

October 14th 2006

Report to the Leiv Eiriksson
Mobility Program of the
Norwegian Research Council

Human Security in the Arctic

Major Research Grants written:

- HAVKYST
- IPY
- NORKLIMA

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Dawn R. Bazely, Department of Biology, York University



From Workshop to Network

The Human Security in the Arctic Project is the brainchild of Gunhild Hoogensen. In May 2004 she organized a workshop in Tromsø that asked whether the concept of Human Security, as defined by the United Nations, is relevant to the North.

The main goal of her application to the Leiv Eiriksson Mobility Program was to obtain funding for the two Canadian members of the Human Security in the Arctic team to come to Norway. Time and effort could then be focused on moving the Human Security in the Arctic Project forward.

We wanted to expand the network of researchers supporting the project and

to make links with other networks of communities (local peoples, researchers, and policy-makers) with similar interests. We also planned to develop the Human Security Framework into a conceptual scaffold that could ably support specific research projects.

An additional goal was to develop interdisciplinary research projects for post-graduate students, and to apply for significant research funding support.

I spent my time in Norway, talking with many people - in Norway, Sweden, Russia and Canada, and both leading and participating in the writing of research grant applications.

From Toronto to Tromsø

I am a university-based applied ecologist with the unusual experience of actually witnessing my primary research being translated into management policy by government agencies. It is completely clear to me that science alone can never provide effective solutions to environmental problems. These solutions are rooted in society's values-based decision. However, it is also utterly clear to me that the absence of good science – and by that, I do not necessarily always insist on peer-reviewed articles – will definitely provide hurdles to the social and political processes of solving these problems. Additionally, if the science exists, it MUST be communicated clearly.

My current research into the ecology of endophyte-infected forage grasses, (grasses with invisible toxic fungi) in

Scandinavia is an ideal fit with the goals of the Human Security in the Arctic Project, because:

1. It has direct major social and agricultural implications.
2. It addresses potential impacts of climate change by working with likely species that may spread northwards.

In the photo to the upper left, Gunhild is collecting grass samples for me!

In May 2004 I presented my research on the country-wide distribution of fungal endophytes of grasses in Sweden, at the Human Security Workshop in Tromsø. I subsequently became involved as an ecologist on the Human Security team.



Tromsøpalme brooch.

This non-native species has become a community icon and city mascot in Tromsø.

Below, Arne Campbell stands in front of a Giant Hogweed plant in August 2005.



"I spent a total of 5 working months in the Department of Political Science, Tromsø University."

Dawn R. Bazely

August 2005 – getting it off the ground ...

From August 2005 to July 2006, I spent a total of 5 working months in the Department of Political Science, Tromsø University, Norway. Since my husband and children could not come with me, I accumulated this work time over four trips.

I spent August 2005 in Tromsø, "the Paris of the North". During this time, I learned about the ecology of the area. I could not miss noticing one enormous non-native species present in the Tromsøya area, that may definitely be posing a threat to human security.

Tromsøpalme or Giant Hogweed is an introduced plant that grows up to 5m tall in Tromsø. It is both disliked and admired by the community, which features it on postcards and in local art, such as the beautiful weaving hanging in the entrance of the Vinmonopolet in Sentrum. The sap

of the plant is chemically photoreactive. If you get it on your skin and then stand in sunlight, it causes burns and blisters. Giant Hogweed is considered a major problem invasive plant species in parts of Europe and North America.

I decided to write a project module for our first research grant application to the Norwegian Research Council's Sea and Coast (HAVKYST) Research Grant competition on Tromsøpalme. I proposed supporting two PhD students to investigate the cultural, political and ecological phenomenon of Tromsøpalme, and to ask if it is truly invasive, and how the community perceives it. The Norwegian government report on non-indigenous species was very helpful, along with conversations with Dag Vongraven of the Norwegian Polar Institute.

HAVKYST – we did not get it, but...

Although we were unsuccessful with our first research grant application, one direct result was that I have actively pursued a collaboration with colleagues in the Biology Department at Tromsø University.

I discovered that there has been little local ecological research into Tromsøpalme. The main research interest in Tromsø has been in the complex taxonomy of the three (!) non-native species of Giant Hogweed, all of which hybridize.

Together with Prof. Kari Anne Bråthen and PhD student, Virve Ravolainen, in June 2006, I designed a project to carry

out research into the basic population biology of Tromsøpalme (see plant at bottom left). Logistical support provided by the Biology Department van in June 2006 allowed me to do fieldwork. A Biology undergraduate student at York University, Paul Hertz, is now doing his B.Sc. Honours Thesis on the Ecology of Tromsøpalme.

This work will be jointly published with colleagues in Tromsø University and at the Tromsø Museum, and depending upon the results and analyses, we will be in a stronger position to pursue further research funding.

International Polar Year (IPY) Applications

The major research grant application that we developed with the support of Leiv Eiriksson funding, was to the International Polar Year. This represented our most significant undertaking and efforts from January to March 2006. The International Polar Year research grant applications totaled in excess of \$1.5 million CAD. Applications were submitted to both the Norwegian and Canadian governments.

This was a truly exhausting experience given the sheer size of the applications and

the fact that the application procedure for the two countries was substantially different.

For example – Norwegian application c.v.s were 4 pages long (A4 format) while Canadian c.v.s were 3 pages long (US letter format). The key to enduring the submission process, which seemed to consist mainly of endless document reformatting, was a sense of humour, plus endless patience and tenacity.

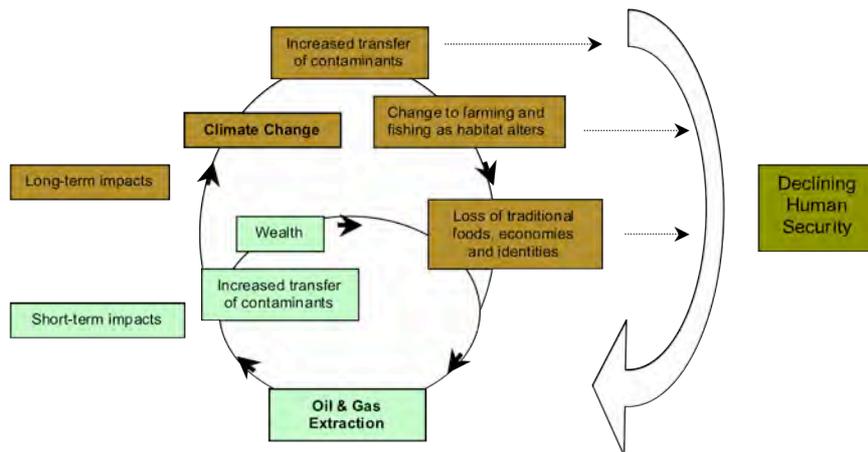
GAPS: Norway and Canada

The long process of applying for an International Polar Year grant for the Human Security in the Arctic Project, began with an initial letter of intent submitted by Gunhild Hoogensen in Fall 2005. This required approval, in order for us to move to the next stage of full proposal submission.

The IPY proposal, entitled “The Impacts of Oil and Gas Activity on Peoples in the Arctic Using a Multiple

Securities Perspective (GAPS)” has many participants and partners throughout Norway, Canada and Europe.

We co-wrote this as a lead team of Gunhild, Julia and myself. We developed a series of conceptual models such as the one at right to illustrate the links between our theoretical framework and the practical research and outcomes that the project will provide.



NORKLIMA application (submitted May 2006 – under review)

In May 2006, I joined Gunhild on a week-long trip to Pomor State University in Arkhangelsk, Russia. I used Leiv Eiriksson funds to cover travel costs. We met with Russian colleagues who participate in the Tromsø-Pomor State Universities exchange (www.pomorsu.ru/Departments/NorwayCentre/eNPC.htm). Gunhild and I also set up a meeting with 5 professors from a range of disciplines, including the Department of Botany and General Ecology, in the Faculty of Natural Geography.

Gunhild was very interested in fostering the existing collaboration between Pomor State University and Tromsø University. Therefore, we proposed a collaborative application to the Climate Change Research Competition – NORKLIMA – of the Norwegian Research Council, in the inter-disciplinary section of the grants.

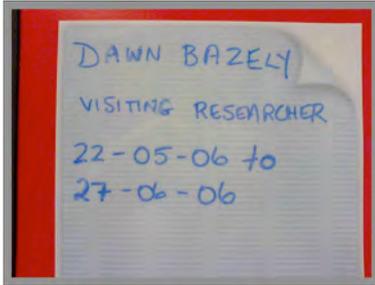
The outcome was the proposal: Climate Change and Oil and Gas Activity: using a human security approach to determine impacts on Norwegian and Russian Arctic communities (CCOGA). Like the IPY application, this was highly interdisciplinary. I took the lead in writing it, even though it will not fund my research or students directly, because I was, by then, well versed in research grant writing in this area! Like the IPY proposal, the application contained a series of related PhD research projects that were nested in the Human Security framework.

The main challenge for me was to learn about the expertise and data that existed in Arkhangelsk and to integrate this into the research proposal. I proposed integrating the Ecological Footprint Approach and Human Security in research to determine significant and effective indicators of ecological and environmental change resulting from the long and short-term impacts of Oil and Gas Activity, in Norway and the Nenets Autonomous Area of the Arkhangelsk Oblast.



Gunhild Hoogensen and colleagues from Pomor State University, Arkhangelsk, Russia - Maria Lvova (centre), and Marina Kalinina (right).

What happens when an Ecologist works in a Political Science Department?



The simple answer: confusion! We found that many of our academic colleagues simply could not get their head around a Biologist being based in a Political Science Department. One of my office neighbours was puzzled by why a Political Scientist would know the Latin names of the plants in the Tromsø Botanical Garden!

It took me many months to arrange meetings with the Tromsø Biology professors. I had great difficulty communicating to the Biology Department head that although I was phoning her from Political Science, I was an Ecologist, whom a number of her faculty might want to meet! When we all FINALLY met in June 2006, I was asked “are you the famous Dawn Bazely?” Well – I guess that we are all

famous somewhere for about 5 minutes!

Doing GENUINE interdisciplinary collaborative research that cuts across broad ranges of disciplines is tough. While many academics claim to be interdisciplinary, for most, the focus still remains extremely narrow. Being truly interdisciplinary, with unexpected collaborations among distant disciplines, requires overcoming the basic structure of academia, which is to put people in specialized boxes. Climbing out of these boxes is energetically costly.

This report is intended to illustrate some out-of-the-box thinking. Rather than the usual staid academic reporting format, I hope that this newsletter will provide a more efficient and engaging form of communication!



Gunhild with History professor, Alexey Feldt, History student, Nastia Khairulina of Pomor State University and young students that we met at the museum of Malye Korely, Arkhangelsk, May 2006

Gunhild Hoogensen – collaborator extraordinaire!

Gunhild has become a close friend. She is wonderful to work with because she is so open to new ideas, theories and approaches.

We have undergone mutual educational experiences. She now includes environmental security and ecology in her lectures and I include the Human Security perspective in mine.

Why is she such a successful collaborator? One reason may be that her undergraduate degree is in Biology, so perhaps this is why she does not have the antipathy towards the Physical Sciences, that seems to prevail among some colleagues in the Social Sciences and Humanities and in society at

large.

An additional hallmark of the active collaborators who have come on board the Human Security in the Arctic project, is that like Gunhild, we are all very interested in learning new things and are not afraid to take intellectual risks and to admit that we don't know something.

Gunhild has attracted a group of people who are firmly committed to the project. The one outstanding task that remains from the 2004 workshop is to finish editing the volume and given the unflagging enthusiasm, this will soon be done.

Julia Christensen – the other Canadian brings a truly Northern perspective

Julia was interviewed by the Canadian Broadcasting Corporation's Canada North Radio Programme about her time in Norway

Because Dr. David Malcolm, the other recipient of the LE was unable to release the time to spend in Norway, he had to find a replacement. We were incredibly lucky that Julia Christensen agreed to his proposal that she join the project.

Julia was in between finishing her Master's degree in Geography and starting her Ph.D. Her strong writing skills, extensive journalism experience and high level of patience, were a key reason why we were

able to submit the two International Polar Year applications to Canada and Norway. Julia has grown up in the Canadian Arctic (Northwest Territory) and she has an extensive knowledge of aboriginal communities and northern youth issues.

Her network of contacts was invaluable in our obtaining support from various NGOs for the IPY applications.

www.ualberta.ca/~ipy/YSC/people.html

The Impact of Leiv Eiriksson Mobility Funding on my Career

The experience of working with colleagues from outside of the Natural and Physical Sciences has allowed me to develop a broader perspective, and to expand into new areas of research.

Similarly, the experience of developing and writing large grant applications really stretched my skills in new directions.

This opportunity and experience has convinced me that ALL academics must actively seek to broaden our perspective rather than maintaining a narrow focus,

which is, unfortunately, what the prevailing university system rewards.

In July 2006, I became the Director of York University's Institute for Research and Innovation in Sustainability.

This 2-year old research unit cuts across all faculties, and is based on the York Centre for Applied Sustainability that was based in the Faculty of Environmental Studies. The challenges that I face are similar to those that face us in building the Human Security in the Arctic Project.



Making NGO connections – WWF Norway

www.iris.yorku.ca/Home/index.html

In developing our major applications to IPY Canada and Norway, we reached out to many groups and networks, academics, government departments and NGOs.

In June 2006, I went to Oslo to meet with Tonje Folkestad, Climate Change Officer in the WWF Arctic Programme.

I was interested in finding out more about the WWF initiatives on climate change and reindeer herding in the Nenets region of Russia because some of our proposed projects in the NORKLIMA application are also here. The meeting provided me with an opportunity

to tell Tonje about the Human Security in the Arctic Project and the Ecosystem Finnmark Project. The latter project, led by Prof. Rolf A. Ims, is based in the Department of Biology, Tromsø University. It is evaluating the interactions between reindeer and northern ecosystems. Kari Anne Bråthen (Tromsøpalme Team) is also a member of the Ecosystem Finnmark Core Team.

<http://uit.no/statsvitenskap/humansecurity/>
<http://uit.no/biologi/forskningsprosjekter/>
<http://www.ecosystem-finnmark.com/>

Summary of the Main Leiv Eiriksson Mobility Program Supported Activities

Grant applications submitted: 2 in Canada, 3 in Norway

Grants received: \$3500 York Incentive Grant, IPY Norway (successful but the amount is not yet known), and the results are pending on the IPY Canada and NORKLIMA applications

Lectures and talks given by Dawn Bazely directly arising from this project: 4

The Ecology of Natural and Human-Induced Disasters– Political Science Faculty, Tromsø, (Graduate Seminar), Biology Department, McMaster University, Hamilton, Canada (Department Seminar), and Earth and Atmospheric Sciences, York University, Toronto, Canada (Undergraduate Course guest lecturer)

Fungal Endophytes of Grasses – Biology Department, Tromsø University

Trips funded: 4 trips to Norway for Dawn Bazely, 1x2 week trip to Norway for Andrew Tanentzap (graduate student in Biology at York University) to work on IPY proposals, 1 week trip to Pomor State University, Russia for Dawn Bazely



"I got to give lectures entitled, The Ecology of Natural and Human-Induced Disasters"

Report to Leiv Eiriksson

Mobility Fund

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*Paris - the Tromsø
of the South!*



*Maddy Ewins at the
Boat House in
Tromsø where
Aretandria keeps its
traditional Norwegian
Boats
June 2006*

Knowledge Transfer: from Tromsø to Mongolia

When I went home to Canada to see my family in April 2006, York International, which had signed a co-operation agreement with the National University of Mongolia, asked me to assist a visiting Mongolian Biology professor, Sonya Nergui, in applying for research funding.

Sonya wanted support in developing their new Integrated Water Resource Management Programme. I adapted our Human Security in the Arctic Framework to create the SWiM (Sustainable Water in Mongolia) proposal.

Threats to water availability and quality in Mongolia constitute a fundamental threat to Human Security. Overgrazing, mining, and climate change are all reducing water for humans and the environment in Mongolia.

We received \$50,000 CAD from the Association of Universities and Colleges Canada for this project for Fall 2006.

I have just spent 2 weeks in Mongolia with two York University colleagues. Three

York graduate students will spend two months carrying out research and developing curriculum for the Integrated Water Resource Management Programme.

Below, I am milking herder's goats in the Little Gobi Desert, where we will collaborate in an ongoing research project. Although the herder lifestyle is highly sustainable, it is threatened by a variety of externally driven factors that pose a direct threat to short and long-term water availability.



Acknowledgements

I am **very** grateful to the LE Administration for allowing me to take up my funding during multiple trips to Norway. In July 2005, I had just completed a one-year sabbatical in which I spent 3 months in Sweden. Consequently, my family was not too happy at the idea of my going to Scandinavia yet again, for an extended period. However, I am very lucky to have the support of a family who believe in actively working to improve the environment, and it also helps that my husband works for World Wildlife Fund Canada.

I saw my children, Madeleine (11), Carolyn (8), and my husband, Peter Ewins, who was, at the time, Arctic Programme Director for Canada, in between my trips. I thank my family from the bottom of my heart for being so supportive and allowing me to spend so much time away. It was tough on you!

Many thanks to Gunhild Hoogensen, Julia Christensen and David Malcolm, for their technical support, friendship and enthusiasm. We laughed and cried together as we worked our way through the labyrinthine bureaucracy of the IPY applications, and taught each other a lot about our respective areas of academic

expertise.

I owe a debt of gratitude to Gunhild's husband, Duane Campbell, and children, Arne, Brontë and Liesbeth, who adopted me. Like my family, they are patient supporters of an academic Mum.

Many thanks to all of the faculty, students and administrators at Tromsø University – and especially to Åshild Tempel, Jochen Peters, Albert Valiente Thoresen, Kjersti Melva and Evelyn Johnsen, who arranged offices, and helped me with printing and photocopying and accommodation. I am also grateful to Marina Kalinina, director of the Norwegian-Pomor University Centre for her hospitality.

At York University, David Dewitt, then, Director of the York Centre for International Security Studies encouraged this collaboration and put me in touch with Gunhild! Rosalyn Reid, Associate Director of the York University Office of Research Services helped us to negotiate the IPY application in Canada.

My daughter, Maddy, paid the best tribute to Tromsø, when she came here in June 2006. She attended school with Arne, and afterwards declared that she plans to learn Norwegian (we bought an enormous dictionary) and to live in Norway!