accurately a vote in favor of a new school. If the village had officially voted for relocating, their window of opportunity for new state-funded development would close. While relocation was in the planning stages, no money or practical plan was secured to actually relocate the village. Conversely, the village was in line and ready to receive an enormous school and gym facility. The school remains the most modern building to date. Today the school will be an extremely costly piece of infrastructure to replace if Shishmaref is relocated.

Development continues to be problematic in conjunction with relocation. The village of Shishmaref has now officially voted to relocate and has chosen a preferred site. Receiving government aid for housing projects is nearly impossible in the aftermath of this vote, and residents say that this has caused the migration of younger, working-age adults. As there are no housing options for young couples, a trend is developing towards out migration to Nome or Anchorage (pers. comm. K. S. 2008).

Surprisingly, reports drawn up this year from the state Immediate Action Working Group (IAWG) - a working group designed to deal with relocation planning and immediate protection of six villages in immediate need - makes no mention of previous relocation attempts (IAWG 2008).

Government strategy

In 2006 the Army Corps of Engineers published a research inquiry into possible solutions for Shishmaref relocation. Three possible scenarios were described: relocate to the mainland and

reconstruction of village infrastructure from scratch, relocate residents to the regional centers of either Nome or Kotzebue, or take no action. Peter Schweitzer and I authored the report on the anticipated consequences of relocating residents to the regional centers of Nome or Kotzebue. In a surprisingly unanimous series of interviews, residents declared that they would not move to Nome or Kotzebue, even if government funding was provided. We were told that traditionally strained relations between the people of Kotzebue and the people of Shishmaref would make integration impossible, and would potentially lead to a miserable situation for everyone. Nome was considered a place of vice that would lead to alcoholism among community members, other declines in social health, and eventual social and cultural disintegration. Many residents said that they would prefer relocation to Anchorage over Nome or Kotzebue. Some commented that they would simply not move if the government attempted to relocate residents to more urban centers (Schweitzer and Marino 2006).

Despite the conclusions of this report and the unanimous local decision, discussion of relocation to regional centers is still in circulation among some policy makers.

Today relocation planning efforts are being spear-headed by the IAWG, an organization constructed by the governor's office which is comprised of a number of state and federal agency representatives. In the last meeting they called for another feasibility study for relocation in Shishmaref, which has caused consternation to Tony Weyiouanna, a Shishmaref resident who has worked on relocation since the late 1980s. It seems that there is no end to the planning and that as a new cast of government workers takes on the task, the past efforts of local residents disappear. In fact, the representative for the Corps of Engineers that currently sits on the IAWG board whom I spoke to knew nothing of the 2006 Cultural Impact Assessment published by her agency on possible scenarios for relocating Shishmaref.

Real local power within the state's planning is relatively absent, despite the good intentions by all to include local voices. According to the IAWG final report, the working group suggests that "local communities severely affected by climate change should be encouraged to establish a project coordinator position to interact with all other organizations and be an advocate for funding through grants and other means to implement needed evaluations and action plans" (2008). Yet, at least two village representatives (pers. comm. T. W. 2008, pers. comm. S.S. 2008) requested funding from the IAWG to travel to the final IAWG meeting and were denied.

The struggle for local control

A consistent theme is emerging from Shishmaref of desiring relocation, but there is skepticism about relocation efforts spearheaded by outsiders. Relocation coordinators in the village confide that it is often a quiet struggle over who is 'in charge' of planning procedures. Fiercely proud, local Shishmaref relocation advocates are making decisions to force local control and power in political arenas. One way to accomplish this is by earning money. The local relocation committee has set up a website where outside individuals can donate directly to the village for relocation.

More visible is the concerted and successful effort Shishmaref has made in marketing itself as the 'first victim of climate change'. The list of news and documentary organizations that have visited Shishmaref for climate change pieces is extensive, and includes, but is certainly not limited to: The New York Times, The National Film Board of Canada, The Associated Press, Reuters, People Magazine, Earthwatch Radio, Global Create (Japan), National Geographic Magazine, Maison Radio (Canada), Viverra Films (Holland), The New Yorker, The Weather Channel, BBC, Time Magazine, TV Asahi (Japan), ABC News, French Daily Liberation, HBO, the Norwegian Broadcasting Corporation, Thalassa (French television), HD Net TV, National Public Radio, the German TV network, ZDF, Svenska Dagbladet (Sweden), and CBS news.

Shishmaref, consciously and consistently, has become the face of climate change. Local relocation activist, Tony Weyiouanna, has largely been the architect of this media success. He tells the story of how, in 2002, a New York Times reporter phoned Weyiouanna in his office in Shishmaref. The reporter had an ultimatum: convince him to come to Shishmaref or he was going to Tuvalu for a climate change story.

"I looked up Tuvalu on the internet," says Weyiouanna, "and saw that he could be sitting in shorts drinking a margarita." Or, he could come to Shishmaref, the relatively desolate island in the middle of the Chukchi Sea. Weyiouanna says, "what I knew we had was culture."

To date, the people in Shishmaref have been photographed picking berries, wearing fur lined parkas, and riding on dog sleds, and these photographs have been reprinted and shown by many of the world's most respected news organizations. The exoticism (compared to the average American) of the Inupiaq people in Shishmaref, and the cultural prestige and romance given by media outlets when capturing these images, has launched Shishmaref into the international consciousness. In an image obsessed political world, this international recognition is a way of reestablishing local control over relocation strategies and planning.

The IAWG's last report makes the statement, "These problems [flooding and erosion leading to relocation], which primarily affect small, isolated communities, are difficult to address and due to this are easily ignored" (IAWG 2008). To gain voice and attention, residents of small Arctic villages are taking drastic steps. Shishmaref has launched a media frenzy¹ and lobbied extensively in state and federal arenas. The village of Kivalina has brought a lawsuit against eight oil companies, 14 power companies and one coal company, asking for the cost of their own relocation (Ben-Ysef 2008). All these efforts, I argue, are an attempt to gain, not just state and federal money

¹ This media attention has caused some concern in the village as well, and there are local negotiations about the worth and cost of the attention (pers. comm. F.F.: 2008, Wisniewski and Marino 2006).

towards relocation, but to regain control over movement of people over traditional lands; an effort to not be ignored or acted upon without consent; an effort to reinvent the power relationship between Native villages and government.

It should be noted that the members of the IAWG board themselves have, at every meeting and in every report, discussed the need for local voice in state and federal projects. In a cross cultural setting, how to establish this voice is complex, and is given little attention. The history of government intervention into Alaska Native village life is a dismal history of colonialism, and reversing the very nature of how government works with and for local Native communities is difficult and underestimated.

Complexity in disaster prevention and sustainability: some final thoughts

De Wet writes

dealing with complexity - as opposed to complicatedness- requires us to find a way to build open-endedness and flexibility into the more structured frameworks and procedures that are an inescapable part of policy formulation and application, and to find ways of capitalising on and incorporating the creativity and entrepreneurial talent to be found among resettlers (2006: 199).

In the simplest understanding of complexity, flexibility is necessary to handle situations that continuously change, evolve, and are - to some degree - unpredictable. Flexibility can only be capitalized on if significant power over money, planning, and defining goals is ceded to local residents. In the context of Shishmaref, the loss of local control over movement and development has contributed to the vulnerability to flooding and erosion that exists today as much as, if not more than, rising temperatures, rising seas, and melting permafrost. If, as Appadurai writes, "globalization is essentially a localizing process" (1996: 11), then any notion of sustainability in a global world must also emerge from the local.

Sustainability is essentially a negotiation about meeting current needs while maintaining concern for the future. With regards to social and cultural systems, sustainability can only be negotiated locally. In order to maintain cultural integrity, to literally sustain a tribe and a way of life - when faced with immediate flooding hazards - people in the village are attempting to regain power over decisions about relocation, land use, and future development. This is being done through encouraging national and international media attention, lobbying efforts, and local organization. Throughout my work in Shishmaref, a consistent theme of interviews concerning relocation is a) the wish to remain as a unique and discrete village on their own land; b) the wish for local control over decision making; and c) frustration with government planning.

The goal is not isolation. Shishmaref is connected in all areas of life to the outside, globalized world. Family members move away, but come back to visit. Television, radio, video games are available in the village. Money, commodities, information, and people move freely among the village, other Inupiaq villages, urban areas throughout the United States, and the world. This will be true for the foreseeable future. This paper has sought to demonstrate, not that the village should act alone, but that the effects of planning and development without local input and local knowledge are antithetical to ultimately creating a sustainable village.

This research has spawned an ever increasing number of further questions and avenues for future research. Among them is the way in which sustainability is defined by different cultural groups in different contexts; what

procedural steps can be taken to successfully integrate local knowledge and local definitions of sustainability with government expertise; and how power and political leverage establish themselves as necessary variables in sustainability theory. Also of interest in the Shishmaref context is how indigenous tribes capitalize on the outside world's essentialized misunderstanding of Native peoples to gain political leverage and media attention. What is constant in these questions is the need to develop broad ranging theory without neglecting local difference; to ultimately ask Shishmaref residents 'what does sustainability mean to you?'

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