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EU-POLARNET SESSION AT ICASS IX Umeå, Sweden – 08 June 2017

STAKEHOLDER ENGAGEMENT, MOVING FROM QUANTITY TO QUALITY

Executive summary

The Arctic region is experiencing rapid change, primarily as a consequence of the changing climate. Climate change impacts such as increasing temperatures and reducing sea-ice cover bring both challenges and opportunities to a wide range of actors. Stakeholders' interests are very diverse and sometimes conflicting. For instance, while being seen as rich in resources for extractive industries, the Arctic is also home to many indigenous communities, which on one hand are concerned with the environmental impact of mining projects and on the other hand need to benefit from such economic developments. Research and development projects in the Arctic need to take stakeholders views into account.

These concerns were the focus of presentations and discussions at the EU-PolarNet session -- "Stakeholder Engagement: Moving from Quantity to Quality" -- held at the Ninth International Congress on Arctic Social Sciences (ICASS IX).



Key ideas and lessons shared:

- **Trust building:** this is a fundamental element of stakeholder engagement. Most of the ideas that came up during the session ultimately contribute to building trust between stakeholders and researchers.
- **Early and ongoing engagement:** Engaging stakeholders requires the construction of long-term relationships, starting prior to the implementation of the project's activities. Engagement approaches should be tailored to each project's context (no copy/pasting from one project to the next), and should be adapted as the project evolves.
- **Time and money:** Stakeholder engagement needs to take into account the particular conditions in the Arctic – especially long distances. This needs to be taken into account when making the project budget.
- **Representativeness of the stakeholder engaged:** local communities are not a homogeneous group. Diversity (e.g. gender, age, social position, family groups) should be taken into account.
- **Collaboration more than participation:** The level of involvement of stakeholders in the projects may vary, but collaboration highlighted as a mutually beneficial and fairer way to proceed in research with local stakeholders.
- **Identifying research questions with the local communities:** This ensures socially beneficial project outcomes.
- **Knowledge sharing:** The results of the research should be given back to the stakeholders. This also requires the translation – in local language and in non-scientific terms – of the knowledge produced.
- **Engagement through intermediaries:** Already existing networks and research projects, or institutional boundary organizations, are possible solutions to avoid the multiplication of engagement processes in a community. This also allows to deepen already existing relationships rather than starting new ones from scratch.
- **Other issues highlighted:**
 - In Europe, Greenland and Russia, the level of local communities' involvement in research project is very low compared to engagement methods in place in North America.
 - Time is a major constraining factor in project building – proposal writing and implementation – while stakeholder engagement is very time consuming.
 - Research projects should not be developed by looking at the funding proposals, but should be based on what the stakeholders need.
 - Potential research fatigue poses a risk for local communities, which have a constant need for research.

Background:

EU-PolarNet is one of the world's largest consortia of expertise and infrastructure for polar research, representing 22 research institutions from 17 European countries, with the goal of developing an integrated European Polar Research Program. EU-PolarNet aims at establishing an ongoing dialogue between policymakers, business and industry leaders, local communities and scientists. An important element of EU-PolarNet is “connecting science with society”, under which dialogue and cooperation with the relevant stakeholders should ensure input for the formulation of the future research in this program.

EU-PolarNet held a session titled “stakeholder engagement: moving from quantity to quality” at the ninth International Congress on Arctic Social Sciences (ICASS IX), organized every three years by the International Arctic Social Sciences Association (IASSA). The session took place in the morning of 8 June. It provided input from a panel of four Arctic researchers who presented their experiences and lessons learned in relation to stakeholder engagement, and from an open discussion with the audience.

After an introductory presentation about EU-PolarNet and the background question of stakeholder engagement, four experts covering most of the circumpolar region – apart from Russia – presented stakeholder engagement methods from their own projects and shared key lessons. Following the individual presentations, a discussion took place during which the speakers discussed the issue with each other and answered questions from the EU-PolarNet organizers and the audience.

Introduction

The representatives from EU-PolarNet provided a background for the session.

Kirsi Latola, University of the Arctic Thematic Networks Director and EU-PolarNet representative at the University of Oulu, presented the overall objectives of the session.

Annette Scheepstra, coordinator at the Arctic Centre of the University of Groningen and EU-PolarNet representative, briefly introduced EU-PolarNet to the speakers and to the audience, highlighting the bipolar focus of the project. Good relationships and dialogue with stakeholders will be important in the creation of the new integrated European Program for Polar Research and she underlined that EU-PolarNet aims at developing projects that will bring benefits for societies, which increases the importance of stakeholder engagement. She also added that while EU-PolarNet is based in Europe, it will also include cooperation partnerships with non-European states such as Canada or the United States. The EU has already developed research projects in the Polar Regions, but they remain, until now, mostly focused on natural sciences. Working with stakeholders is something new in the European framework.

She said the session was organized to help EU-PolarNet deal with stakeholder engagement by learning from the different lessons the speakers would share from their experiences.



What can we learn from social license to operate research?

Coco Smits, PhD candidate at the University of Wageningen, Netherlands, and consultant at Royal Haskoning DH, presented the findings from her research on Social License to Operate (SLO) and her experiences in stakeholder engagement from the projects where she worked as a consultant.

SLO originated in the 1990s in a context of large mining project development as a response to growing societal unrest in relation to these projects. It is now widely used. Social licenses emerged as a third and complementary license, next to legal licenses (permits to obtain before the execution of a project) and political licenses (parliamentary or governmental support for the project). SLO is an ongoing process of approval and acceptance of the project by the local communities and stakeholders.

SLO has two key principles:

- Trust: (1) Interaction and Personal Trust (interpersonal level) and (2) Institutional Trust (community trust in the institution that is leading or supporting the project). Institutional trust can be based on integrity (belief that the institution takes action based on the same set of principles as the community's), or competence-based (belief that the institution has the right competencies and skills to carry out its activities).
- Legitimacy: (1) Input Legitimacy, based on the right and representative selection of stakeholders. (2) Throughput Legitimacy, based on openness and transparency of the process. (3) Output Legitimacy, based on the contribution of the project to society or to specific stakeholders.

After this presentation of the background of SLO, Coco Smits presented some lessons in relation to these two key principles:

Concerning “Trust”, research has shown that the quality, rather than the quantity of engagement matters more. Trust is about doing what was promised at the start of the project and it is therefore important to think about the promises made when first engaging stakeholders. Consistent representation of stakeholders is also key since projects last over long periods.

For input legitimacy, it is important to have a representative set of stakeholders, not focusing on one group and leaving others aside. When doing stakeholder mapping exercises, especially in an Arctic context, it is also important to take into account the size of the companies seeking a license to operate. For throughput legitimacy, transparency in what is made available, how and when it is made available is a requirement. Stakeholders should get access to the information and be able to understand it, therefore the information should be translated for them. For output legitimacy, it is important to consider what the community needs in terms of research, and think of how useful the project's outcome will be for the society. Keeping those needs and possible outcomes in mind is important when engaging with stakeholders.

Coco Smits also highlighted the importance of starting stakeholder engagement and building relationships from an early stage. Studying project stakeholders in a local but also international context is also important. Each research project being unique, engagement approaches should be tailored to local contexts rather than copy-pasted from former projects. Engagement is also an ongoing process and should be adapted following evolutions in the context and along different phases of the project. Different stakeholders and approaches might be needed at different stages of the project. Stakeholder engagement is a question

of time and money, especially in the Arctic where people are separated by long distances and this should be taken into account when making the budget for the project. Finally, she mentioned the importance of being proactive. Other actors (e.g. government) will not necessarily engage the stakeholders, and if they do they might consider their own agenda when building relations.

What can we learn from social impact assessments research?

Leena Suopajärvi, lecturer at the University of Lapland, Finland, and researcher in the Nordregio-led REGINA research project on remote communities and extractive industries, presented her findings on Social Impact Assessments (SIA), and the research she did within the REGINA project in the Sodankylä Municipality, Finland.

In most of the Northern countries social impacts are addressed in the planning phase of large natural resource projects as part of Environmental Impact Assessments (EIA). In Finnish Lapland mining projects Suopajärvi studied, SIA had a minor role in EIA, representing 3 or 4% of the assessment documents. SIA is also more about local communities' expectations – what people expect mining to bring – rather than actual impacts, partly because they are made prior to the project licensing process.

The selection of informants was also not representative of the local population, the main informants being elderly men, with women only 20 to 30% of the respondents. Young people were also underrepresented in these assessments. Finally, the studied SIA did not seem to take vulnerable groups into consideration. Overall, the selection of stakeholders engaged in these SIAs tends to give the idea of the local communities as a homogenous group.

She also presented the operations for conducting these assessments in the REGINA Project in Sodankylä Municipality, Finnish Lapland. In this mineral rich area, three mining projects are found, one operating, one bankrupt, and one in planning phase. The municipality has difficulties handling such large developments. In this context, the

REGINA Project aims at developing a Social Impact Management Plan (SIMP, see: Franks & Vanclay 2013) which consists of creating a participatory process for managing the social impacts, engaging local people in the process as actors rather than objects of the assessment. A knowledge gap analysis and a participatory process led by the municipality were carried out with the aim of formulating a policy program for mining. A mining agreement would also be signed by the municipality, the mining companies and all relevant stakeholders.

Suopajärvi highlighted some points from the REGINA project questionnaire. Overall, the mining industry seems to have the social license to operate in Sodankylä municipality. Nevertheless, the informants were worried about the dependency and the vulnerability of the mining industry to global economic fluctuations. Negative environmental impacts were also noticed. In a study focusing on the women's perception of the mining projects the lack of educational, employment and career opportunities they found in these projects was highlighted. The group that was the most critical of the mining projects included the reindeer herders and the villagers living close to the mining areas.

Such a collaborative planning was highlighted as a collectively beneficial process. It provides the mining companies with knowledge of the local perceptions of their activities. As an ongoing process, it follows up on the changes or perceptions and opinions, and studies the actual impacts of mining – and not only the expectations. Municipalities can also use this process to assess other issues such as the need for housing or services planning. For local residents, this process allows them to be heard and to participate.



What can we learn from research about community based participatory research?

Elizabeth Rink, associate professor at the Montana State University in Bozeman, United States, presented her findings from the Community Based Participatory Research (CBPR) method she used in her research projects on reproductive health in Greenland.

CPBR was defined using the definition from the Kellogg Foundation Community Health Scholars: “[CBPR] equitably involves all partners [...] with a research topic of importance to the community with the aim of combining knowledge and action for social change to improve health and eliminate health disparities”.

Elizabeth Rink especially highlighted the fact that CBPR is based on a research question that emanates from the community, and not from Academia, the Government or the industry. Rink uses CBPR for health-related issue but this method can be applied to any other topic of research.

CBPR originated in the 1940s as an Action Research method, mainly used in education (see work of Kurt Lewin) and as a Participatory Action from the 1970s (see work of Paulo Freire) to address the disconnect between Academia and local communities. Elizabeth Rink embraced CBPR for the framework it provides to conduct interdisciplinary research, incorporating and honoring both local and academic knowledge. Through its academic structure and its iterative and continuous engagement of local stakeholders, it allows to meet both group’s needs.

CBPRs are composed of five main steps:

- (1) Building and maintaining the partnership: the trust of the community is a key element. The construction of the partnership is an ongoing process.
- (2) Identifying the research questions and methods used with the community: the community members know best which research method would fit with their own community to get answers.

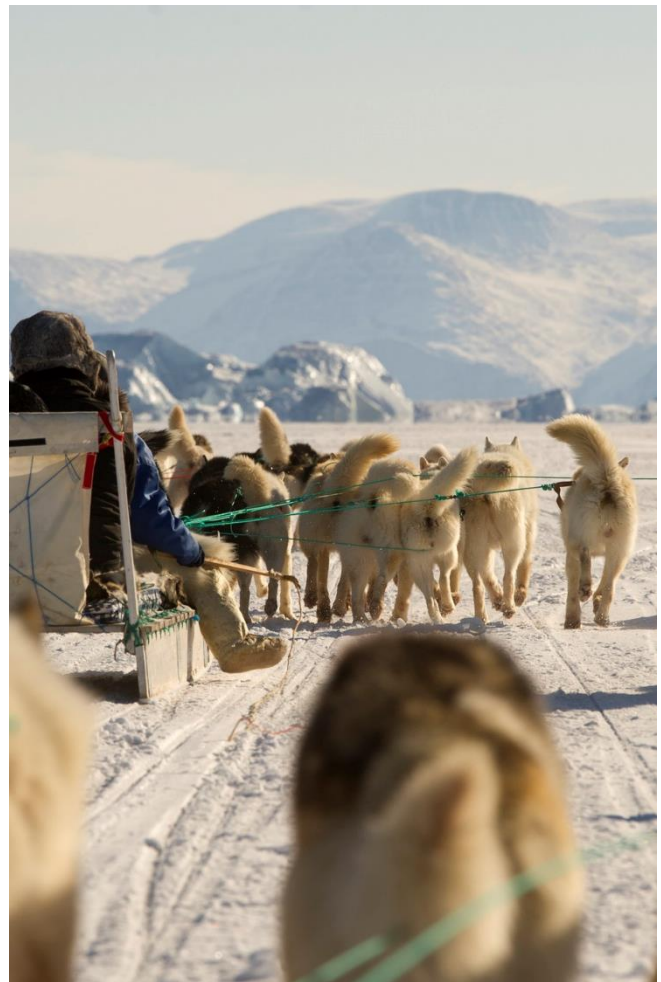
- (3) Participatory data collection: researchers and local people working together to collect the information. However, depending on the topic, it may fit better to have the academic researcher or the local people collect the data. The level of participation of each group to the data collection depends on the community's decision.
- (4) Participatory data analysis and data interpretation: collaboration between the research team and the community is important.
- (5) Identifying with the community where and how to share the results: in the case where the results are negative, this allows to work with the community on finding a way to present more positively. This also help to understand the need to share results with the Academia as well as the communities and applied professions.

CBPR is very often used with Indigenous communities in North America and it is often a requirement from funders. In the Russian or Scandinavian Arctic, it is not common but other methods of participatory research exist there. In Greenland, Elizabeth Rink's projects are the only ones applying CBPR.



Finally, she presented some lessons on stakeholder engagement in CBPR:

- (1) Spend time – a year, or a year and a half – with the community prior to the research. This is essential to build trust and have the community wanting the researchers to engage further.
- (2) The diversity of community values has to be taken into account. Although Arctic communities are usually small, the views on what is important and what is not can differ from one family to the other.
- (3) Understand and learn the community's history. What happened a century ago can still be present in people's mind. Also, it is important to know who came to the community before the project and how it may have affected the community.
- (4) Respect the community's traditions and take into account the exposure to western culture at the same time.
- (5) Integrate Indigenous worldviews for an effective co-production of knowledge by science and traditional knowledge.



- (6) Make the relation reciprocal by giving back the results to the community to make the project mutually beneficial.



Well-being and resource development

Brenda Parlee, associate professor at the University of Alberta, Canada, presented the findings from her research with the Lutsel K'e Dene First Nation in the North West Territories, Canada.

Her research focuses on studying the impacts of resource development on communities. To measure this impact, the concept of “well-being” has been increasingly used – e.g. development of “community well-being index: in Canada. Well-being is a catch-all-concept that allow us to understand the integrated nature of social, economic, cultural and ecological change, however, Parlee added that it is also a vague and somehow messy concept.

Well-being has different meanings depending on the socio-cultural context and the disciplines of health, sociology, or indigenous studies all have a different understanding of the concept. Well-being will also have different meanings from one community to another.

To the Lutsel K'e Dene, well-being is defined the “Dene way of life” (*Dene Ch'anie*) while the Cree in Alberta conceptualize it as “being alive well” (*Miyupimaatisiin*) with a different understanding attached. While characterizing it as an “academic mumbo-jumbo concept”, Parlee recognized its potential to create dialogue and learning opportunities between different cultures. In the Circumpolar North, large community-based initiatives already exist to formulate a common definition of well-being. The Canadian “Community Well-being Index” is one example, which tried to repackage the old matrix (e.g. income, unemployment, education, housing, etc.) into this new framework.

Looking carefully at the way well-being is defined, and who defines it, is important, she said. She also raised concerns on the tendency to develop a long “laundry list” of indicators defining well-being, with indicators changing from one group to another. One can easily get lost in all the different definitions of this concept.



Three examples of the use of well-being in environmental assessments contexts where presented:

- (1) In the oil sands mining projects in Alberta, well-being has become a flashpoint and there are different narratives on how development affects communities, their sense of well-being or their way of life. Brenda Parlee quoted Grand Chief Herb Norwegian, from the Deh Cho First Nation, who sees resource development projects as a “cancerous tumor” affecting the health and well-being of communities. On the other hand, government agencies talked more in terms of pathologies and social problems (e.g. suicide rates and addictions). There, well-being was not necessarily part of the narrative in decision-making.
- (2) One of the largest and most recent environmental impact assessments in Canada

was conducted on the Mackenzie Gas Pipeline project, which started in 2004. In the assessment, the concept of well-being started being used more analytically and the pipeline joint-review panel used the concept to understand the extent to which the development project would intersect with some of the community’s key values and practices, rather than looking only at impacts and stressors. The idea was to look from the other direction, and to understand what mattered for the communities in the MacKenzie Valley. In general, there is a lack of considerations of community-based values and indicators. The datasets being used are usually built by Statistics Canada and government agencies and these do not work based on specific theories but tend to gather data following lists of indicators.

(3) Since the 1990s, Parlee has worked with the Lutsel K'e First Nation on the development of a set of 36 indicators of well-being, to be used in a monitoring program. Her and her team are currently collecting a fifth round of surveys in the community to understand changes in the context of diamond mining activities. Close to 23 years of data on changes in the well-being of the community has already been collected. Work has been done prior to the approval of the Ekati Diamond mine in the early 2000s and some of these projects are now in the closure phase.

Brenda Parlee added some final comments on community-based research, highlighting that dialogues to define concepts such as “collaboration”, “participatory co-learning” would be necessary. A lot of literature exists on this topic, but it is disconnected from the realities on the ground. It should be more informed and defined by practice and by communities. She ultimately raised the question on the role and opportunities of non-indigenous scholars in co-learning processes, a question on which Indigenous research methodologies and Indigenous voices are critical.



Discussion

After the individual presentations, the discussion was divided into two different parts: first, the panel answered the questions from the session’s chair; in the second part, the discussion was open to the audience.

- **Kirsi Latola** started by asking how one can effectively work with stakeholders in a way that is beneficial for all.

Coco Smits recalled the importance of early engagement, even before starting project activities, as well as the necessity of understanding this engagement as an ongoing process that should be adapted as the project or its context evolve. Concerns were raised related to the limited amount of time available to develop research

projects, reducing possibilities for early engagement. Building on long-term relationships between researchers and communities was pointed out as a solution which in addition to maintaining and reinforcing trust between the two parties could allow researchers to be better informed on the communities’ needs and research priorities. All the panel members agreed on the importance of building trust.

Leena Suopajärvi also insisted on the need for planning when engaging with stakeholders, stating that the mining boom in Northern Finland had led to a research boom. In this context, municipal leaders may be hard to engage, as they are busy with many different municipal and research projects-related activities at the same time.

- **Annette Scheepstra** asked how we engage the right stakeholders in the right project. She added that when mapping stakeholders, EU-PolarNet came out with a very long list. A questionnaire was sent to them recently, yet few responses were received from non-academic stakeholders. Especially lacking were responses from Indigenous People. She posed a complementary question on how to convince funders (EU Commission) to invest money specifically to engage stakeholders. **Kirsi Latola** additionally asked how EU research projects could get to the same level of community participation as in North America.

Leena Suopajärvi suggested the local acceptance of stakeholder engagement in the Social License to Operate is a strength. Rather than engaging all stakeholders, however, she added that this raises the complex issue of defining what is “local”.

Considering larger projects, **Coco Smits** highlighted the importance of investing and building on partnerships that already exist at the local level, rather than starting new ones.

Brenda Parlee raised the issue of the tension between potential research fatigue on the one hand and the communities’ constant need for research on the other. She stated that small communities are overworked and can hardly do everything on their own. This creates an opportunity for collaboration – more than participation – as communities need for research. She also pointed out challenges related to the perception of indigenous communities by academic institutions where they are stereotyped as slow and unwilling to participate – stereotypes that, in her opinion, would better characterize universities themselves.

Kirsi Latola then opened up the discussion to the audience.

A comment was addressed to **Brenda Parlee** on the origins and on the usefulness of “well-being” as a concept in Northern Canada, highlighting two main reasons for the increasing use of the concept. First, “well-being” was a strategically better term than “health” for social sciences to enter the discussion. Second, “well-being” has a positive connotation, and communities, which were tired of being characterized as in poor shape, pushed to spread this term. **Brenda Parlee** agreed to this and added that well-being is also not an outcome to be achieved but an ongoing set of tools and processes to deal with challenges and opportunities.

- A question was asked on how researchers deal with conflicts and disagreement among the stakeholders.

Elizabeth Rink said in her projects, a community advisory board had the final say in case of conflicts. However, she argued that establishing deep relationships early on and keeping stakeholders informed in all phases of the research tends to limit conflicts. She made a link with Brenda Parlee’s presentation, supporting the idea that fewer and deeper relationships are better than many superficial ones.

Brenda Parlee added that communities should not be seen as homogeneous and asserted that diverging opinions are a healthy element in any community, different opinions between men and women, employed and unemployed people, should be taken into consideration.

On the same topic, **Coco Smits** pointed out the importance of being transparent in the reports that are published, to show the community’s heterogeneity and the differences rather than talking only about “the community” or “the society”.



- **Kirsi Latola** asked if any of the panel members had ever been close to losing a community's trust, and how they would react if the outcomes of the research are not what the community was expecting.

Making the link with the previous question from the audience, **Leena Suopajärvi** explained that as a researcher her role is only to collect and report the data, and not to solve the problems in the community she works with. In her project, a consultant group was hired to solve possible problems. She added that problems have less chances to occur if the stakeholders get the chance to meet and talk with each other.

Elizabeth Rink explained that, when her results are negative, she works with the community advisory board to find out more positive ways of presenting them, thinking of ways to deal with it. In her opinion, such a method goes back to the need for transparency, which allows the relationships, and ultimately the work, to be more fluid.

Kirsi Latola suggested that this might also be linked to the importance of engaging the right stakeholders from the beginning. **Elizabeth Rink** agreed.

Brenda Parlee highlighted the importance of reflexivity when publishing the results, one should not publish the outcomes of the research just for the sake of the grant, but think of the relevance of the information that is to be published, and how constructive the report will be once it is published.

- A comment from the audience pointed out the importance of sharing the result in an understandable way, translating it both in the community's language as well as in a less scientific terms. This point was made concerning publication of results, but also for the research itself (e.g. making questionnaires understandable for the respondents).

Kirsi Latola agreed and added that this is especially a European and a Russian issue, while North American research projects are far more advanced in community involvement.

Elisabeth Rink explained that giving back, and sharing results with the community, is as important as building and maintaining the relationships. Returning the knowledge to the community is also very time consuming.

- **Kristina Bär**, EU-PolarNet communications officer, asked if mechanisms such as boundary organizations, working as intermediates between the EU projects and the communities could function, instead of starting new engagement processes for each project.

Elisabeth Rink explained that in Montana, researchers have to go through institutional tribal review board, which play a role of gatekeepers, accepting or refusing research projects in the communities.

In northern Canada, the Aurora Research Institute and the Nunavut Research Institute license research projects, as **Brenda Parlee** explained, adding that this system is not always perfect.

Elisabeth Rink added that a similar system was in place in Alaska, with one reviewing body for all Alaskan Native people.

Such a system does not exist in Finland according to **Leena Suopajarvi**. It was suggested that networks such as reindeer and caribou herding networks that were created during the IPY could provide such a service.

Elisabeth Rink mentioned that, for large research projects, academic centers in universities function as liaisons between the researchers and the communities.

- On the same topic of institutional intermediates, **Kirsi Latola** asked if such mechanisms existed for industries or other – non-local/indigenous communities – stakeholders.

Coco Smits explained that when starting on a project for an – industrial – client, an inventory is made of the

projects being implemented in the area. She stated that while it is relatively easy to identify industry partner's projects, it is usually hard to identify other projects.

Regarding boundary organizations, **Brenda Parlee** asked who benefits the most. She argued that, in Canada, efforts to create boundary organizations had been developed in such a way that industries could deal with only one Indigenous organization. On the one hand, such settings make it easier for industries to implement their activities, on the other hand, it makes it more complicated for communities to get information on the process



- **Björn Dahlbäck**, director general of the Swedish Polar Research Secretariat, suggested that research projects could learn from methods used in the industry sector to engage stakeholders, looking at methods from the commercial sector to approach markets and customers.
- Another comment from the audience mentioned the issue behind the very term “stakeholders” when talking about local communities. Actors such as industries or conservation organizations can be stakeholders but local communities are more than this.

Elizabeth Rink agreed, and expanded the scope of this comment, recalling that all actors – from local communities, industries, governments – have a different culture and the approach to engage them should take it into account.

- **Annette Scheepstra** asked if there would be any chance for IASSA to play a coordinating role in large EU – and other – projects, by forming a new expert group for instance.
- A comment from the audience highlighted how crucial seed money is for stakeholder engagement to give opportunities to build the relationship with the community. Stepping over this part can have long-term negative effects on the project.

On this point **Brenda Parlee** recalled that building on existing relationships and using networks that are already in place might sometimes be a better idea than starting new relationships from scratch.

- Before closing the session, **Kirsi Latola** came back to the title of the session, asking for final comments on the question: “Stakeholders engagement, how do we move from quantity to quality?”

Leena Suopajärvi stated that quantity is quality. No other comment was made.



Final remarks:

Kirsi Latola and **Annette Scheepstra** closed the session thanking the participants and informing them and the audience about the second ICASS IX EU-PolarNet session that would be held on the 10 of June at 1PM, which would focus on Social Science and Humanities incorporation, and transdisciplinary cooperation in Polar research projects.

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EU-POLARNET SESSION AT ICASS IX Umeå, Sweden – 10 June 2017

INTEGRATING SOCIAL SCIENCE AND HUMANITIES IN LARGE EU AND OTHER PROJECTS

Executive Summary

The climate change induced changes occurring in the Arctic have regional as well as global impacts on the environment and on societies. The connections between climatic, ecological and societal changes increase the need for research that brings together different disciplines. Integrating natural sciences, social sciences and humanities (SSH) as well as stakeholders' views in transdisciplinary research is a challenge, which needs to be addressed to improve our understanding and our capacity to respond to change.

This was the focus of presentations and discussions at the EU-PolarNet session -- “Integrating Social Science and Humanities in large EU and other projects” -- held at the Ninth International Congress on Arctic Social Sciences (ICASS



IX) in Umeå. EU-PolarNet aims at pushing forward transdisciplinary cooperation, bringing together natural sciences, social sciences and humanities, but also stakeholders. The need to embed the future integrated polar research in a concept of social and economic relevance, was especially pointed out.



Key Ideas and lessons shared:

- **Each discipline has its own language:** Building bridges between disciplines is key for transdisciplinary projects. Two solutions were discussed:
 - (1) Developing “translator” positions and competencies in project management to create nodes between work packages/disciplines.
 - (2) Training researchers to work with researchers from other disciplines.
- **Proposal writing:** Seed money and longer proposal writing periods are key to conceive transdisciplinary projects. Separate budget lines should be allocated to the interdisciplinary work. Integrating disciplines in transdisciplinary work packages was suggested: while tying disciplines closely together all along the project, this might also make the project less clear for evaluators.
- **Getting a final integrated outcome:** The process included preparatory work within work packages, followed by meetings to synthesize the results in one message. Rather than a list of each discipline’s result, transdisciplinary project outcomes should integrate them into one message.
- **Open-mindedness:** Preconceptions and silo thinking hinders the collaboration between disciplines, and stakeholder engagement. The academia should be more open for discussion with the business sector, they have common interests and lessons could be shared.
- **Communication, outreach and stakeholder engagement:** These activities should start at an early stage in a project’s development, and they should be taken into account when making budgets. Social media, dialogue and other skills should be developed. The need to include outreach activities across all scientific levels, and the need for open data, were also mentioned.

Background

EU-PolarNet is one of the world's largest consortia of expertise and infrastructure for polar research, representing 22 research institutions from 17 European countries, with the goal of developing an integrated European Polar Research Program. EU-PolarNet aims at establishing an ongoing dialogue between policymakers, business and industry leaders, local communities and scientists. An important element of EU-PolarNet is “connecting science with society”. In that sense, a key goal of the program is to develop scientific research projects that bring societal or economic benefits. Connecting knowledge on environmental and climatic change with human societies will require research cooperation across disciplines from the natural sciences and from the SSH.

EU-PolarNet organised a session titled “Integrating Social Science and Humanities in large EU and other projects” at the Ninth International Congress on Arctic Social Science (ICASS IX), organized every three years by the International Arctic Social Sciences Association (IASSA). The session took place in the afternoon of 10th June. It provided input from a panel of three Arctic researchers who presented their experiences and lessons learnt in relation to social sciences and humanities (SSH) integration in inter- and transdisciplinary projects, and from an open discussion with the audience.

After an introductory presentation about EU-PolarNet and the background question of SSH integration in research projects, three researchers from different transdisciplinary research projects presented their experiences on SSH integration methods from inter- and transdisciplinary project. Following the individual presentations, a discussion took place where the speakers discussed the issue with each other and answered the questions from the EU-Polar Net organizers, and the audience.

Introduction: Inclusion of SSH in EU-PolarNet

The representatives from EU-PolarNet, provided a background for the session.

Kirsi Latola, University of the Arctic Thematic Networks Director and EU-PolarNet representative at the University of Oulu, presented the overall objectives of the session.

Annette Scheepstra, coordinator at the Arctic Centre of the University of Groningen and EU-PolarNet representative, briefly introduced EU-PolarNet. EU-PolarNet is a Horizon2020 funded coordination and support action that involves 22 research institutes and stakeholder organizations from 17 countries.

To frame the discussion, Annette Scheepstra defined three key concepts:

- Multidisciplinarity involves different disciplines working together on a project, but each researcher works in his/her own discipline.
- Interdisciplinarity requires researchers from different disciplines to work in a more integrated way.
- Transdisciplinarity goes a step further, involving stakeholders and end users in the research process.

Annette Scheepstra then explained that the European Union already has a long history of large research projects but until now very few have focused on the Polar issues and when they do, the focus tends to be mainly on natural sciences. Thus, integrating SSH in large projects is relatively new in the European Union, and EU-PolarNet needs to learn more about it. She also highlighted the importance of the IASSA to help EU-PolarNet learn more on these questions.



Lessons to be learned from the ICE-ARC Project

Dimtry Yumashev, Senior Research Associate from the University of Lancaster (UK), shared his experiences in SSH integration from the EU-funded, ICE-ARC (Ice, Climate, Economics – Arctic Research on Change) transdisciplinary project.

The ICE-ARC project is a European consortium funded under the European Union’s Seventh Framework Program for Research (FP7). It is a four years project (2014-2017) with a budget of 12 million Euros and involves 21 institutions from 11 countries across Europe. ICE-ARC is coordinated by the British Antarctic Survey in Cambridge.

Yumashev described ICE-ARC as a transdisciplinary project that largely involves natural sciences – where funding is usually allocated – but disciplines from the SSH are also included. The project is divided in five different components:

(1) Ice: Improving observations and methodologies.

- (2) Climate: improving the models (e.g. climate or sea-ice models) to reduce uncertainties on future scenarios.
- (3) Economics: costing climate change and estimating the global economic implications climatic processes such as declining sea-ice or thawing permafrost.
- (4) Society: identifying social vulnerabilities by working with local communities. This was done in North West Greenland, through Danish partners, and helped to understand the local challenges and identify possible ways to adapt.
- (5) Impact: engaging stakeholders. In Yumashev’s opinion, this part made the project truly transdisciplinary. The aim was to facilitate knowledge exchange by bringing the science “directly in the board rooms” and in political discussions, to inform and improve policymaking and business strategies. This also allowed the project to develop its own elements for outreach without waiting for the knowledge to be shared by the media.

Yumashev explained that the biggest challenge was to enable the dialogue between natural and social sciences and with the stakeholders, such as business and policy makers. As he phrased it, researchers from different disciplines “speak a different language”. To address this challenge, the project is trying to put in place “translators” to build bridges between disciplines. He said this has been successful and the interactions between disciplines has produced some specific results. Due to his own background and experiences in natural sciences, applied economics and stakeholder engagement, Yumashev was one of the “translators” in ICE-ARC.

Yumashev then detailed the project’s main achievements:

- (1) Achievement 1: Natural science research observations have been used to reduce uncertainties in climatic models. These advances were then incorporated in the project’s economic models.
- (2) Achievement 2: Working with the local community in Qaanaaq (North West Greenland) allowed researchers to understand the historic resilience of these people in the face of the past climate shocks. The cooperation with local people also allowed natural scientists to carry out their observations

with the help of local hunters (e.g. using dog sleds). The researchers also went to local schools organizing workshops on climate science for kids.

- (3) Achievement 3: Transdisciplinary issues were explored through close cooperation between climate scientists and economists, on sea ice decline, Arctic shipping and its impacts, estimating losses and benefits from these processes for instance (see Yumashev et al. 2017).
- (4) Achievement 4: Multiple stakeholders were engaged through different events including a workshop on Arctic shipping in Brussels; a plenary session on Arctic shipping at the Arctic Circle (Reykjavik); an EU event on the Arctic event at the UNFCCC’s CoP22 (Marrakesh); and the Arctic Base Camp at the Davos Forum. He considered the latter as the “crown jewel” of the project’s stakeholder engagement activities. This engagement allowed to bring together natural scientists, economists, government representatives, as well as renowned climate advocates (e.g. Al Gore and Christina Figueres), and increase awareness on the global importance of the Arctic.



Lessons to be learned from the Humanities and Social Sciences Expert Group and the History Expert Group of SCAR

Lize-Marié van der Watt, researcher at the Royal Institute of Technology and member of the Humanities & Social Sciences Expert Group (HASSEG) of the Scientific Committee on Antarctic Research (SCAR), gave a presentation on the evolution of the place of SSH in Antarctic research. Her focus was on the two SCAR expert groups: HASSEG and the History Expert Group.

Sciences and especially natural sciences have a very special place in Antarctica, mainly due to the Antarctic Treaty System. The dominance of natural sciences, the international governance system, and the absence of permanent populations makes Antarctica a very interesting place to study from a SSH perspective. The

position of SSH within Antarctic research is still not well understood in general but there is momentum supporting SSH related research in the areas of governance studies, environment perceptions and psychology.

SSH in Antarctica started through the work of historians, writing mainly about the Heroic Age. In 2004, a History Action Group was established to study the institutionalization of Antarctic research in SCAR, as part of the preparations of the International Polar Year (IPY). This IPY initiative was the first of this nature to incorporate SSH as a component with a product of itself – and not as an outreach tool. The History Action Group became an Expert Group in 2010, reflecting the credibility gained by the discipline in Antarctic research. The same year, a Social Science Action Group created and was turned into an Expert Group (HASSEG) in 2014. Propositions to merge the

two groups, and put them on par with the other – natural sciences standing groups have been made, but this is still an ongoing discussion. From 2013, the two groups became *de facto* a single entity, jointly organizing workshops and conferences. She added that this issue would be discussed at HASSEG’s “Depths and Surfaces Conference” in Hobart, Tasmania (July 5-7).

HASSEG and the History Expert Group aim at increasing the scholarly contributions and fostering Antarctic research collaboration within SSH, and with the natural sciences. Some national projects are already working on this, such as the work of historian Adrian Hawkins in a New-Zealand-US research project in the McMurdo Dry Valleys, integrating History and Ecology.

She reflected on the place of SSH in Antarctica:

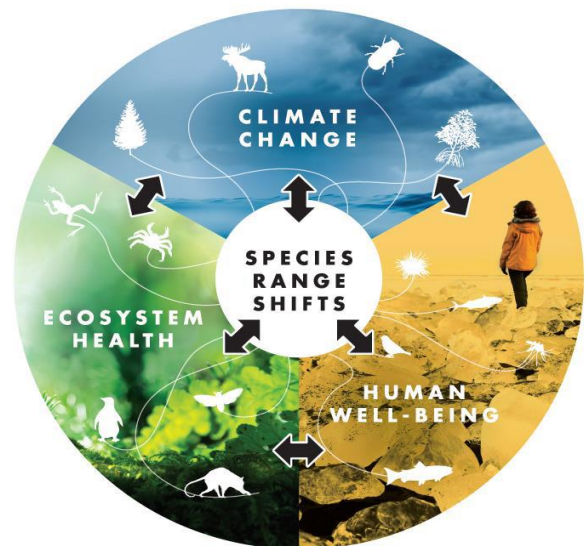
- (1) SSH in Antarctic research is often used as a communication/outreach device in interdisciplinary projects.
 - (2) SSH in Antarctic research is often used as an additional component of interdisciplinary projects. The example was given with the role of historians to gather data from historical climate records (e.g. logbooks) to hand it to natural scientists.
- Need for SSH to be proactive and develop their
- (3) activities to get a critical mass in the institutional structure to influence discussions and funding. Efforts are being made in this direction with the objective of bringing HASSEG and the History Group on par with natural science groups. She also pointed out the need for SSH researchers to seize opportunities to influence policies, pointing to EU-PolarNet’s online survey as a way for those researchers to have their voices heard.
 - (4) SCAR’s Horizon Scan was an opportunity for SSH. This exercise aimed at identifying the future important research questions to answer about Antarctica, the presence of SSH researchers in the discussion and their contribution proved to be beneficial for those disciplines.

- (5) The place of legal studies, which fall neither under the natural sciences or the SSH should be considered.

Holistic approach in climate change research and the consequences the human biome

Birgitta Evengård, professor of infectious diseases at Umeå University, gave a presentation on the issues covered by Nordforsk-funded CLINF Project (Climate Change Effects on the Epidemiology of Infectious Diseases and the Impacts on Northern Societies).

Climate change impacts have strong effects on human well-being. Ecosystems are transformed and many species move poleward as the climatic conditions change, with impacts on the range and occurrence of infectious diseases, ultimately affecting northern societies. Two articles were published recently on these issues (See: Pecl et al. 2017 and Bonebrake et al. 2017). These linkages make transdisciplinary cooperation necessary.



From Pecl et al. 2017

The increasing knowledge about the environment, coupled with the development of methodologies is an opportunity to increase human well-being and address challenges such as climate change.

Evengård expressed her concerns regarding the current level of ignorance, especially at the political and decision making-level. She brought forward the importance of education, and of dialogue between science and people, and within scientific disciplines, highlighting the need to “meet the people where they are, and not where they should be”. She also highlighted the need for continuous outreach to share the results of sciences, not only by publishing science articles but also by sharing the results to the broader audience, to schools and media.

Other examples of recent climate-sensitive infectious diseases outbreaks where also mentioned:

- As ticks move north, they carry diseases that can spread in regions that were formerly too cold. This the case with tick-borne borreliosis outbreaks occurring today in Umeå region. The ranges of other potentially disease-carrying insects are shifting due to the effects of climate change.
- Thawing permafrost in Russia affects infrastructure, but also health, because diseases that were preserved in the permafrost may be released, and contaminate the water on which people rely. Currently, little data is available on those regions to address this issue.
- The threat does not only concern Indigenous Peoples. In 2010 in northern Sweden, a cryptosporidiosis – a water-borne disease – outbreak occurred due to a dysfunctional water cleaning system, forcing a thousand people to boil water before use to eliminate the pathogen.

Evengård said that for sustainability, we need healthy environments, with healthy communities and economic vitality. She made a link to the Sustainable Development Goals¹ which do not sufficiently reflect the dynamics of ecosystems and the impacts the latter have on human well-being.

Despite the complexity, Evengård believes that we have the methodologies and the capacity to collect data and address these issues. She highlighted the need for open

data and thanked the European Union for pursuing policies in this direction.

Discussion

After the individual presentations, the discussion was divided into two different parts: during the first part, the panel answered questions from the session chair, **Kirsi Latola**; in the second part, the discussion was open up to the audience.

- **Kirsi Latola** started the discussion asking the speakers what solutions could be found to develop a common language between disciplines.

Birgitta Evengård suggested that pedagogical content could be included in projects, adding that the future generation of researchers should not specialize the way the current generation does, and that future researchers should be trained differently, developing pedagogics and be exposed to media early in their training. She also explained that universities are to slow too respond these types of challenges.

Lize-Marié van der Watt commented that SSH researchers are not trained to carry out outreach activities. Outreach is a distinct component that should be added to disciplines. She added that translating scientific knowledge into more accessible terms is a complex and broader question because researchers usually come from privileged social positions. She agreed that early training in pedagogics would be a way to tackle that.

Referring to his own experiences, **Dimtry Yumashev** considered that more open-mindedness would be necessary as researchers within each discipline are somehow locked in “bubbles” and silo thinking.

- **Kirsi Latola** asked Dimtry Yumashev if the large events at which ICE-ARC participated had

¹ <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

contributed to interdisciplinary collaboration – and not only to stakeholder engagement.

Dimtry Yumashev answered positively and mentioned the leading role of Gail Whiteman, director of the Pentland Centre for Sustainability Studies, and member of ICE-ARC’s steering committee, who used her experience to bring together researchers and stakeholders from different background and to build bridges between their fields and activities. Bringing together business, policy-makers, community leaders and natural scientists in the same panel discussions in events such as the Arctic Base Camp is, in his opinion, a major achievement because those actors are usually poorly connected with each other.

Birgitta Evengård added that researchers can be very adaptable as long grants are open on the topics that need to be explored and developed.

Kirsi Latola then opened up the discussion to the audience.

- **Nicole Biebow**, head of the international cooperation unit at AWI and project manager for EU-PolarNet, asked Dimtry Yumashev if ICE-ARC’s levels of collaboration between disciplines and with stakeholders would have been as high if the EU Commission had not pushed for it in the call for proposals.

Yumashev answered that this level of stakeholders’ engagement has been reached mainly thanks to Gail Whiteman’s experience on the matter. He presumes there was no long-term planning on this aspect in the project and that things were built this way partly out of luck because they knew “the right person at the right time”. If a similar call was opened today, he believes that the members of ICE-ARC would be in a good position to answer it as they already have a methodological model to apply.

- **Nicole Biebow** asked Dimtry Yumashev if he would be ready to go further in similar transdisciplinary projects.

Dimtry Yumashev answered positively and added that the experience gathered in ICE-ARC would be most valuable for the development of new proposals.

Lize-Marié van der Watt argued the social capital necessary to build those networks is mostly found in rich northern Atlantic societies and that one should be “self-reflective” about it. She gave the example of the tobacco industry which built networks with Academia and on the political level, leaving a negative imprint and contributing to people’s skepticism towards scientific research – seen as motivated by funding only. She added that specialization remains important in research but, when building their research education programs, universities should think of ways to increase researchers’ ability to collaborate with other disciplines.

- **Kristina Bär**, EU-PolarNet communications officer asked if the solution should be to train scientists to talk across disciplines, or to form “translators” to become nodes in the projects, facilitating interactions between researchers of different disciplines.

In **Lize-Marié van der Watt**’s opinion every researcher should be able to work with other disciplines. This should not be a requirement in every program but she believes that early career scientists today will have to learn how to work across borders. She also pointed out the lack of space for failure in today’s research, especially in large research consortia.

Dimtry Yumashev stated that increasing researchers’ ability to interact with each other would be very important and would contribute to more open-mindedness and awareness. He also expressed his wish to see more activities and funding supporting it.



- **Kirsi Latola** asked about the kind of challenges transdisciplinary projects may face.

Dimtry Yumashev highlighted the lack of open-mindedness in researchers from different disciplines. He explained that the preconceptions of scientists, who were initially reluctant to engage with actors from the political or business realms, hindered the process, especially when a participation to the World Economic Forum was suggested. Their refusal for dialogue with the economic and political world was very counterproductive for science in his opinion.

Birgitta Evengård suggested to include the “translator” task in project management, she argued that scientists would probably refuse to take on that role, but “translating” could become the responsibility of the project manager.

Dimtry Yumashev added that technological or science translator may exist in other sectors (e.g. governmental agencies, think tanks, NGOs) but such positions are lacking in Academia.

- **Gertrude Saxinger**, assistant professor at the University of Vienna and member of EU-PolarNet, highlighted the importance of learning processes, both between researchers in projects, and between researchers and the local communities. Such processes help to identify research needs with the communities. She asked Dimtry Yumashev about the relations between the researchers and the community in Greenland, and how motivated the community members were to help the project.

Yumashev was not part of this fieldwork but he explained that the engagement was made using already existing connections between Danish researchers and the local community.

- **Annette Scheepstra** suggested that proposals could be written in a way that avoids separating different disciplines in different work packages.

Nicole Biebow said that integrating disciplines in work packages presents the risk for the proposal to be refused by evaluators.

Birgitta Evengård agreed on the importance of evaluators but the way calls are formulated should be looked at, because the evaluation will be based on it. Project management could be strengthened by being as specific as possible in the formulation, and by including the “translator role” in the proposal.

Lize-Marié van der Watt agreed, suggesting that translator roles could get separate budget points. She added that more time and money should be given to plan the proposals, especially for multidisciplinary projects. She gave the example of the CLINF project – she was part of the funding committee – which had a high quality proposal because seed funding had been allocated for the project planning. The need for seed funding for proposal planning and for early stakeholder engagement was generally acknowledged among the speakers.

- Concerning communication, **Gertrude Saxinger**, brought forward the idea of considering different ways

of communicating other than town hall or roundtable meetings, which community members tend to avoid. She recommended other approaches to engage them and communicate the results – e.g. filmmaking, printing books and brochures, etc. She added that funding for outreach should be increased.

Birgitta Evengård agreed and mentioned examples of communication tools used in CLINF – developing a website for the project, video² illustrating the results of a science article. She underlined the importance of social media for outreach. She also added that communication and outreach activities should be developed early.

Lize-Marié van der Watt argued that social media competence should be taught in research courses.

Dimtry Yumashev suggested that is important for the Academia to collaborate and get input from other sectors such as business or governments, which researchers usually try to avoid, mainly due to

preconceptions about those sectors. He explained that businesses are progressive and also have needs for research; Academia should take advantage of those common goals. **Birgitta Evengård** mentioned that many universities have integrated these ideas already.

- **Kirsi Latola** asked if there would be any lessons Arctic research could learn from Antarctic research.

Lize-Marié van der Watt explained that Arctic research programs are more interactive in the roles they give to the different disciplines, while in Antarctic research, the SSH are still included in projects as add-ons – e.g. explaining the impact of natural sciences findings for humans. The Antarctic and the Arctic are very different, yet there are some similarities such as the way both are perceived, or how they are constructed and managed as fragile environments. Many organizations also have a bipolar perspective.



² <https://www.youtube.com/watch?v=6d-3Nv2n-Xk>

Nicole Biebow argued that Antarctic research is very nationally driven, despite the existence of SCAR, compared to Arctic research. Large international research consortia are quite common in the Arctic – due to European funding.

Lize-Marié van der Watt agreed, and highlighted the counter-productivity of nationally driven research in Antarctica mentioning the unnecessarily high number of research stations present in the Antarctic Peninsula. In her opinion, SSH would benefit from more international research programs – e.g. by reducing the high costs of travels. Also, researchers have to go through national programs to travel to Antarctica. She tried to list international research in Antarctica but very few came to her mind and all were very large initiatives.

Arctic research functions more on a project-based level, this may facilitate transdisciplinarity, in **Nicole Biebow's** opinion.

- **Kristina Bär** asked how transdisciplinary projects could present their results in an integrated and coherent way, reflecting the intersections between the different disciplines, rather than presenting each disciplines' findings.

Dimtry Yumashev explained that, in ICE-ARC, an interdisciplinary paper synthesizing the key findings of each field. To produce that paper, working groups from each work package met earlier this year, another meeting was scheduled for late June. After this, each work package would work to combine a final message, which would be aggregated during future meetings after the summer.

- Before closing the session, **Kirsi Latola** asked the speakers to share their ideas on how to move forward in transdisciplinary research.

Dimtry Yumashev recommended to take advantage of the momentum that is currently building up in this field.

Birgitta Evengård highlighted the need to formulate “soft competencies” such as trust or scientific

“translation” skills in project designs, but most of all, project management needs to improve.

Nicole Biebow made a final comment regarding the EU FP9 currently being prepared. The question of preparatory phase and seed money has been raised in those discussions. Building larger consortia of more than 30 or 40 researchers is part of those discussions. This idea was criticized by some speakers who highlighted the potential counter-productivity of overly large research consortia.

Final Remarks:

Kirsi Latola and **Annette Scheepstra** closed the session and thanked the participants for their contributions.

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