

Local knowledge and scientific research in the Arctic Regions

Workshop

Title:

Integration of local knowledge in scientific research. A workshop for exchanging and transferring knowledge on collaborative research practices in (sub)arctic regions between aboriginal and academic researchers from France, Scandinavia and Canada.

Institution managing the project: CEFE CNRS Montpellier

Venue of the workshop:

Maison des sciences de la communication du CNRS

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Funding: CNRS, ISCC (Institut des Sciences de la Communication) and INEE (Institut Ecologie et Environnement)

Project coordinator: Sylvie Blangy

Summary of the project:

Local and traditional knowledge is increasingly important in environmental research programs, especially those concerned with climate change in Arctic regions. Research collaborations between indigenous peoples and those from outside the community are encouraged but are still being developed and are specific to Canada. The French scientific community operating in the Arctic regions of Canada and Scandinavia is highly interested in obtaining expertise on how to integrate traditional knowledge in research projects and develop partnerships between social and life sciences. The OHM: human-environment observatory project currently led by INEE on the Inuit community of Baker Lake in Nunavut offers the following opportunities: 1) reinforcement of France-Canada collaborations, 2) development of interdisciplinarity studies, 3) study of knowledge transfer between local experts and scientists. A participatory workshop using the collaborative research techniques developed in Canada is offered as part of the ISCC. It will bring together the Cree, Inuit and Saami researchers and the researchers from universities and research centers in Canada, France and Scandinavia. This meeting will give rise to a special issue on integration of local knowledge in scientific research.

Project description:

Local and traditional knowledge is increasingly important in environmental research programs, especially those concerning climate change in arctic regions (Berkes 1999). Qualitative observations transferred by the elders as narratives and observations over several generations now have scientific value and are mentioned or even integrated and combined with the quantitative data (Igort Krupnik 2002) (Grenier 1998). As part of the International Polar Year, research projects that are based on partnerships with local communities have been encouraged. Canadian research teams now include local communities in the data collection phase; they take the time to validate their results in the form of periodic restitutions and they establish monitoring based on the schools and the elders (Lévesque 2009, Gérin-Lajoie 2009).

However, the reconciliation between local knowledge and scientific research is still a work in progress. The experiments are few and scattered, and researchers now wish to discuss and compare their collaborative practices. The first teams to embark in these partnerships have mentioned several difficulties: collection, analysis, and publication of the data are more time-consuming than with non-participatory research; restitution and validation of the results require periodic feedback to (and from) the community, leading to increased travel budgets (transportation to the Arctic is expensive); validation of the articles before publication by tribal or village councils or by indigenous research institutes is haphazard; thus, publication time is longer and this can compromise future grant applications. Lastly, polar research is currently dominated by researchers in earth and life sciences who admit to having little experience on how to approach communities and involve them in their work.

On the other hand, native research centers are emerging in the arctic, such as the very recent “Inuit Knowledge Center” in Nunavut, northern Canada. This center is based on the experiences of the “National Institute of Research Excellence for Maori Development and Advancement” (New Zealand), the “Alaska Native Knowledge Network” (University of Fairbanks, Alaska) and the “Saami Research Center” (University of Lapland in Northern Norway).

Currently, the local communities want to extend their partnerships and wish to:

- Be a part of the research and not the subject of the research
- Develop research that responds to the concerns of the community (widening generation gaps, uncertain future of young people, socio-economic and environmental impact of opening and exploiting mines, obstacles to the preservation and transmission of local knowledge)
- Be involved from the start of the project in defining the research questions
- Be full collaborators and be involved in all phases of the analysis and interpretation of results
- Have more systematic access to the results of the research conducted on their territories
- Master the valorization and publication of the results concerning traditional knowledge and implement a system of intellectual property over the data and knowledge collected.

Several initiatives have emerged in the context of the Polar Year, which foreshadow future collaborative research:

- Recommendations, codes of ethics for researchers, expertise guides and research protocols (NRI 2007) (Negotiating research relationships with Inuit communities).

- Feasibility study of an “Observatoire Hommes-Milieux” (OHM) Human-Environment Observatory in the arctic region of Baker Lake, Nunavut. This and other OHMs, created by the Institute for Ecology and Environment of the CNRS (INEE) are interdisciplinary tools for studying the environment and human-environment interactions. The objective of OHMs is to study the consequences of a rupture or of a brutal evolution of a structuring activity, both on the local society (impact and perception by local people, impact on health, effects on land management...) and on the environment (pollution, impact on natural resources, biodiversity, evolution and resilience of ecosystems). This arctic OHM would lead the way to developing collaborations between France and Canada on a site heavily impacted by the opening of gold and uranium mines. Also, the Inuit community has challenged scientists to develop research on the socio-economic and environmental impacts of the exploitation of the uranium mine operated by Areva, which will begin operations in 2012.

- Development of collaborative research programs with the Inuit of Nunavut and the Cree of Eeyou Istchee by the Center for Northern Studies (CEN, university of Laval, Canada), in order to better integrate local knowledge and to encourage knowledge exchange between

native teams and scientists. The CEN has just signed a cooperation agreement with the INSU of the CNRS that has resulted in the creation of an International Mixed Unit (UMI) and the provision of CNRS researchers at the University of Laval.

- Funding by the Paul Emile Victor Polar Research Institute (IPEV) of a comparative study between Inuit (Canada) and Saami (Scandinavia) on the impact of global change on lifestyles and on animal resources (caribou and reindeer). Comparative analyses, exchange visits and research collaboration between the two communities have allowed the development of a model for integrating local knowledge and expertise. Exchange visits between the two communities (Inuit of Baker Lake and Saami from Övre Soppero, northern Sweden) are planned for 2011-2012.

- Study of new forms of tripartite research collaboration between the community of Baker Lake, the academics/researchers of several disciplines who do their fieldwork in this territory, and the mining companies who operate in these sites.

State of the art and previous work

As part of my work in northern Canada during my Marie Curie Fellowship, I developed a new concept of self-determined native collaborative research (Blangy, 2010), which is anchored in local knowledge and value systems. This concept was inspired by the work of Linda Tuhiwai Smith (Tuhiwai Smith 1999) and (give the first name, as for Linda...)McIntosh (McIntosh, Zygodlo et al. 2004).

Techniques for collaborative research and social engagement used in the workshops are derived from those developed by Chevalier (Carleton University; www.sas2.net), which were tested and adapted to the native context with Cree partners from James Bay. These techniques and this socio-constructivist approach allow my native partners to have high autonomy in the development of research projects focused on local concerns. They also allow them to collaborate with the scientific community. This collaborative approach restores fairness and terms of trade that are more favorable to the natives than is the case in conventional research. We use mixed methods that link qualitative and quantitative values. Stories, narratives, participatory mapping exercises, radar graphs, other highly visual geometric shapes, games and exercises that ease the dialog (Roman carousel, **construct analysis**) borrowed from other disciplines (psychology, economics) and the sharing of information allow us to compile, analyze and interpret the data generated in highly integrative fashion, enriching the research projects. These techniques promote comparative studies and research collaborations within and between the native communities themselves.

The Canadian Council for Social Science Research (CRSH) funded an exchange workshop in June 2009 in Ottawa on collaborative research and native tourism. This workshop brought together 15 academic researchers and 15 Canadian native co-researchers; we explored how to transfer knowledge and developed a tripartite collaborative research project (Inuit, Saami and Shout), submitted to the Pilot Program of Native Research of the CRSH.

The project

Following the June 2009 workshop (Tuktu), to plan the creation of an OHM on Baker Lake, and more generally to strengthen collaborations between France and Canada and develop forms of collaborative research in the arctic regions, we propose the organization of a workshop in France, with the following objectives:

- To share best practices and experiences in integrating local knowledge in scientific research, i.e., sharing knowledge about modes of collaboration developed between

- communities and universities in the Arctic, and about available tools (charters, protocols, ethical advice, models, case studies, intellectual property, etc.);
- To reflect on research methods, participatory techniques, and collaborative approaches that facilitate dialogue and knowledge transfer, and perhaps even the co-production of knowledge between indigenous people and “outside” researchers, and between social and natural scientists;
- To reflect on the communication of research results in order to make them accessible and support decision-making in the communities;
- To become familiar with participatory techniques and collaborative approaches developed by Chevalier and Blangy and adapted to the native context;
- To contribute to the development of an arctic OHM Man & Environment Observatory project supported by the INEE;
- To strengthen the existing collaborations around the tripartite project among the Cree of James Bay, the Inuit of Baker Lake and the Saami of Ovre Sopero;
- To strengthen interdisciplinary research collaborations between the CNRS and other research laboratories in Canada and, among others, the Center for Nordic Studies in northwestern Quebec.

Practical implementation

This meeting is organized as a 3-day participatory workshop based on the one held in Ottawa in June 2009.

It will be held at the ISCC headquarters in Paris, France, from 31 January to 2 February 2011. It will bring together a group of 20 to 25 people who meet at least two of the following criteria:

- their research field is in the arctic and sub-arctic regions;
- they work in collaboration with local communities;
- they integrate local knowledge into their research programs;
- they are familiar with participatory research;
- they are involved in an OHM of the CNRS;
- they have developed interdisciplinary research projects.

Some of the people invited will have their expenses covered by the funds of the ISCC and the INEE. Priority in funding will be given to native researchers, and to academics and researchers with whom they have established research collaborations:

- 6 native researchers (Inuit, Cree and Saami) involved in research projects funded by the IPEV, the CRSH, ArcticNet and the EU or other European or national agencies;
- 6 Canadian academic researchers, and Scandinavians who collaborate with the Inuit, Cree and Saami partners, and who have developed projects including knowledge transfer and integration of traditional knowledge;
- 6 French researchers working in the arctic and sub-arctic regions interested in developing an interdisciplinary approach on the arctic regions, becoming familiar with participatory techniques and developing research partnerships with native communities.

Methodology

- A 3-day meeting in Paris at the ISCC headquarters;
- A workshop consisting of Cree, Inuit, Innu and Saami researchers as well as Canadian, Nordic and French academic researchers;
- Animation of the workshop using collaborative research techniques developed in Canada;

- Posting of the results and consultation by other research partners via the CMS website www.aboriginal-ecotourism.org on the basis of a discussion forum.

Budget

The workshop is funded by the CNRS, Centre National de la Recherche Scientifique, and in particular by two of its institutes, the ISCC (Institute of Communication Sciences) and the INEE (Institute for Ecology and Environment), with a sum of 23,300 Euros. Part of the ISCC funding is from PIR (Interdisciplinary Program for Research in Communication Sciences).

The budget for "invited participants" includes transportation and living costs on site in Paris for the duration of the workshop and covers primarily the costs of native, Scandinavian and Canadian researchers in their entirety. The other researchers will support their own expenses or will be supported by funds sought elsewhere.

Equipe(s) participant au projet : cf the list attached

Expected results

The following are expected outcomes of this workshop and two other similar meetings planned in Canada at Baker Lake and Quebec:

- An evaluation of the methods and approaches used to integrate local knowledge and expertise in scientific research projects in arctic and sub-arctic regions, including participatory modeling;
- An exchange on current projects led by the teams, including (among others) the study of the impact of global change on local communities;
- An exploration of how to build new and sustainable collaborations among Canadian, French and Scandinavian researchers on arctic and sub-arctic regions;
- The outline of a research program for the creation of an OHM at Baker Lake in Nunavut, which will be refined during the workshops in Canada;
- An exploration of the feasibility of a Workshop Zone in the northwestern region of Quebec (James Bay Cree and Nunavik) with the Centre for Northern Studies;
- The development of a protocol and a native collaborative research model outlining the forms of partnerships to be established;
- The outlines of a special issue in English on the integration of local knowledge in research, in the form of a compilation of experiences from North America and northern Europe. The articles will describe the current experiments, evaluate the current obstacles and propose new collaborative approaches. The articles will be co-written by native and non-native participants. The collection of papers will be submitted to *Hermès*, *Arctic*, *Polar Research*, or another suitable journal, for publication as a special issue.
- The start of a long-term network, and the outlines of a project for requesting EU (FP7) and French (ANR) funding in order to implement projects that will arise from these meetings.