

The Impacts of Oil and Gas Activity on Peoples in the Arctic Using a Multiple Securities Perspective (GAPS) ¹

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Project Partners: Geir W. Gabrielsen, Kari-Anne Bråthen, Andrei Repnevski, Dawn Bazely, Julia Christensen (young researcher), Andrew Tanentzap (young researcher), Alexey Feldt, Oksana Zaretskaia (young researcher).²

Funded Young Researchers: Holger Pötzsch, Kirsti Stuvøy, Victoria Gonzalez, 1 PhD student.

Aim and relevance for the international polar year

“Human-induced climate change is undermining the ecosystem upon which the Inuit of Canada, Alaska, Greenland and Russia depend for their physical and cultural survival. Climate change in the Arctic is not just an environmental issue with unwelcome economic consequences. It is also a matter of livelihood, food and individual and cultural survival. In short it is a "human security" issue.” Shirley Wolff Serafini, former Canadian Ambassador to Norway (3 May 2004)

Over centuries, Arctic peoples have learned to adapt and thrive in an uncertain, harsh environment. Presently, change is occurring in the Arctic at an unprecedented rate, placing great pressure on local peoples' capacity to cope. Such change puts immense strain on the many factors that are necessary for human well-being in the Arctic. These include the health of the environment, the supply of traditional foods, community health, economic opportunities, and political stability. *For the purposes of this project, human security is achieved when individuals and communities have the freedom to identify risks and threats to their well-being and the capacity to determine ways to end, mitigate or adapt to those risks and threats.* (UNDP, 1994; O'Brien, 2005)

GAPS is a multi-national, multi-disciplinary initiative *that aims to examine the scope and range of human security in the Arctic. GAPS specifically focuses on the impacts of oil and gas activity on climate change and on Arctic peoples, in order to identify and document threats and coping strategies from traditional and human security perspectives (in both Arctic communities and among Arctic researchers). GAPS aims to deliver this knowledge in hand with Arctic communities, to other Arctic communities, and to the human security policy and academic communities. GAPS is submitting proposals to both the Canadian and Norwegian IPY programs.*

The Norwegian component of the GAPS application directly addresses the IPY objective of increasing international cooperation, in particular with Russia. It will also recruit new researchers with a strong Arctic focus, and directly engages Norwegian individuals and communities in the production of knowledge about social and natural sciences in relation to human security in polar regions. One crucial outcome of this project will be the development of a strong, human security based network of communities in Norway and Russia (see GAPS Canada) that will direct this knowledge to the human security policy community. This project also examines the ecological and social impacts of oil and gas development and exploitation on Arctic communities. GAPS complements and supports the activities of the Arctic Monitoring and Assessment Program (AMAP), in particular the Assessment of Oil and Gas Activities in the Arctic (OGA). Finally, a central concern of the international IPY committee is the need for integration of social science perspectives in Arctic research. GAPS is the embodiment of such a multidisciplinary spirit, in that *natural and social scientists are working together in one project* for the purpose of providing a more holistic understanding of life in the Arctic.

As a co-signatory of the Lysøen Declaration on Human Security (1998) with Canada, in which Arctic cooperation was identified as a key aspect of their partnership agenda, GAPS will ensure that Norway continues to take a lead role in human security, particularly in the Arctic.

¹ This project description has been adapted towards the funding allotted by the NFR. Changes to the description begin on page 5, beginning with the heading “Award”.

² As young researchers have been made a primary objective of this project, we include them not only in the funded positions, but also as part of the active partners (executive) of the project.

Rationale and Framework

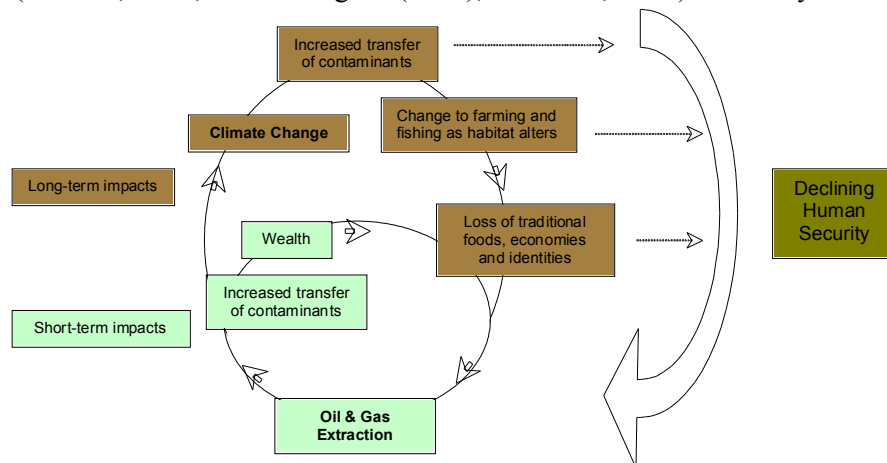
Human Security, Fossil Fuels and Climate Change in the Arctic

Since the early 1970s oil and gas development has come to dominate the industrial sector in the Arctic. At the same time, the region is experiencing climate change with increasing intensity. The pace of resource development has accelerated significantly in recent years as the price of oil and gas has risen, motivating industry to travel further north to extract fossil fuels for global consumption. Increasing pressure from various governments—Russian, Norwegian, Canadian and American—requires the Arctic to be open for business. Arctic communities are being tied into the global market for oil and gas, putting more pressure on their already-strained individual and societal capacities to cope with change, participate in resource management decision-making, and secure any possible economic and social benefits.

Occurring amidst a changing climate, oil and gas activity poses critical challenges to the human security of communities, affecting local economies, traditional livelihoods and identities, health, food, and the environment. Furthermore, many of the current drivers of change in the Arctic are only expected to intensify in the future (Chapin et al. 2005). Such large-scale alterations of the environment interfere with local peoples' capacity to adapt by putting access to resources—and the resources themselves—at risk. While GAPS focuses its analysis on the effects of oil and gas development in the Arctic on local communities, it is impossible to separate such activity from an overall context of change—particularly, climate change—as these processes interact and overlap in ways that make potential effects even more acute (Fig. 1).

Figure 1. Short-term and long-term consequences of the Arctic fossil fuel industry

The traditional language of security has been actively employed in the Arctic region for decades (Huebert, 2001; St. melding 30 (2004); Heininen, 2004). Security in the Arctic



has focused on issues of power, resource exploitation and territory. Global climate change is already altering the Arctic landscape, and allowing for increased transport and greater access to untapped resources, particularly fossil fuels. Moreover, the burning of this fuel to satisfy global energy demands, will further accelerate climate change. Consequently, oil and gas plays an increasing role in security debates by both increasing sought-after revenues for Arctic states, and also providing for a reduced dependency upon Middle Eastern sources (Barlindhaug, 2005).

As oil and gas activity intensifies, it is critical that we understand its effects on communities in a comprehensive way, so that we can explore all the factors that contribute to a sense of well-being or human security. Through collaboration and communication with communities, we can examine the risks, threats and opportunities that oil and gas activity presents to human security in the Arctic.

Security Models: Old and New

If the traditional 'security' concept is alive and well in the Arctic, what about 'human' security? As states consider potential conflicts over territory and resource

exploitation, people continue to live in the region. Is the concept of human security, as popularized by the 1994 UNDP Human Development report, and broadly defined as “freedom from fear, freedom from want”, meant for people and communities in the Arctic? Not according to the dominant security and human security debates. Despite the clear interest and recognition of its relevance to the Arctic (Canada/Norway 1998; Peace Prize Symposium, 2005) human security is still largely invoked only in cases of large-scale violent conflict (McRae, 2001; Buzan, 2004). While a growing body of research and policy work has developed on human security (UNDP 1994; Hoogensen 2005), limited research has been conducted on:

- (1) the relevance of the human security framework for the Arctic, and
- (2) the unique challenges to human security in the Arctic context.

The GAPS project provides an alternative framework to the traditional security approach of policy makers (Fig. 2). In contrast, our human security framework explicitly broadens the number of groups involved, and takes as its starting point, the referent of the individual and/or community as the determining factor of security (Fig. 3). Conceptually, this framework closely parallels Costanza’s models of ecological economics (Costanza, R. 2001)

In our framework, Arctic communities express their perceptions of threats and assess their capacity to cope with them. These expressions are not isolated from those threats identified by Arctic researchers (e.g. contaminants in traditional foods), and the interactions between these two communities (Arctic peoples/communities and Arctic researchers) are explicitly linked. In order for the human security framework to function fully, policy-makers must also be included. This completes the human security “triangle” and generates a multiple securities approach. This does not mean that government and policy-makers are obliged to intervene at all levels of identified human in/security in the Arctic. However, they can act as an important conduit for the facilitation of knowledge between communities, as well as responding to human in/securities when communities can no longer respond effectively to threats.

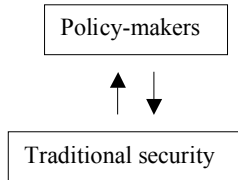


Figure 2: Dominant Approach or Discourse for Security in the Arctic

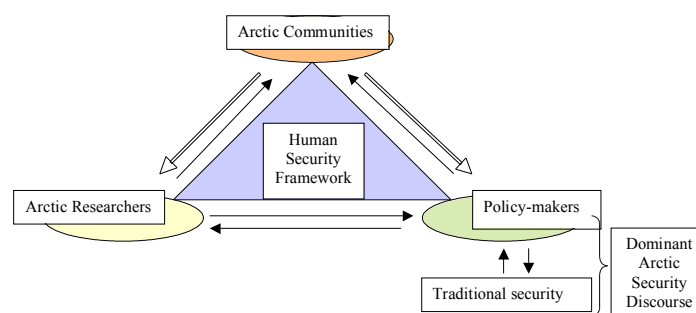


Figure 3: Bringing the Human Security Framework to the Arctic

Arctic oil and gas development, analysed from a securities perspective, can be seen both positively and negatively, generating risks and threats as well as opportunities. The Human Security framework provides a vehicle for the expression of threats and vulnerabilities and adaptabilities from the grassroots level.

Moving forward within a human security framework

The accumulating body of research into human vulnerabilities and adaptations to changing environments in the natural and social sciences has, many argue, failed to be transferred into effective action on the part of policy makers. “It appears that we care very

little about the health threats that pollution of the Arctic represents . . . research on the Arctic receives little attention.” (Anderssen and Gabrielsen: 2005). Directing research knowledge towards an existing and specific policy community (human security) therefore is integral to effective policy action.

GAPS not only challenges predominant, state-centric conceptualisations of human security, but it also addresses security issues across a range of disciplines and approaches human well-being from a variety of interlinked and overlapping angles. The human security framework (Fig. 3) demands input from a variety of academic disciplines. The GAPS research team includes experts in ecology, community health, ecotoxicology, geography, sociology, and political science. We are truly interdisciplinary in our research approach, in order to integrate the wide range of factors that comprise human security e.g. economic, food, health, environmental, personal, community and political security (Axworthy 2001: 24-25).

By taking the community as the starting or referent point, GAPS adopts a bottom-up approach that will effectively involve Arctic communities, as well as explicitly articulate the need for interdisciplinary research on the impacts of change in the Arctic. “She sits at the back of the hall, listening to experts from far away talking in a language not her own about the fate of the bush she has roamed all her life.” (Weber, 2006). The GAPS research team will communicate and collaborate with communities and local organizations, and will pay active attention to the well-articulated need for comprehensive, participatory research on the impacts of oil and gas development in Arctic communities (AHDR 2004; ACIA 2005; AIL 2005).

Research project description

GAPS contains a series of related and integrated sub-projects that address human security in the Arctic from different angles. Each sub-project aims to address different themes of human well-being within the human security framework. The goal as a research team is to bring these sub-projects together to illustrate the comprehensive nature of human security and the multiple processes that interact to create security or insecurity. These sub-projects will occur in cooperation so as to promote interdisciplinary collaboration and communication in the field, as well as lessen the load of research projects on the communities.

The overall aim of the Norwegian GAPS project is to identify threats to, and opportunities/adaptation/coping strategies for, human security in the Norwegian and Russian Arctics by assessing the impacts of oil and gas activity in these regions. This aim will be addressed by 4 integrated sub-projects (SP) covering the scopes of 1) increase of contaminants in human environments, 2) spread of invasive non-indigenous species, 3) identification of human in/securities in Arctic communities (resident and research perspectives), and 4) identification of human security in Arctic communities: Community and Research perspectives (synthesis and integration). SP3 and SP4 will be linked to international GAPS projects and other IPY initiatives, allowing for and strengthening international cooperation, facilitation of community linkages and networks (Canadian communities are very interested in the resulting outcomes for Norwegian and Russian communities, for example), and facilitating circumpolar comparison.

The sub-goals of the Norwegian GAPS project are:

- To identify and document the impacts of oil and gas development on Norwegian and Russian Arctic communities;
- To determine the meaning of security in the Arctic context, by identifying the factors that contribute to in/securities as articulated by community members;
- To define the relationship between traditional and human security in the Arctic context;
- To determine the current/future threats posed by invasive non-indigenous species and increased contaminant exposure that will be generated by short-term oil and gas activity and longer-term climate change;
- To identify new potentials for local adaptability/capabilities to ensure human security in communities;

- To determine linkages and disjunctures between research-based and community-based identification of threats and capabilities;
- To deliver findings through accessible venues to communities (media, town-hall meetings, community-based youth researchers) and to human security policy communities (reports, publications, meetings);
- To facilitate community engagement in research in the Arctic and further strengthen university-community research linkages;
- To facilitate communication and collaboration between circumpolar communities; and,
- To provide the basis for PhD and post-doc research for participating young researchers.

Research sites: Proposed research sites Nenets Autonomous Region, and Arkhangelsk, Russia, and Porsanger and Hammerfest, Norway. Additional relevant sites will be more specifically chosen in consultation with the Barents Institute and the Saami College. All sub-projects will work together on the same sites to ensure maximum participation (as research assistants, PhD students, translators, pathfinders) of community members.

Award: This project has been awarded the amount of 6 million NOK over a four year period. The following sub-projects have been adjusted according to what this amount enables each sub-project to achieve. Top priority has been placed on the multi-disciplinary character of the project (cooperation between the social and natural sciences), and on young researchers; therefore, the vast majority of the funds will be used to support 2 full PhD positions, 1 year student fellowship, and a 2 year researcher/post-doctoral position. Most communication between researchers and the expert group will take place via telephone and email, as travel funds are largely earmarked for the young researchers. Two conferences are planned, however additional funding will be sought (through the University of Tromsø) to support these conferences. The extent to which the entire GAPS expert/consultants group can participate in these conferences will depend on external travel funding (or their own funding); otherwise, their contributions consist of their being available for consultation and advice for our young researcher team. GAPS Canada, the sister project of GAPS Norway, together comprising GAPS International, has been awarded \$500 000 CAD subject to proposal and budget revisions.

Some important notes: we have been able to expand our Russian contacts, and we now have very good cooperation coming from Pomor State University (PSU) in Arkhangelsk. The consultants from PSU will assist us in obtaining data from the Arkhangelsk Oblast. We have also made some decisions about which young researchers should be awarded the student fellowship, one PhD position, and the Post-doctoral position. These decisions are justified in the relevant sub-projects below. Generally speaking however, these students were chosen as their competency in the respective subject area is well demonstrated, and enables the research to be carried out immediately, eliminating the need to introduce the themes to the new participants. This is particularly important for the 1 year student fellowship and the 2 year post-doctoral fellowship (which builds upon, but does not replicate, that student's PhD work). We have also obtained cooperation with the University College of Tromsø (HiTø), which will make its resources (study program on oil and gas, etc) available to our young researchers, and we will share our knowledge in kind with them. Our contact at HiTø is Are Sydnes (letter of cooperation attached). All GAPS research participants confirm that research and data collection will be conducted in strict accordance with IPY data policy.

SP1: Oil and gas, climate change and plant invaders in Arctic Ecosystems³

- Invasibility of toxic fungi-infected forage grass species over climatic gradients.

Responsible Researchers: Kari Anne Bråthens (UiTø), Dawn Bazely (York, Canada)

³ SP1 has been substantially altered from the original proposal, although the theme has been retained. The financial support towards this project is minimal compared to the other sub-projects, but we wished to still include it as it has been, and continues to be, a pivotal focal point for multidisciplinary cooperation, and we expect that this theme will be the subject of further multidisciplinary cooperation in the future. SP1, as it currently stands, provides the preliminary ground work for further research on the connection between invasive species and oil and gas activity.

Participants: Andrew Tanentzap (youth consultant), Victoria González (UiTø), Elena Shavrina (PSU – consultant)

All species have the capacity to expand, but problem plant invaders are those whose movements to new continents and regions are mediated by humans (Myers and Bazely 2003). Invasive and erupting species, both indigenous and introduced, can alter how systems function at the community and ecosystem level (Williamson, 1996; Walker and Smith, 1997; Gordon, 1998; Myers and Bazely, 2003), and have substantial social and economic impacts (Soule, 1990; Simberloff, 1996; Mooney and Hobbs, 2000; Pimentel *et al.*, 2000; Perrings *et al.*, 2000; Lounibos, 2002; Perrings *et al.*, 2002; Meyerson and Reaser, 2002). In a warming climate, some species that spread northwards will, undoubtedly, include a number that will significantly disrupt ecosystem functioning (Mooney and Hobbs 2000), thereby threatening human well-being.

Grasses are a key group of plants that contain most of the world's major food (cereals) and forage (grasses) species. Many temperate and arctic grasses can be infected by microscopic fungal endophytes which render them toxic to herbivores and also make the grass host more drought and flood resistant, consequently making the grasses able to invade new habitats. Although grass-fungal endophyte-herbivore interactions have been recognized as extremely important elsewhere (they cause huge productivity losses to the USA livestock industry), they are little studied in northern Europe in spite of their importance to moose, and reindeer. This is probably because they are not visible and have been difficult to detect. Large-scale surveys of fescue grasses in Sweden indicate that endophyte infection is widespread, particularly at warmer, lower elevations. Projected climate change will likely expand the conditions under which endophyte-infected grasses grazed by reindeer thrive.

Reindeer husbandry is an important industry to Sámi people in Northern Norway. Recent claims have been made on the industry becoming unsustainable (Moen and Danell 1999). Whereas such claims are based on effects of high reindeer numbers primarily on the inland part of Finnmark, there are potentially important negative effects from endophyte-infected grasses on reindeer in their summer pastures. For instance, strange reindeer deaths and unexplained loss of pasture land could be due to areas being invaded by endophyte-infected grasses. Climatically Finnmark has steep gradients from coast to inland and from west to east (Hanssen-Bauer 1999), probably affecting invasion of endophyte-infected grasses. Presence of endophyte-infected grasses along these gradients can be used as indicators of future climatic changes on plant invasibility.

The overall goals of this sub-project are:

To document the abundance and distribution of toxic endophytic fungi in important forage grass species, to vertebrate herbivores such as reindeer, *Rangifer tarandus*, throughout the climatic gradients of Finnmark. Such documentation is now easy to accomplish (Koh *et al.* 2006) and will enable us to assess the invasibility of endophyte-infected grasses for the projected climate change. Moreover, we want to detect the toxicity level of these endophytes by studying their alkaloid level. Because this sub-project has limited resources it has become a pioneer study. However, it will make the basis for a future proposal with more human-induced aspects on invasion of endophyte-infected grasses, e.g. in the potentially oil and gas threatened region of Hammerfest.

Field work for this study has already been conducted in Finnmark by Victoria Gonzalez, within the interdisciplinary project "Ecosystem Finnmark". We will continue cooperation with "Ecosystem Finnmark", a Norwegian Research Council project that is also based at the University of Tromsø.

Victoria Gonzalez has been chosen to conduct this particular project. From her Master Thesis Victoria Gonzalez is familiar with effects of reindeer husbandry management on aspects of pasture quality, making her competent within the research area that is part of the present project. Given that this is only a one-year project we believe Victoria to be an excellent candidate given her competence and insight to the actual study region and field of research. PhD funding for Victoria is currently being sought, through which she will be able to take the initial research obtained here, and address the invasion of endophyte-infected grasses connected to oil and gas, specific to the Hammerfest region.

SP2: Persistent organic pollutants in human plasma of residents from traditional Arctic societies – impacts of oil and gas activity.

Responsible Researchers (co-supervisors): Geir Wing Gabrielsen (NPI) and Gunhild Hoogensen (UiTØ)

Participants: 1 PhD student (this position will be announced).

In some Arctic populations, contaminant levels are so high that they can affect children's mental development and the resistance to infections (AMAP 2002; Cone 2005). In addition, there are concerns about effects on hormones that are important for growth and sexual development (Ahlborg et al. 1992; Lemesh 1992; Hansen 2000). The primary source of these persistent organic pollutants (POPs) is from marine food with high lipid content (AMAP 2002; Sadanger et al. 2003). However, these are the same foods that provide important nutrients, energy in a harsh climate, and also a sense of identity in a time of rapid cultural change (AMAP 2002). From the perspective of research, not only do the effects and sources of contaminants need to be documented, but it is also necessary to facilitate communication of these results to the affected communities. The overall objective of the present study is to get circumpolar data for emerging pollutants and metabolites that are linked to environmental pollutants (including oil and gas activity). What are the direct and indirect linkages between oil and gas activity and POP levels in humans? Possible geographical differences in contamination levels should also be investigated.

Indigenous peoples from Arctic societies – Alaska, Canada, Greenland, Northern Norway and Russia – living the traditional way of life will be interviewed and asked about their eating habits, life-style factors and about eventually diseases. Women will as well be asked about pregnancy and times of breast feeding. Additionally, plasma samples will be taken of each person interviewed (done in cooperation with local health officials). The samples will be analysed for pollutants, especially for pollutants connected to oil and gas activity. Samples of the different food items will be taken and analysed for the same pollutants. Pollutant levels of each person will be correlated to their effects on the immune- and hormone system, eventually diseases and to the pollutant levels in food items they are used to eat. Contamination levels will be compared between men and women. Pollutant levels will be correlated for each person directly to effects on the immune- and hormone system, the fatty acid profile and eventually diseases and food items.

There have been done studies on the problem of human health and POP pollutant concentrations before (Dewailly et al. 1989; Van Oostdam et al. 1999; Hansen 2000; Van Oostdam et al. 2000). However, there are few studies related to oil and only a few studies on emerging contaminants as BFRs and PFOS and about metabolites of standard POPs (i.e. HO-PCBs, MeSO₂-PCBs and MeSO₂-p,p'-DDE) in humans. Additionally, previous studies were only performed as a mean pollutant concentration of the population from one region and were compared to mean pollutant levels in food items. Therefore, this study will compare individual pollutant concentrations, effects on hormone- and immune system and the fatty acid profile and eventually diseases and the concentration of the food this individual person is eating. The desired outcome is a survey combining the insights of social sciences and human toxicology

This study complements recent studies of contaminants in North Norwegian and Russian communities (SFT, 2005; SFT, 2006), and complies with several major goals that have been formulated in the Arctic Monitoring and Assessment Programme (AMAP 2002) and a new assessment related to oil in the Arctic (AMAP, in press): a) There is a need to obtain a spatial distribution of the magnitude of contaminant levels (including pollutants from oil and gas activity) on a circumpolar basis, and on metals (mercury and cadmium), and POPs in organisms for which there are concerns for biological effects. b) There is a need for improved information on spatial and temporal trends to clarify the adverse effects of POPs, PAHs, methyl mercury, and cadmium on human populations, especially on child development. c) Interoperability, information and co-operation between the different countries is of importance. d) There is a gap in current understanding of the diet and food consumption patterns of specific arctic populations to allow better estimates of dietary intakes of contaminants and permit more reliable estimates of associated risks. This study intends to

provide new knowledge pertaining to trends of the adverse affects of contaminants on Arctic populations, using the human security framework, and focusing on relations between health security (one of the 7 categories of human security) and economic/energy security.

SP3: Cumulative impacts of change: using human security to articulate opportunity and threats in four circumpolar communities (joint project with GAPS Canada)

Responsible Researcher for Norwegian component: Gunhild Hoogensen (UiTø)

Participants: Holger Pötzsch (UiTø), Kirsti Stuvøy (UiTø) Julia Christensen (PhD student, McGill), Oksana Zaretskaia (youth consultant - PhD student, PSU); Are Sydnes (HiTø) .

Arctic Indigenous leaders are deeply concerned about the cumulative impacts of climate change and oil and gas development and the potential risks for culture, sustainability, and health of Arctic Indigenous peoples (AIL 2005). The capacity to adapt to such rapid and intense change depends heavily on the human security of local peoples; that is, the capacity necessary for local people to identify threats to their well-being and the capacity to determine ways to end, mitigate or adapt to those risks. In order to ensure that Arctic communities are supported in their resilience efforts, and are able to take advantage of any opportunities oil and gas activity may bring, it is crucial that we seek and understand community articulations of what is necessary for human security amidst unprecedented change. Furthermore, it is necessary that we explore how representations of change through mass media, government and policy affect local perceptions of in/security.

Eight communities (in conjunction with the GAPS Canada) will comprise the focus of this study: Nenets Autonomous Region, Arkhangelsk (Russia), Hammerfest, Porsanger (Norway), Inuvik, Fort Good Hope, Tuktoyaktuk (Northwest Territories, Canada), and Kaktovik (Alaska). The Norwegian component (which is independent of the Canadian study, in that a complete project will be successful with or without Canadian IPY funding) focuses on the Nenets Autonomous Region, Arkhangelsk, Hammerfest/Porsanger, and Kirkenes (as a research base, through the Barents Institute) while the Canadian component will focus on the Mackenzie Delta and Sahtu regions of the Northwest Territories. These regions have both indigenous as well as non-indigenous populations who are being touched by oil and gas activity and climate change in different ways. The experiences of these communities, all in different parts of the circumpolar world, will be compared and contrasted in an attempt to explore how political, economic and legal contexts affect human security. Such an exercise will facilitate cooperation and collaboration between countries on approaches to supporting community resilience to the effects of change.

This research project will proceed along two avenues: 1) the impact of mass media, scientific reporting, and government and policy campaigns on local perceptions of security (top-down security) (PhD position) and 2) assess human security risks and opportunities resulting from engagement in oil and gas activity in Arctic communities as they are identified by Arctic peoples themselves (bottom-up security) (2 year post-doctoral position).

1). The impact of mass media representations on individuals and collectives has been widely addressed in scientific literature (Luke 1989, Kellner 2003). Mass media representations influence the content of public discourse and impact the legitimacy of political decision-making and public policy (Lincoln 1989).

Interviews with researchers and politicians and a qualitative content analysis of mass media representations (TV-programmes, local and national newspapers, etc), as well as of scientific reports and science-based policy documents dealing with security threats in the North, will serve to assess a top-down approach. How do these approaches differ, how to they correspond? In what ways are these views reflections of traditional security approaches (sovereignty, energy security) or reflective of a wider securities agenda? In doing this the project brings together different environments (local communities, researchers, and politicians) combining their voices in an overall multiple securities assessment of potential and actual threats in the North

2. For the assessment of human security risks and opportunities as perceived from “the bottom up” (meaning from the individual/local/societal), we will employ a collaborative research approach to fully and meaningfully involve community members. Qualitative research methods, such as ethnographic interviews and focus groups, will be used to learn

about local peoples' perception of threat and opportunity resulting from oil and gas engagement, as well as their capacity to end, mitigate or adapt to identified threats, or how they chose to interpret and make use of opportunity. Here too, we need to ask: in what ways are these local views reflections of traditional security approaches (sovereignty, energy security) or reflective of a wider securities agenda? And why?

In total, we will explore the role that mass media and government and policy campaigns play in local conceptualisations of security, and compare this with qualitative surveys and interviews, as well as broader exploration of quantitative (statistics) and secondary data. Such an analysis will allow us to address perceptions of human security from the top-down and bottom-up; in other words, we can better understand how media, government and policy initiatives can influence perceived risks and opportunities at the local level. This will contribute to local articulations of human security in an effort to facilitate a broad picture view of the multiple processes shaping security at the individual level.

The candidates chosen for these two positions are Holger Pötzsch (PhD position) and Kirsti Stuvøy (Post-doctoral position) (cvs and grading attached). Holger Pötzsch has a strong background in cultural and media analysis, and his master's thesis addressed the role of media (pseudo-documentary and popular culture film) in societal perceptions of war. He also has a background in languages, including Russian, enabling him to access Russian media sources (he is also fluent in Norwegian, allowing him access to Norwegian sources as well). Holger Pötzsch obtained the highest grade possible on his master's thesis (A). Kirsti Stuvøy obtained her master's degree in Germany with a high score, and is currently a PhD student in her last year and a half of studies at the University of Tromsø. She has completed her course work, and is in the final stages of data collection, and has already begun writing her dissertation. Her area of focus is the perception of human security amongst women in Northwest Russia. Kirsti Stuvøy is fluent in Russian and Norwegian, and has gained extensive experience in conducting interviews for the purpose of assessing levels of human security in a gender context. This post-doctoral project will take advantage of the skills she has obtained, while giving her a very new and different context in which to work, thereby expanding the scope of her knowledge.

SP4: Identification of human security in Arctic communities: Community and Research perspectives (synthesis and integration)

Responsible Researcher: Gunhild Hoogensen (University of Tromsø)

Participants: Geir Wing Gabrielsen (NPI), Dawn Bazely (York U, Canada), Kirsti Stuvøy (UiTø), Julia Christensen (McGill, Canada), Holger Pötzsch (UiTø), Alexey Feldt (PSU, Russia), Elena Shavrina (PSU, Russia) Victoria Gonzalez (UiTø), Kari-Anne Bråthen (UiTø), Andrei Repnevski (PSU), Oksana Zaretskaia (PSU).

This project will synthesize and integrate the collected data of SP1-3, as well as the data obtained from the GAPS Canada research. The first three SPs will produce independent outcomes as their own research projects, but all contribute to the overall picture of security in the Arctic. This sub-project therefore consists of the most multidisciplinary facet of the GAPS initiative, bringing community, natural science and policy perspectives together. The outcomes of the species invaders and contaminants research will be compared with the outcomes of the community-based research to determine the extent of similarity and discord in perceptions of human security. This project will also focus on the multiple securities dimension, collecting data from Russia, Norway, Canada and the US pertaining to their security perceptions in the circumpolar region. A further comparison of the community and research identification of threats and opportunities (human security) with state security will be conducted. The outcome will be a comprehensive securities picture of the Arctic as illustrated in figure 2. Most of this collaboration will be conducted through email, and will focus on the production of an edited volume that sums up each individual project, and then analyses the results of the three sub-projects together using a multiple securities approach and the human security framework.

GAPS Partners/Expert Group

Attached (see appendix) is a list of consultants and expert group members who have agreed to provide support in one manner or another to the GAPS project. Their expertise is briefly

outlined on the list. Our list is fairly extensive – we have received a great deal of interest and support for the project, and these members wished to contribute in some way (mostly as consultants). As such, two confirmation letters needed to be added to “other items”. Though the active research group is considerably smaller (and the funded group smaller still), the project will benefit enormously from the input of the vast array of expertise.

Perspective and Strategic Foundation

This project aims at comparing findings from major areas in the Arctic, analysing the effects of industrialisation along two main dimensions. (1) The project will contribute to understand some of the main economic, social, cultural and political effects of industrial development by carrying out a multi-level analysis of the effects of oil and gas development. (2) The project will contribute to understand the biological effects of industrialisation by comparing the spread of pollutants and species invaders across a variety of organisms in the Arctic. The main strategic underpinning of the project is a comparative analysis of regions in the Arctic that ultimately will contribute to broadening the platform for Arctic cooperation and dialogue.

Societal relevance and communication

The weighted focus on threats to human institutions and biological organisms on the one side, and all of the opportunities that industrialisation represents on the other side, will contribute to develop parameters that can serve as guidelines in political decision making processes. Another equally important aspect of the project is the production of learning material that can be used in the schools and communal institutions such as museums. Researcher will, during the project period, carry out visits to elementary schools in order to present the project. Thus, the project will allocate resources for the publication of so-called popular science, that can be read by a wider audience. Such material will contribute to enlighten the general population concerning the questions analysed in this project.

Coordination and Cooperation with other IPY projects

There are a number of IPY projects (see Appendix) that are complementary to GAPS. Direct linkages have already been made with MODIL-NAO through a formal contract of close collaboration and sharing research data where relevant to the respective projects (please see attached contact). Further cooperation is considered with CAVIAR and EALÁT.

Education and Outreach

Funding for data management will be directed towards the development and maintenance of a GAPS project website (one main GAPS International project website, with links to GAPS Norway and GAPS Canada sites) that will facilitate communication of research milestones and, eventually, dissemination of research findings intended for the public. A student will be hired on a student stipend to manage the websites for the 4 year period. A database for researcher access only will also be developed from this funding as a way to consolidate research findings into one secure location.

Funding has also been allocated to producing popular as well as scientific publications (as much as possible will be made available online however, downloadable from the websites). In addition, GAPS is a partner on two outreach funds applications; one by IPY Youth, and the other managed by Bjørn Vassnes.