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International Experts Meeting

**Climate Change  
and Arctic Sustainable Development :  
scientific, social, cultural and educational challenges**

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## **KEYNOTE: Education for sustainable development**

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### **The United Nations Decade of Education for Sustainable Development**

The goal of the United Nations Decade of Education for Sustainable Development (2005-2014), is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning. UNESCO is the leading UN agency for the Decade of Education for Sustainable Development, and the objectives of the decade of are to

- facilitate networking, linkages, exchange and interaction among stakeholders in ESD;
- foster an increased quality of teaching and learning in education for sustainable development;
- help countries make progress towards and attain the millennium development goals through ESD efforts;
- provide countries with new opportunities to incorporate ESD into education reform efforts.

### ***The Arctic and the World*<sup>1</sup>**

Today's world is more dependent on the North<sup>2</sup> than ever - a dependency that will only grow in the future. The North represents invaluable resources, globally vital ecosystems, an important platform to conduct research and understand our dynamic planet, as well

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<sup>1</sup> This article is partly based on Uarctic Shared Voices, IPY legacy, 2008, authored by Kullerud and Snellman.

<sup>2</sup> The term "the North" is here used synonymous with the wider definition of the word "the Arctic", as it is used in the Arctic Council, Barents Euro Arctic council, by the University of the Arctic as well as by Arctic Indigenous Peoples (Permanent Participants of the Arctic Council). In this text Arctic is not limited to the high Arctic i.e. Arctic ocean with its archipelagos. Many discussions and articles often confuse those two possible understandings of what is the Arctic.

as a dream of a different land: a pristine part of the earth for the mind to explore. Seen from the south, the Arctic may be a frontier or a modestly relevant periphery, but the Arctic is also a fifth<sup>3</sup> of the earth's surface, and similarly important for the services the nature provides to humankind. Sustainable development of this region is thus critical to the rest of the world.

The North has been a homeland for people for thousands of years. For a few centuries it has been an arena for exploration, exploitation, and land claims by national states. The last decades have given us a melting of the political ice but also melting of sea ice from rapid climate change. The Rovaniemi process, which started in 1991 led to a unique partnership between governments and indigenous peoples to safeguard the Arctic environment and ensure the sustainable development of the region through what is now the Arctic Council. Now, 18 years later, it is more imperative than ever that indigenous and state political leaders work in cooperation with local communities, academic institutions and the private sector to build a resilient and strong North.

### **Challenges for the North**

As a source of vital resources, the North for centuries has been managed as a distant "colony" within each nation state. It has been a place where one sends experts, soldiers, doctors, managers, workers and teachers, while resources and young northerners are sent to the South. The new international cooperation, different types of local governance, and the establishment of new higher education and research institutions, all show hope for a new future. The North can become a region which is empowered to provide goods and services globally on equal terms with other regions in the world.

The norths of the different Arctic States face many similar challenges. They need to build capacity for daily governance, develop human as well as natural resources in a sustainable way, create jobs and develop opportunities for their population. Furthermore, they need to provide the world with vital resources like lumber, metals, fish, oil and gas, and services like transportation routes, pristine nature for recreation, and local knowledge about the North as well as opportunities for research vital to understand the earth system. These developments need to be done in a region with an extremely low population density, and a history of "colonial style" management by the national capitals.

Unfortunately the North has generally been perceived as a periphery, and investments in education have historically been done from a 'help' and 'frontiers' perspective, even if there are shining exceptions in several countries. The governments of the Arctic countries have met the challenges of the north with school systems more often identical to the system provided in large towns in the south, than with education systems adapted to local needs. Different kinds of higher education institutions in the North have been established, ranging from those focusing on training students for the local job market through professional education, to science based universities, often modeled on higher education institutions in the southern parts of the country.

### **Primary and Secondary education**

The UNESCO led "Education for All" movement has led to a Canadian and Norwegian Arctic initiative which produced a preliminary overview<sup>4</sup> report on the state of education in the Arctic. This report confirms the general picture described above, and the findings

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<sup>3</sup> Depending on the definition, Arctic may be from 14-20% of earth surface

<sup>4</sup> Rønning & Wiborg: Education For All in the Arctic? A survey of available information and research; Nordland Research 2008.

also expressed in the Arctic Human Development Report<sup>5</sup> and by Indigenous leaders of the Arctic.

There is a clear correlation between the level of education and income in the Arctic. An important observation<sup>6</sup> is that both those completing an ordinary school system and those who receive good training in traditional skills have better economy than those who drop out from traditional or ordinary forms of education. Not surprisingly, do those who have higher education have the highest income in the communities.

Arctic communities, and in particular rural areas, face high drop-out rates in primary and secondary school. There is for all of the Arctic a history of education systems that tried to force central school models on local people including different degrees of suppression of local language. This is today improved to various degrees in the Arctic states. Lack of skilled teachers with local roots, in particular in rural areas, is a circumpolar challenge.

Even if there are exceptions, the school systems provide an education modeled by western values and content and local and traditional knowledge is only valued in good-will speeches and normally not valued in admission to further education, jobs, or in evaluations of education systems. The education is normally driven by central norms and poorly fit the local needs, and does not provide education and training relevant for local job markets. This leads to a continuation of the old system with a high degree of unemployment, import of, often short term, experts, and outmigration of youth. It is normally the females that leave and males who stay behind, leading to many social problems.

It is time for a shift from viewing knowledge as a standardized commodity to seeing it as a distributed resource, decentralization of control and decision making in education and local adaptations of curriculum, and increased use of alternative approaches to access knowledge from any place at any time<sup>7</sup>.

## **Higher Education**

There is a global trend towards bigger units and more centralization both in the private and public sectors. This is a general challenge when one aims at sustainable development of the sparsely populated Arctic region. This trend is also evident in higher education: larger universities provide the benefit of more comprehensive programming, the ability to develop world class research in some areas, and the capability to promote themselves in a competitive research and education market. This strategy, based on the need to be robust, dynamic and well known in one's own right is resource demanding and, therefore, a driver towards larger entities.

The less populated North cannot easily host comprehensive universities and professional education institutions with a size that can match this development. It is, however, not the total size of a university which determines its excellence in a specific area at a given time, as good research groups tend to be modest in size. Many of the same challenges can be solved by smaller institutions if they cooperate in networks, share resources, and divide roles in an efficient manner. The circumpolar network of smaller and larger institutions can form the critical mass for expertise in any field by their collective size. Through a well organized network, partnering universities will be better equipped than any single institution, even if large, to develop and maintain world class excellence in several disciplines as well as foster education, research, and training, that

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<sup>5</sup> Arctic Human Development Report, <http://www.svs.is/AHDR/>

<sup>6</sup> Poppel et al. <http://www.arcticlivingconditions.org/>

<sup>7</sup> Rønning & Wiborg: Education For All in the Arctic? A survey of available information and research; Nordland Research 2008.

is relevant to sustainable development of the Arctic region.

To address this the Higher Education institutions in the circumpolar north have formed the University of the Arctic (UARctic). UARctic allows for a dynamic development of the shared education systems through this kind of cooperation. Smaller learning centers can provide relevant quality education for people who seek higher education within their community or region, based on curriculum developed through circumpolar cooperation. The same learning centers may be developed to serve the infrastructure needs of shared research projects and thus benefit universities that do not have access to such infrastructure. A complete network in the Arctic Region can be a very efficient tool to deliver relevant curriculum for a changing North.

## **Research**

The global academic community has practiced international cooperation in Arctic research since the first Polar Year 125 years ago. It laid the groundwork for a century when the Arctic has become an increasingly attractive arena for scientific research. The International Polar Year, now ending, represents hope for a future with intensified research and increased attention to the Polar regions, including the human perspectives. The people of the North are no longer only an object of study; instead, indigenous peoples and other northerners together take active part in the development and governance of the region, and in defining the research agenda for the North, with "shared voices". After this IPY the global research community, in particular that located in southern latitudes, who seek to study in the North, will benefit from partnering with a growing well educated northern population and the Arctic higher education and research structure.

The University of the Arctic is ready to take the lead to provide stewardship for a sustainable long-term legacy of the Polar Year in higher education and research cooperation in the Circumpolar North that promotes both western academic traditions as well as traditional and indigenous knowledge in the northern knowledge base. It is a goal we hope we share with the whole science community, that future leaders of polar science are just as likely required among youth from the North than from today's southern based research communities. UARctic will provide this leadership in close cooperation with the global polar research community, in particular the major polar science organizations, IASC and SCAR, as well as IASSA. We hope that UNESCO and other global organizations will support this endeavor.

Further, UARctic is committed to ensuring that the northern universities and colleges become key players in the development and sharing of knowledge in and about the North and that such knowledge is based on indigenous and local traditional approaches as well as modern science approaches to knowledge generation and sharing.

## ***The University of the Arctic***

Practically all northern universities, colleges, and organizations engaged in higher education have come together in the University of the Arctic (UARctic), currently a network of 116 members. The leaders of UARctic higher education institutions have signed a declaration, the UARctic Charter, which demonstrates an unparalleled will to share resources and goals across national and institutional boundaries to ensure research, education and training in and about the North. The ambition is for a dynamic UARctic that uses its members' resources and capacity in a flexible and adaptive manner to meet the needs of the North as it changes over time.

UARctic members are ready to take a collective responsibility as leaders of

research and education relevant to northern communities both to serve the North's internal needs as well as to equip the North with the capacity to serve the rest of the planet. In UArctic, through its members, the North has the higher education opportunities needed to ensure leadership and competence to develop its own relevant strategies for knowledge generation and sharing, as well as for education to ensure sustainable development of the north.

**Recommendations:**

UNESCO's International Experts Meeting is recommended to adopt the following:

- Emphasizing the importance of relevant education, research, and knowledge building for sustainable development of the Arctic both to benefit Arctic Inhabitants and its Ecosystems as well as to ensure sustainability of the goods and services from the Arctic the rest of the world is so dependent on
- Acknowledge both western science and research as well as Indigenous and local traditional knowledge as basis for knowledge generation and sharing
- Recognising that concerns about the Arctic regarding environment, climate, and adaptation to global change can only be solved with an Arctic population equipped and sufficiently skilled to address these challenges.
- Encourage Arctic states to work together to develop primary and secondary education systems that are flexible and relevant to the population and that relevant adjustment to education systems and education of relevant teachers with a local knowledge base is prioritized
- Recognise the potential of the University of the Arctic network among all the higher education institutions of the Arctic and recommend to UNESCO and other international organisations that promote higher education to use this network in their Arctic Initiatives
- Recommend that UNESCO establish an Arctic initiative, where Science, Higher Education and primary education are seen as a whole, based on amongst other the Education for Sustainable development and Education for all initiatives