



Summary report of the Arctic Stakeholder Forum consultation to identify key investment priorities in the Arctic and ways to better streamline future EU funding programmes for the region



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ABBREVIATIONS

AIS:	Automatic Identification System
ASF:	Arctic Stakeholder Forum
BEAC:	Barents Euro-Arctic Council
BRC:	Barents Regional Council
CORS:	Cross-Origin Resource Sharing
EEAS:	European External Action Service
ENI:	European Neighbourhood Instrument
EU:	European Union
FP9:	Ninth EU Framework Programme
GEO:	Group on Earth Observations
GNSS:	Global Navigation Satellite System
ICT:	Information and Communication Technology
Interreg:	Interregional Cooperation
ITS:	Intelligent Transport System
NDPHS:	Northern Dimension Partnership in Public Health and Social Well-being
NORA:	Nordic Atlantic Cooperation
NSPA:	Northern Sparsely Populated Areas Network covering North Norway, North Sweden, Mid Sweden, East and North Finland
OECD:	Organisation for Economic Co-operation and Development
SANKS:	Sámi Norwegian National Advisory Unit on Mental Health and Substance Use
SAON:	Sustaining Arctic Observing Networks
SAR:	Search and Rescue
SMEs:	Small and Medium-sized Enterprises
TEN-T:	Trans-European transport Network

ABSTRACT

The report summarises the results of a consultation of stakeholders in the Arctic region on investment priorities for EU support and ways of streamlining EU funding programmes. While conditions across the Arctic vary considerably, there is wide agreement on the main priority for investment – to extend and improve digital infrastructure. There is also wide agreement on the need to strengthen internal and external transport connections and to support local economic activities and their diversification from primary production into related areas, including renewable energy and sustainable tourism. Investment in all these areas is considered vital for local business competitiveness and sustainable economic and social development. It is equally agreed that it is important to support research into climate change, its mitigation and adaptation to it and into development opportunities, reinforced by global warming, which safeguard the fragile ecosystem and the interests of local communities. While the importance to the region of continuing EU involvement is recognised, there are calls for more information about the instruments to provide that support, for a single entry portal to access this information, the harmonisation of regulations, concentration on the main development opportunities in the Arctic, closer cooperation and coordination between programmes and with national and international initiatives and the involvement of local stakeholders in planning programmes.

EXECUTIVE SUMMARY

The present report summarises the results of the consultation organised by the Arctic Stakeholders Forum (ASF) in early 2017 to gather the views of governments in the region, businesses, local authorities, universities, research centres and other stakeholders on investment priorities and of ways of streamlining EU funding programmes. The ASF was established by the Joint Communication on ‘An integrated European Union policy for the Arctic’ from the European Commission and the European External Action Service in April 2016. It comprises the national governments of Denmark, Finland, Sweden, Norway and Iceland, the regions of North and East Finland, North and Middle Norrland in Sweden and North Norway, Greenland, the Faroe Islands and the Saami Council.

The main priorities for investment identified in the consultation are:

- to extend and improve digital infrastructure;
- to develop internal and external transport connections;
- to support local business development, including into renewable energy production, bio-economy, sustainable use of natural resources and sustainable tourism;
- to support research into climate change, its mitigation and adaptation to it and into development opportunities which do not harm the environment and strengthen climate resilience.

As regards the functioning of EU programmes, there are calls for:

- improving information about funding opportunities and the assistance to applicants;
- simplifying administrative procedures and harmonising regulations across funding sources;
- increasing coordination between programmes and with national and international initiatives and funding sources;
- giving more weight to multidisciplinary, cross-sectoral and international approaches;
- involving local communities in the planning of programmes.

Socio-economic context

Although they differ widely in terms of socio-economic conditions, the countries and regions in the Arctic have in common an extremely low density of population, a harsh climate, a fragile ecosystem and remoteness from major markets as well as being seriously affected by global warming. But collectively they also have abundant natural resources, valuable mineral reserves, a unique environment, significant potential for renewable energy production, a vibrant mix of cultures and several universities and major research centres. While still heavily dependent on fishing, hunting, forestry and mining, they have

diversified economic activity into related areas, such as the Arctic bio-economy, as well as into agriculture, creative industries, tourism, ICT and R&D, especially into cold climate technologies, maritime activities and 'blue' growth and mitigating and adapting to climate change. Though threatening the eco-system and traditional ways of life, climate change also opens up new opportunities for economic development through facilitating mineral extraction, easing travel difficulties and lengthening the growing season. To realise these opportunities in a sustainable way for the benefit of both the region and the rest of Europe requires substantial investment in hard and soft infrastructure.

Investment priorities

There is wide agreement on the main investment priorities identified in the consultation, in particular, on the importance of EU support for digital infrastructure, but also for better transport connections and local business development. The views expressed are summarised below by broad policy area.

Digital Infrastructure

Broadband coverage across the Arctic region should be extended and digital infrastructure installed, or satellite technology used where this is not viable, to ensure good connectivity. This is vital for business competitiveness and as the basis for e-healthcare, distance learning and other remote services which are crucial in sparsely populated areas. It is equally important for such expansion to take explicit account of the needs and interests of both indigenous peoples and others in the region. Investment in an underwater cable link between Europe, the US and Asia is also required to increase the speed and security of communications and to provide much needed additional capacity.

Transport

The long term development of the Arctic region depends in large degree on a sustainable and efficient transport network. To this end, there is a need to extend the two TEN-T core corridors (the North Sea-Baltic route in Finland and the Scandinavian-Mediterranean route in Sweden) towards the north around the Gulf of Bothnia, as well as to consider the construction of a possible railway line from Finland to the Arctic Sea. In addition, it is important to develop space-based applications to improve search and positioning systems and to open up the possibility of automated vehicle guidance through satellite navigation.

Business development and smart specialisation

Development of the region should be based on local Arctic knowledge and the know-how of indigenous peoples as well as scientific evidence. Support should go to strategic projects which serve the wider interests together with those of local enterprises and communities as part of a smart specialisation strategy. Policy should focus on creative industries, on creating a low carbon, circular and bio-economy and, more specifically, on supporting sustainable fisheries, aquaculture, agriculture and forestry, mineral and other raw material industries, renewable energy, ICT, intelligent land and sea transport systems, services supporting shipping and maritime activities generally, and sustainable tourism. It should also focus on developing innovative ways of adapting to climate change and building resilience against it.

Research and innovation

Research is an important area for support, especially into climate change, which has implications for accessibility, economic activity and security. There is a need for better understanding of the change occurring so as to develop effective cold climate, green technologies and business solutions to help mitigate its impact and to adapt to it. This is vital to ensuring the resilience of livelihoods and the effective management of climate and water-related risks. In addition it is important for research on the Arctic to be a specific focus of the 9th EU Framework Programme and for the EU to be involved in international programmes as well as for there to be cooperation across borders so as to share scientific infrastructure and research findings. A particular need is for investment in more accurate ocean, sea ice and atmospheric forecasting, together with earth observation systems, and in research to identify sustainable opportunities for social and economic development.

The environment

As well as research into climate change and measures to build resilience to this, the EU should continue its efforts to protect the Arctic environment and improve the ability to manage and adapt to climate change and the weather risks associated with it. This includes through cooperation with the Arctic Council and by providing funding for tackling the various pressures on the eco-system and biodiversity, as well as by supporting efforts in the region to keep the rise in temperatures below 2 degrees and to avoid accelerated melting of the ice and snow from carbon emissions.

Energy

Further support is needed to further the shift towards renewables and, in particular, towards bio-energy, wind farms, tidal power, energy recovery from waste and hydro power, as well as towards state-of-art technologies, such as in power generation, and energy saving measures, in housing in particular.

Tourism

Support is needed for the development of sustainable tourism, ranging from nature tourism to hunting-, fishing, water and cultural tourism including in the Saami communities, though this needs to be accompanied by regulations to better preserve the natural environment, as well as by efforts to ensure that the views and interests of indigenous peoples are fully taken into account.

Culture

Culture is a key factor in the development of communities and the local economy. It is, accordingly, important to preserve the cultural heritage of the region by supporting various cultural activities in all parts of the Arctic and its communities, including in the Saami community, for which the Saami Council calls for support of investment in various cultural areas.

Healthcare and social services

Low population density and widely dispersed settlements give rise to difficulties in meeting healthcare and social needs. There is a need to develop e-health technologies, to facilitate the exchange of healthcare personnel across the region, to tailor services specifically for the needs of the indigenous peoples and local communities and to combat the adverse effects on health of a harsh climate.

Skills and education

There is need to overcome skill shortages and skills mismatches in the region by increasing cross-border mobility and cooperation between training centres and employment services, creating 'competence platforms' spanning borders and developing common standards in vocational education, along with the greater use of distance learning. There are calls to strengthen the recruitment and education of teachers in the Arctic, to improve the quality of teaching. There are also calls to open access to EU programmes, such as Erasmus Plus and Horizon 2020 to all non-EU citizens in the region.

Integrated urban development

Support should be provided for the development of sustainable cities and communities, including of the Arctic university cities, which have the research, innovation and production capability to develop green and smart technologies to benefit not only the Arctic region but the rest of Europe as well.

Functioning of EU programmes

While the importance of continuing EU support for the region was recognised, a number of weaknesses in the functioning of EU programmes were identified along with possible ways of improving them, including in relation to access to programmes, application support and implementing, monitoring and reporting on programmes. The complexity of applying for

and administering programmes should not create unnecessary obstacles to undertaking projects which are beneficial for Europe as well as for the region.

Difficulties in obtaining the right information and possible solutions

There is a lack of information about EU programmes. Brochures and newsletters with details of programmes and how to participate would help in this regard and raise awareness of the funding possibilities available. Information on the rules and regulations involved is complex and dispersed. There should be a single entry portal to all the information required, as well as more help to interpret the regulations.

Difficulties in assembling the resources required and possible solutions

The administrative requirements for participating in programmes are excessive and procedures are overly bureaucratic as well as varying between programmes. Simplification is needed through the same rules and procedures being applied to all funding programmes. There is a need for help in meeting co-funding requirements and to cover the delay in receiving payment from the Commission.

Ways of improving the functioning of programmes in common areas of interest

Programmes should be more concentrated on the most pressing problems and on the main opportunities for development. Closer cooperation is needed as regards the use of research infrastructure, as well as across borders and between programmes. Equally, there should be increased coordination between programmes and with national and international initiatives and funding sources to reduce duplication of effort and to increase effectiveness. Increased effectiveness could also be achieved by giving more weight to multidisciplinary, cross-sectoral and international approaches. In addition, regional and local stakeholders, including the indigenous peoples should be involved in the planning of programmes to make use of their knowledge about the region and to ensure that their rights and interests are protected.

1. INTRODUCTION

The Joint Communication, 'An integrated European Union policy for the Arctic', adopted by the European Commission and the European External Action Service (EEAS) in April 2016¹, sets out a new EU strategy for the region, building on earlier Communications in 2008 and 2012. It expresses the intention of the EU to step up its existing action and engagement in the Arctic by pursuing a series of activities focused on counteracting climate change, safeguarding the fragile Arctic environment, unlocking the potential of the region for sustainable development and strengthening international cooperation by deepening regional and multilateral cooperation. The Communication suggests that the European Arctic area is suffering from under-investment and highlights the particular importance of investment in infrastructure together with research, science and innovation. It indicates that European company investment could help to advance the sustainable development of the region, possibly aided by the European Structural and Investment (ESI) funds and initiatives under the Investment Plan for Europe.

The Joint Communication established the Arctic Stakeholder Forum (ASF) as a temporary forum for consultation, involving EU institutions, Member States and regional and local authorities to identify investment priorities and ways of better streamlining EU funding programmes in the future. The work of the forum is to be completed by the end of 2017. The participants in the ASF included, in addition to EU institutions:

- the Governments of Denmark, Finland, Sweden, Norway, Iceland, Greenland and Faroe Islands;
- the regions of North and East Finland (Pohjois- ja Itä-Suomi), North and Middle Norrland (Övre Norrland and Mellersta Norrland) in Sweden and North Norway (Nord-Norge), which are members of the Northern Sparsely Populated Areas (NSPA) network;
- the Saami Council.

Each of these, with the exception of Iceland, organised a consultation between 16 January and 27 February 2017², involving local businesses, local authorities, universities, research centres and other stakeholders '*interested and active in developing their geographical area and able to see investment priorities from a cross-border/transnational perspective*'³. These were asked for their views on a series of questions relating to participation in EU programmes, the functioning of these and investment priorities for the Arctic region. This report summarises the contributions to this consultation. The main points made are set out below, starting with the investment priorities for the region and going on to the views expressed on EU funding programmes. The points to emerge from the high-level event "A sustainable Arctic – Innovative approaches" held in the City of Oulu on 15-16 June 2017 to discuss the preliminary results of the consultation are also summarised below, together with those included in a report produced by the City to accompany the event.

It should be noted that the contributions are very different in scope and size. Some proposed investment priorities for the Arctic region as a whole, others focused on their own area and needs. Some adopted a broad approach and set out long-term strategies for investment, others called for very specific and sometimes small investment projects to meet local needs. The present summary, it should be emphasised, is aimed at covering all the views expressed in an impartial way rather than at defining a coherent consolidated strategy on the basis of these views, though an attempt has been made to set out the points coming out of the consultation as coherently as possible.

¹ JOIN(2016)21 final of 27 April 2016

² Iceland did not hold a consultation while the Faroe Islands did not hold a full one since, in the case of the latter, with the exception of Horizon 2020, the only programme to which the Faroe Islands, as a non-EU partner country, currently has access to is the Northern Periphery and Arctic Programme.

³ Arctic Stakeholder Forum - action plan for the consultation process.

2. THE SOCIO-ECONOMIC CONTEXT

The countries and regions which are part of the Arctic area are home to some 3.1 million people. Over half of these live in the EU, some 1.2 million in the north and eastern region of Finland and 900 thousand in North and Middle Norrland in Sweden, while 480 thousand live in North Norway, 330 thousand in Iceland, around 56 thousand in Greenland and 50 thousand in the Faroe Islands, the last two being self-governing territories of Denmark. In addition to sharing a cold and harsh climate, they all have large land areas in relation to their population – and in some cases large areas of sea too. Virtually throughout the region, population density is less than 7 people per square kilometre, only a small fraction of the EU average (117 per square kilometres), and it is less than one person in every 7 kilometres in Greenland, even if the land area is restricted to that which is free of ice (only around 20% of the total). Even in the Faroe Islands, which are relatively small in size (around 1 500 square kilometres in total), population density is only just under a third of the EU average.

While population has tended to become increasingly concentrated in small and medium-sized towns and cities, it remains largely dispersed in small settlements across most of the region. This together with the extreme climatic conditions and the remoteness gives rise to major difficulties not only in terms of communications but also for the provision of public services and economic development. Nevertheless, the various parts of the region have succeeded to a large extent in overcoming these difficulties while retaining their social and cultural diversity. Although traditional primary sectors remain an important source of exports and employment – fishing in most parts, though especially in Greenland and the Faroe Islands, hunting and reindeer herding among the Saami communities in Norway, Finland and Sweden, and mining and forestry in the last two countries – there has been significant economic diversification into other areas. These include agriculture, aquaculture, seafood and other food products, mineral extraction, hydrocarbon products, chemicals, renewable energy and eco-tourism, as the different parts of the region have taken advantage of their differing endowments of natural resources and largely unspoilt, unique environment. In addition, knowledge-intensive activities have been developed and research capacity has been built up, especially in the university cities in the region, particularly relating to climate change and cold climate technologies.

These areas offer further opportunities for sustainable development so long as environmental considerations are respected and care is taken to protect the delicate eco-system. Realising these opportunities can bring substantial benefits not only for the region itself but also for other parts of Europe in the form of combating climate change and mitigating its effects, energy security, food production and technological innovation. But to do so involves substantial investment, not least in improving transport and communication links within the region as well as with places - and markets – outside.

The various parts of the region have another feature in common. All have been disproportionately affected by climate change for which they bear little or no responsibility. This is imposing new pressures on the eco-system, traditional activities and ways of life as air and sea temperatures rise, affecting the abundance and distribution of fish stocks and animal habitats. At the same time, however, it is also giving rise to new opportunities for economic development as warmer temperatures open up new shipping routes and make travel generally easier, as well as facilitating mineral extraction and lengthening the growing season for crops and vegetables.

3. RESULTS OF THE CONSULTATION PROCESS

3.1. Investment priorities

There was common recognition in the consultation that EU programmes are important for the development of the Arctic region. They provide funding for investment in hard and soft infrastructure and opportunities for non-EU parts of the region to cooperate with EU Member States as well as encouraging private businesses to invest in the Arctic. It was

emphasised that such investment not only benefits the Arctic but the EU more generally as well as supporting the EU in building links with North America and Asia.

The consultation identified a number of priorities for investment, several of them being widely endorsed as indicated. These are set out below, organised by broad policy area. An indication is given of the countries or regions from which the views expressed emanate, but this does not mean that such views are held exclusively by the stakeholders concerned and that others elsewhere do not share similar views.

It was stressed by the Finnish Government that EU funding and the selection of investment priorities should take account of economic, social and environmental sustainability, including climate change, and that the sustainability of value and supply chains, in particular, should be a key determinant of this selection. The adoption of such sustainability principles, it is argued, creates incentives for innovation and the basis for long-term sustainable development.

Digital Infrastructure

All stakeholders without exception emphasised the need to extend broadband coverage across the Arctic region, together with the systematic upscaling of e-society measures and the installation of cost-efficient digital infrastructure as a major priority. Good connectivity, it was argued, is a vital element in regional development and job creation, and digitalisation is crucial in numerous sectors of activity. Where installation of broadband is not feasible, other solutions, particularly efficient satellite connections, need to be found.

Improved connectivity is not only important in its own right but is seen as a means of enabling better use of e-health technologies, distance learning and the delivery of other kinds of service which are vital for sustainable development in sparsely populated areas. Digital infrastructure to allow the use of modern technology is also of increasing importance for maintaining traditional livelihoods, such as reindeer herding. Accordingly, the expansion of digital infrastructure and services in the Arctic should take explicit account of the needs of indigenous peoples and local communities. Importance should also be given to developing connectivity that supports maritime and aviation users, and, in particular, search and rescue, as emphasised below. In this regard, the Finnish Government called for the EU to collaborate to find solutions for satellite navigation coverage problems in the Arctic, given that such coverage forms the basis for many current and future digital services and locational and automated guidance systems.

Views and proposals on investment in digital infrastructure

Stakeholders throughout the region recommended investment in ICT and improvements in digital infrastructure:

- stakeholders in the NSPA in Norway, Finland and Sweden, in the City of Oulu and the Finnish Government called for investment in an under-water cable connection between Europe, Asia and the US, via the UK, Iceland and North Norway. They emphasised that, in addition to increasing the speed of communication, the cable would answer the rapidly growing need for more line capacity and be an alternative to 'southern routes' which are seen as relatively risky. It could also provide a major stimulus to growth in the countries concerned;
- stakeholders in Denmark called for investment in geospatial infrastructure to improve positioning and navigation in the Arctic, supported by a strong communications network to ensure efficient data transfer, which would include satellite surveillance over the region;
- those in the Faroe Islands stressed that a fully digital infrastructure for public and private communications and services is crucial for development;
- those in Greenland emphasised that improved telecommunications and access to the Internet is vital in a sparsely populated country where settlements are widely dispersed;

- the Icelandic Government made the similar point that investment in broadband infrastructure and connectivity throughout the region is needed so that communities have access to the same level of services as in other places;
- those in Norway lent support to the use of the European Regional Development Fund (ERDF) and the Connecting Europe Facility to stimulate broadband roll-out in the EU Arctic Member States, which is likely to require in some cases satellite-based services;
- the NSPA in Norway, Finland and Sweden proposed investment to ensure full high-speed internet coverage in all sparsely-populated areas, even where it may not be commercially viable, to install a telecommunications cable in the North-East Passage, to support cloud computing and to further R&D in digital solutions;
- according to the Saami Council, investment in connectivity and high speed internet would help to overcome the challenges relating to long distances, as well as enabling e-learning facilities to be set up, so that young Saami can pursue their studies, and facilitating cross-border activities in the Sápmi region;
- stakeholders in Sweden reiterated the importance of access to e-Government services for people and businesses throughout the country including in sparsely-populated areas;
- the city authorities in Oulu in Finland emphasised the importance of a trans-Arctic data cable to create the shortest and safest means of communication between Europe and Asia. They pointed out that increasing the connectivity of the Arctic region would open up new opportunities for many sectors of activity, especially ICT, oil and gas production and mining, and would boost productivity as well as supporting the 'smart' development of cities.

Transport

The widespread and strongly-held view to emerge from the consultation is that the long term development of the Arctic region depends to a major extent on a sustainable and efficient transport network. This is also a key message to come out of the OECD studies of the NSPA in Norway, Sweden and Finland (in 2017) and of the North Atlantic region (NORA) comprising the Faroe Islands, Greenland, Iceland and the coastal counties of Norway (in 2011). These both conclude that investment in transport infrastructure is vital if the region is to develop and that further investment is needed to improve connections both within the region and to other parts of Europe. Investment in transport, it is argued, would support business development, widen local labour markets and enable people to meet together more easily. Transport systems need to operate in changing weather conditions and in difficult terrain. They also need to be sustainable, which means reducing the greenhouse gas and other pollutants emitted. New investment should, accordingly, minimise the adverse effects on the environment and traditional land-use.

Two main priorities for transport emerged from the consultation. The first is investment in physical transport infrastructure, including the extension of two trans-European Network (TEN-T) core corridors and better connections with national transport systems. A list of the specific projects called for is set out in the box below. The second is the development of space-based applications to improve search and positioning systems, necessary, for example, for automated vehicle guidance through satellite navigation.

Development of the TEN-T in the Arctic

The NSPA in Norway, Sweden and Finland and the City of Oulu both highlighted the need to extend the TEN-T core corridors, the North Sea-Baltic and the Scandinavian-Mediterranean, to the Arctic in Northern Sweden and Northern Finland. This 'Bothnian extension' would consist of the North Bothnia railway line, the Iron Ore line, including a connection to the Port of Narvik, the new East Coast line and the Haparanda Line in Sweden, which extends to Tornio in Finland and from there links to the main line to Helsinki. These are functioning lines which are already included in plans for the construction of the TEN-T core network in this part of Europe. There was also a call to consider developing the Arctic corridor line from Finland to the Arctic Ocean. It was stressed that it

is now time to make concrete plans and to put in place financing arrangements for these projects. The Finnish Government in particular considers that a railway from Finland to the Arctic Ocean could support economic growth and increase climate resilience in Europe and globally. The major industries in the region – mining, fisheries, agriculture, forestry and the growing tourism sector – require efficient and more sustainable transit routes for goods and people. Well-functioning and cost-efficient infrastructure is needed to increase the security of supply, especially of energy and food.

The Norwegian Government suggested, in addition, using the ESI Funds to implement the Joint Barents Transport Plan, formulated with the Swedish, Finnish and Russian Governments and designed to develop an efficient transport system in the Barents region, by aligning the investment financed by the Funds in the Arctic EU countries. The idea is equally for the EU to play an active role in the Barents Euro-Arctic Transport Area (BEATA) and to make use of the Northern Dimension Partnership on Transport and Logistics (NDPTL) to identify common interests in the Arctic region.

Navigation safety, Search and Rescue systems

It was pointed out in the consultation that there is currently no complete search and rescue coverage of the Arctic Ocean and that the growing activity taking place requires increased competence and capability to ensure safety for people and to protect the fragile Arctic environment. The Arctic Search and Rescue (SAR) authorities have, therefore, recognised the need to further develop advanced information sharing between coastguards, emergency services and others involved in SAR operations⁴.

Accordingly, stakeholders in a number of countries – in Denmark, Norway and Finland – as well as the Icelandic Government and the Saami Council – called for investment in an efficient SAR system. The challenges to overcome include long distances, severe weather, ice and cold, a poor communications network and lack of infrastructure as well as resources. The development of an efficient system is becoming increasingly important not only because traffic in the Arctic is growing but also because extreme weather conditions and unsafe ice are becoming more frequent. At the same time, joint training and systematic sharing of lessons learned, as well as technological innovation in communications networks and connections to them, navigation, survival and rescue equipment, and healthcare services are called for in order to improve SAR capabilities in the region. As regards communications, the need is for proper satellite broadband and AIS⁵, radio towers and other infrastructure to support SAR operations.

The Saami Council emphasised that there is also a growing need for SAR capabilities in Lapland as the number of tourists is increasing and the density of the population is extremely low. It was proposed that the EU should contribute to multilateral funding to establish a system of this kind and should cooperate with organisations such as COSPAS-SARSAT in doing so.

The Norwegian, Finnish and Danish Governments emphasised, in addition, that the needs of Arctic users should be explicitly taken into account in the Galileo, Copernicus and GOVSATCOM space-based systems, which are necessary not only to safeguard maritime activities and to ensure rapid search and rescue operations, but also to better monitor climate change and the consequences for the environment and seabed. It was mentioned in this regard that in Greenland the geodetic infrastructure for positioning, navigation, mapping and land surveys is based on a basic GNSS network (CORS) which is not compatible with Galileo. It was stressed that to secure positioning systems such as Galileo in the future, it is imperative to modernise the communications network in the Arctic in order more closely to achieve real time data transmission. It is also imperative to modernise the sea charts in the Arctic and update them according to the digital standards of the new multi-beam hydrographic survey data. This will enable modern positioning

⁴ http://www.raja.fi/download/73962_Arctic_Search_and_Rescue_Capabilities_Survey.pdf?4f3ed129b21ad588

⁵ Automatic Identification System for tracking the movement of ships.

technologies, for e.g. navigation, SAR applications and environmental protection, to be used.

List of transport projects proposed

- **Rail:** to upgrade and extend the Scandinavian-Mediterranean core TEN-T corridor along the Bothnian extension linking the North Bothnia line, the Iron Ore line, the new East Coast line and the Haparanda line in Sweden; to modernise the 'Ofotbanen'(Ofoten line) in Narvik, Norway; to develop the Mid-Nordic Corridor (Sundsvall-Trondheim) together with the E12 Corridor and the Midway Alignment (Umeå-Vaasa) to complement the proposed extension of the Scandinavian-Mediterranean Corridor and the North Sea Baltic Corridor; to upgrade and extend the North Sea-Baltic line from Helsinki to Tornio in Finland; to support the Eastern Corridor and the Karelia Silk road from North-Karelia in Finland to mid-China; to upgrade and extend the Arctic Corridor which consists of the line between Rovaniemi in Finland and Kirkenes in Norway (and further to Murmansk in Russia) and/or between Skibotn in Norway and Kolari in Finland (a feasibility study commissioned by the Norwegian and Finnish Governments is due to be completed in Spring 2018); and to modernise the 'Inlandsbanan' (Inland railway line), which runs through the central part of northern Sweden.
- **Air traffic and airports:** to build or extend a number airports in Greenland, in particular, Nuuk, Ilulissat and Qaqortoq, and to convert the airport in Oulu in Finland into an international one; to increase both east-west and north-south interregional flight connections within the NSPA in Norway, Sweden and Finland as well as with other parts of the Arctic region; to support ongoing developments in the aviation sector in Iceland and to increase flights in Sápmi; to develop a new cross-border perspective for air connections, defined according to Public Service Obligations.
- **Navigation and ports:** to develop the ports in the NSPAs in Norway, Sweden and Finland, specifically, to support the construction of the new port in Oulu in Finland; the development of the ports of Kemi and Kokkola and the upgrading of the ports of Sundsvall, Luleå, Umeå and Skellefteå all in Sweden and the ports of Narvik and Mo i Rana in Norway, which all have concrete plans for major investment; to support ongoing developments in shipping and logistics in Iceland; to improve hydrographic surveying and chart production in the Arctic, so as to increase the safety of navigation and environmental protection as well as improving SAR systems; to develop Marine Spatial Data infrastructure in Greenland; to improve the Arctic-Spatial Data infrastructure and to test whether new technologies, such as Bathymetric LiDAR, can be used to speed up surveys and the charting of the seabed.
- **Road:** to upgrade and maintain the road network in the NSPAs in Norway, Sweden and Finland.
- **Intermodal transport:** to invest in the inter-operability of transport modes in Norway, Sweden and Finland and to ensure that they are operational in any weather conditions throughout the year.
- **Public transport:** to increase the availability of public transport in general and of buses in particular in Sápmi.
- **Intelligent Transport Systems (ITS):** to explore the potential of ITS in the NSPA in Norway, Sweden and Finland.
- **Off road transport:** to improve the regulation of off-road traffic, which is increasingly damaging the fragile natural environment in Saami areas, and of tourist routes to ensure that visitors stay within designated areas, and to monitor off-road transport.

Business development and smart specialisation

There was a common view that Arctic expertise and knowledge should be a driver of economic development in the region and that support should go to local enterprises and communities to assist in this. Initiatives to boost business development and the transition

towards a low carbon, resilient society in the countries and regions concerned should, accordingly, be based on smart specialisation strategies, built on regional strengths and knowledge and aimed at forming complete value chains and circular economies where possible and appropriate. To support such strategies, there is a need for policies to improve operating conditions for companies, to encourage more and better organised collaboration in and between the various parts of the region, to promote public-private partnerships and to foster networks between companies and research centres, as well as flexible approaches which are equally suitable for the smaller countries and islands. There is also a need to promote business innovation to develop the means of countering and responding to climate change and the associated weather risks and to build resilience to them in the region.

The proposals made by various stakeholders do not distinguish *per se* between support to research and innovation and support to SMEs and business development. The prevailing view was that smart specialisation necessitates intervention to support the knowledge base and local enterprises. In the same way, efficient communication and transport systems are seen as crucial for business development, growth and job creation. A number of stakeholders, the Finnish Government in particular, stressed the need for an integrated strategy aimed at strengthening the various drivers of growth in the Arctic region simultaneously.

Views were also expressed that EU priorities for investment funding should focus on the following sectors⁶:

- sustainable fisheries and marine resources, including aquaculture (by stakeholders in Greenland, in particular) as well as other maritime industries (by those in the Faroe Islands), and reindeer herding, hunting and gathering (according to the Saami Council);
- mining, mineral and other raw material industries as well as chemicals to make them more environmentally sustainable and to integrate them into the circular economy (by stakeholders in Sweden and Greenland) including the management of water from mines (by the NSPA in Norway, Sweden and Finland);
- the bio-economy (by stakeholders in Sweden and Finland) and in particular bio-industries based on forests and agro-food as well as marine, water and other natural resources (by the NSPA in Norway, Sweden and Finland);
- the metal, machinery and machine-tool industry (by the NSPA in Norway, Sweden and Finland);
- ICT (by the Finnish Government), including the digitalisation of healthcare and social services and robotisation (by the NSPA in Norway, Sweden and Finland), telecommunications and e-technologies (by stakeholders in Norway), and the development of 5G networks, printed intelligence, data security, big data and the Internet of Things;
- satellite technology, including the Galileo, GPS, Glonass and Beidou systems, as well as digital services and automated vehicle guidance through satellite navigation (by stakeholders in Finland)
- energy production and technology, specifically involving renewables, such as bio-fuels and hydro-, wind (at sea as well as on land) and tidal power as well as energy recovery from forest residues and waste and increased resource efficiency (by the NSPA in Norway, Sweden and Finland) and the development of hydropower and small grids (by stakeholders in Greenland);
- services supporting shipping and other maritime activities in the North Atlantic and Arctic waters (by stakeholders in the Faroe Islands and Denmark), services supporting

⁶ The sectors are listed in the order they are included in the Statistical classification of economic activities in the European Community (NACE) and not necessarily in order of priority.

key industries elsewhere (by the NSPA in Norway, Finland and Sweden) and the remote operation of vessels (by stakeholders in Finland);

- sustainable tourism respecting the environment (by stakeholders in Greenland, the Icelandic Government and the Saami Council) and joint tourist product development with better cooperation across national borders (by the NSPA in Norway, Sweden and in Finland);
- creative industries and cultural activities (by stakeholders in the Faroe Islands);
- healthcare and hospitals (by stakeholders in Finland) and life sciences (by those in the Faroe Islands and Sweden).

However, there are a few other measures that need to be taken or to be improved (according to the OECD, 2011 and 2017), to ensure that businesses, especially start-ups, have what they need to get established, grow and remain operating in the Arctic region:

- the provision of better financial instruments to support SMEs at various stages of their development and to help them overcome the barriers to innovation and growth that start-ups face;
- the provision of better support for SMEs to help them expand into international markets and to find suitable channels of distribution and partners abroad;
- investment in logistics and infrastructure to support international business development;
- Investment in high quality local education, lifelong learning and research institutes.

Research and innovation

Many of the stakeholders consulted stressed the importance of research into *climate change*, which is occurring rapidly in the region, and the issues surrounding this. The transformation of the natural environment resulting from the melting of the ice caps has implications for accessibility and economic activity as well as security. While the transformation threatens traditional ways of living, it also opens up new development opportunities, as indicated above. Those consulted in Finland, Norway, Denmark and Greenland and the Icelandic Government, in particular, emphasised the need for better understanding of the changes taking place in order to adopt effective courses of action in response to them. Stakeholders in Norway and Finland urged the EU to strengthen research activity in the Arctic and to focus on three main priorities:

- protecting the Arctic environment and combating climate change through both mitigation and adaptation;
- achieving sustainable economic and social development in and around the Arctic;
- establishing international cooperation in research on Arctic issues.

They stressed the importance of international cooperation for building and sharing scientific infrastructure to study the data on climate change and the findings from research on it. They also emphasised the need for a focused Arctic research agenda in the 9th EU Framework Programme (FP9) and their increased involvement in EU initiatives. In addition, they underlined the importance of the EU actively participating in, and coordinating with, established international programmes organised by the Arctic Council – such as the ‘Sustaining Arctic Observing Networks’ (SAON) and the ‘Group on Earth Observations’ (GEO) – not least to avoid initiating new and competing projects. Similarly, synergies could be explored with the Arctic Council’s Arctic Spatial Data Infrastructure initiative which provides tools for data distributors and end users, ensuring that geospatial data is easy to access, validate and combine with other data.

Stakeholders in Denmark also identified climate change as a major area for research. They highlighted the need to invest in more accurate ocean, sea ice and atmospheric forecasting and in models to predict developments in the melting rate of the Greenland ice cap and the resulting rise in sea levels. They pointed out that better models and forecasts would

help to reduce the uncertainty relating to the changing environment and enable more effective measures to be taken, as well as indicating new opportunities for business development and tourism.

The Icelandic Government similarly pointed to the importance of better monitoring of climate change and the effects over both the short and long-term on the ice cap, the sea and the Arctic environment more generally in order to get a better understanding of them and the way that other regions are likely to be affected.

A common view expressed was that the development of cleaner technologies is indispensable for countering climate change and preserving the environment. A second area of research identified as an investment priority is, accordingly, *sustainable green and cold climate technologies*. Swedish and Finnish stakeholders emphasised that people and organisations in the Arctic region have unrivalled expertise in working in extreme conditions which gives the EU a competitive advantage in this area. Significant ongoing investment in research and innovation, including in testing, however, is needed to make the most of the opportunity which this advantage provides to gain a competitive lead in global markets.

In the same vein, NSPA stakeholders in Norway, Finland and Sweden also called for support of applied research in cold climate technology as well as sustainable green technologies. They expressed the view that testing and finding solutions in extreme conditions is vital for addressing the challenges in the Arctic. In addition, since such testbeds are hubs for innovation where research institutes, the public sector and SMEs can work together, they are seen as a means of involving SMEs in sparsely populated areas in knowledge networks.

The Swedish government also recommended investing in infrastructure for applied research, such as in testbeds and 'living laboratories' that can be used jointly by universities in the Arctic. It suggested, in particular, the development of a testbed facility at the Kaunisvaara mine site in Pajala in the North of Sweden to enable testing of mining technology and rehabilitation methods in cold climates as well the small-scale testing of processing techniques. It called, in addition, for research on sustainable green solutions, including earth observation, in the region.

A common view is that climate change has opened up new opportunities for raw material extraction and processing, but more research is needed to find ways of taking advantage of these opportunities in more environmentally friendly ways as well as making more sustainable use of the resources concerned. Processing of raw materials, for example, still requires vast amounts of energy and many stakeholders called for more research to develop greener methods, without which processing will have a damaging effect on the environment and will accelerate the process of climate change. At the same time, stakeholders in Greenland pointed out that the specific minerals and metals needed in renewable energy technology can now more easily be extracted than before, which could help to increase the share of renewables in total energy production and so combat global warming.

The environment

In addition to increasing resources for research into climate change and proposing a specific research agenda for it under FP9 as already noted, two further proposals were made in the consultation.

The Norwegian Government referred to EU Arctic policy, which is conditioned by the fact that climate change, pollution (including cross-border), growing accessibility, alien species and expanding economic activity are increasingly affecting the environment in the polar regions. It stated that participation in the environmental working groups of the Arctic Council and the alignment of funding to these groups, would be welcome and would help to tackle these challenges and called for environmental and climate change considerations to be taken into account in decision-making in relevant policy-areas.

The Finnish Government drew attention to the support the EU has provided for research on black carbon and the regulations which it has introduced that will result in significant

reductions in black carbon emissions from Member States. It underlined the importance of making further efforts to reduce such emissions by enlisting the help of a wide range of organisations and through the use of various programmes and funding sources.

The Icelandic Government, in addition, called for EU support for efforts made by the countries in the region to achieve the milestones set by the Paris Agreement to keep the rise in global temperatures below 2 degrees. It drew attention to the fact that the Arctic is warming twice as fast as the rest of the world, causing profound changes in the region and, accordingly, pleaded for improved international cooperation to meet the Paris objectives and for more engagement in the search for concrete measures to respond to warmer temperatures in the region.

Energy

For stakeholders in Greenland, Sweden, Finland and Denmark and the Icelandic Government, investment in sustainable energy, in the generation of energy from renewables and in measures to improve energy efficiency is a priority.

As a leader in geothermal energy production, the Icelandic Government expressed an interest in further supporting the shift towards renewables, which it saw as an important driver of sustainable growth and better living conditions, pointing out that continuous innovation was lowering both investment and operating costs.

In the other countries, support was proposed for a range of renewable sources, including bio-energy and full-scale bio-refineries fuelled by biomass from forests, wind farms (both at sea and on land), tidal power, energy recovery from the burning of waste and hydro power. In Greenland, particular efforts are being focussed on the last as well as on energy efficient housing and ventilation systems to save energy. This is also a priority area for investment for the Finnish Government.

In the Faroe Islands, support was expressed for collaboration to develop island solutions for renewables based on wind and tidal power.

Tourism

In a number of countries, specifically, Sweden, Finland, Greenland and the Faroe islands, there was a call for EU funding to be used to support the development of sustainable tourism. While in Greenland, the proposal was mainly for investment in infrastructure to increase capacity, in Sweden, the emphasis was on creating an Arctic Nordic brand and a broad tourist 'offer' ranging from nature tourism to hunting, fishing, water and cultural tourism including in the Saami communities. Finland stressed that the Arctic bio-economy should be part of such a sustainable tourist offer, pointing out that traditional Arctic food, natural water resources, renewable energy and timber construction, for example, are part of 'the Arctic travel experience'. It also pointed out that as the Arctic tourism brand is developed there is a need for attention to be paid to safety and security aspects and to build a comprehensive overview of the industry.

The Faroe Islands too proposed support for the development of an Arctic tourism brand but stressed that it needs to be accompanied with new regulations to better protect the natural environment. It is also the view in Norway that environmental protection needs to be improved and that a code of conduct is required, along with maintaining a genuine dialogue with indigenous communities over the development of tourism, a view echoed by the Saami Parliament in Norway.

Culture

The Norwegian and Faroe Island Governments, suggested the use of EU funding to support various kinds of cultural project across the Arctic region, both local ones and those involving recreational activities as well as those promoting 'Arctic culture' more widely. It was argued that culture contributes in many ways, and at different levels, to the development of communities and is a driver of economic activity. The Norwegian proposal

for the establishment of specific funding schemes could be one way of supporting a diversified range of cultural activities.

Preserving the cultural heritage and sharing it with others is at the heart of the proposals made by the Saami Council. More specifically, the Council identified three main priorities. The first is for investment in museums to display the artefacts currently held outside Sápmi, and waiting to be returned, in cultural centres where the Saami culture can be shared and in a suitable venue to host the Saami National Theatre, *Beaivváš*.

The second priority is to support Saami film production and media activities. Films, in particular, are seen as a powerful means of telling 'the Saami story', of keeping the Saami languages alive and of helping young Saami to identify with their roots.

The third priority is to invest directly in supporting the Saami languages. Since the different Saami languages and dialects are traditionally spoken in two or three different countries, the Saami Parliament has established the joint Saami languages centre, '*Sámi giellagáldu*', to promote their use, but funding for the centre is uncertain. The Council, therefore, requests support for the centre as well as for language tools, such as error correction, translation and speech synthesis. The stakeholders in the NSPA network participating in the consultation also called for measures to protect the Saami culture and languages.

Healthcare and social services

Low population density and widely dispersed settlements, together with the limited resources of small municipalities, give rise to problems in meeting healthcare needs, a point emphasised by stakeholders in the NSPA in Finland, Sweden and Norway as well as by the Saami Council. The first proposed to use the Northern Dimension Partnership in Public Health and Social Well-being (NDPHS) as a platform to identify common public health and healthcare interests in the Arctic region and to facilitate the development, testing and use of e-health technologies, including to monitor, mitigate and prevent the adverse effects on health of a harsh climate. They also proposed the exchange of healthcare personnel and the promotion of a healthy lifestyle among people of all ages and especially the young.

The Saami Council, on the other hand, put the emphasis on healthcare training as well as on Saami language courses for doctors and nurses. It also proposed that support should go to healthcare establishments in the region, particularly to the Sámi Norwegian National Advisory Unit on Mental Health and Substance Use (SANKS), and to the development of healthcare techniques and online treatment services especially tailored to Saami needs.

In Greenland, as well as on the need for more doctors and nurses, the focus was on social innovation with a proposal for projects targeted at children, young people, the elderly and marginalised workers in small settlements in the outer peripheral areas.

Skills and education

According to many of the stakeholders consulted, one of the main bottlenecks to growth in the Arctic region is a lack of skills in key areas and a wide-ranging skills mismatch in labour markets. The OECD (2017) report on the NSPA in Finland, Norway and Sweden came to a similar conclusion. In order to alleviate such bottlenecks, the Swedish Government proposed an approach largely based on cross-border cooperation, consisting of establishing matching structures across national borders, creating 'competence platforms' which span borders and developing common standards in vocational education. The latter echoes one of the main recommendations for tackling the skills mismatch in the NSPA in the OECD report, which also called for action to facilitate cooperation between businesses, training centres and employment services together with support for business training for young people.

Cooperation and cross-border mobility were equally suggested as means of supporting education in the region, along with measures to encourage the take-up and broader use of distance learning. The Norwegian Government pointed, in addition, to the limitations on the mobility of students and teachers stemming from the fact that not all countries in the region have access to EU programmes. It, therefore, proposed that:

- Erasmus+ and Horizon 2020 should be open to all of the counties by establishing an 'Arctic window' in the programmes;
- 'peer learning' activities should be facilitated in the relevant EU programmes;
- the Finnish initiative in the Arctic Council to establish a network programme for the education of teachers in the Arctic ('Teacher Education for Diversity and Equality in the Arctic') should be supported;
- ASF funding should be aligned with the Nordic Council 'Nordjobb' initiative to improve the skills of young people;
- investment should be made in collaborative ventures between Arctic universities, such as the Joint Arctic Agenda.

The Saami Council emphasised, in particular, the need for 'satellite campuses' with high-speed internet connections to provide distance education in the places where the Saami people live and work. It also called for support for partnerships between Saami research centres and education institutes and for the establishment of a '*duodji academy*' (Saami handicrafts academy).

Integrated urban development

The City of Oulu stressed in its contribution to the ASF that the development of the Arctic region implies the development of sustainable cities and communities where individuals and families are happy to live. It, accordingly, invited the EU to help support the 'smart' development of Arctic university cities, such as Oulu and Rovaniemi (both in Finland), Luleå and Umeå (both in Sweden) and Tromsø and Bodø (both in Norway), cities which have the necessary human resources in research, innovation and production to develop green and smart technologies which would benefit not only the Arctic region but the rest of Europe as well. The Swedish government also proposed using EU funding to support the development of smart cities and taking advantage of the experience of northern cities to build platforms for smart cities in remote rural urban areas.

3.2. Functioning of EU programmes

In addition to identifying investment priorities in the Arctic region, the consultation aimed to bring to light the difficulties encountered by stakeholders in participating in EU funding programmes, or in collaborating with these, and to collect suggestions of how these difficulties might be overcome, as well as of the ways in which programmes could be streamlined in the future.

3.2.1. Bottlenecks and means of overcoming them

The main difficulties of participating in EU programmes identified in the consultation are, first, to obtain relevant information on them and, secondly, to deal with the extensive requirements that are involved in project applications.

Difficulties in obtaining the right information and possible solutions

Lack of awareness: The consultation indicated that for some (most especially those in Greenland and the Saami region) a first difficulty in participating in EU programmes is the lack of information about them and the funding possibilities which exist. It was suggested that brochures and newsletters, circulated to potentially interested applicants, containing details of programmes and explaining how to participate in calls for proposals, would help to overcome this and increase awareness of the programmes concerned.

The large number of dispersed information sources: A common difficulty expressed is that project applications have to conform to an extensive set of rules and to respond to specific criteria so that there is a huge amount of administrative effort involved in preparing them. This difficulty is compounded by the information which needs to be taken into account being dispersed across a large number of different sources which are not always easy to identify. Accordingly, stakeholders in Denmark and in the NSPA in Finland, Sweden and Norway suggested creating a single entry portal that provides access to all the

information needed in one place, in the same way as, for example, the *Isaaffik* ('gateway in Greenlandic) portal set up by the Kingdom of Denmark, which gives access to a wide range of information on the Arctic.

Complexity of system: A number of stakeholders also mentioned that EU administrative structures are complex and difficult to understand and participating in programmes is complicated. As a response to this, the Saami Council proposed that a forum should be set up where information about EU programmes is shared, explained and discussed.

Difficulties in assembling the resources required and possible solutions

Extensive administrative requirements: Broad agreement emerged from the consultation that the administrative requirements involved in participating in programmes are excessive, reflecting the overly bureaucratic nature of the process. Because eligibility rules and reporting requirements also vary from programme to programme, this adds to the administrative costs. It was pointed out that the heavy administrative burden is a real problem for small authorities with limited staff.

Stakeholders from virtually all countries called for simplification by applying the same rules and procedures to all EU funding programmes, which means defining eligible costs and distinguishing between direct and indirect costs in the same way, applying a common set of rules for calculating costs and interpreting state aid regulations and adopting the same reporting procedures. There was also a widespread call for more trust of beneficiaries and reduced financial controls.

Extensive financing requirements: A number of respondents to the consultation pointed out that it is problematic for projects not to be fully financed by EU programmes since co-funding is not always available, especially for new initiatives. Others pointed to the difficulty of coping with the often lengthy delay in receiving payment from the Commission, which is an obstacle to SMEs, in particular – many of which are micro-enterprises in the Arctic – participating. A means of overcoming this, it was argued, would be to make larger payments at the start of projects or to create a seed fund to cover the development phase of projects.

3.2.2. Ways of improving the functioning of programmes in common areas of interest

Improving dialogue and communication: EU programmes in the Arctic region in general, and cross-border cooperation programmes in particular, are seen as powerful means for addressing common development issues. There was a widespread call, however, for a further deepening of cooperation, especially with regard to research infrastructure, transport and logistics and, from the Swedish Government in particular, for increased dialogue between the authorities across the region and for better use of the tools available. (The cooperation between the two EU Arctic cooperation programmes, Interreg and ENI, serves as an example of the kind of cooperation being called for.) EU support for Barents Euro-Arctic Cooperation was also called for, since this is one of the main joint platforms for furthering stable and sustainable development and 'people-to-people' cooperation in the region⁷.

More focussed and streamlined funding: It was widely suggested that programmes should be more concentrated on the most pressing problems in the region and on the main opportunities for development. It was also proposed that there should be closer coordination between calls for proposals on specific issues to increase synergies between programmes. The Danish Government recommended, in addition, that the EU should develop smaller programmes instead of large programmes which span a number of years. On the other hand, there was a call from the NSPA in Finland, Norway and Sweden for

⁷ 'Cooperation in the Barents Euro-Arctic Region' was launched in 1993, consisting of the intergovernmental Barents Euro-Arctic Council (BEAC), the members of which are Denmark, Finland, Iceland, Norway, Russia, Sweden and the European Commission, and the interregional Barents Regional Council (BRC), comprising 14 counties or similar sub-national bodies.

greatly increased simplification. This could take the form of reducing the number of programmes (which would imply an increase in their size) and priorities.

Fostering a cross sectoral approach: Stakeholders in Sweden, Finland and in the NSPA, in particular, emphasised the need to put more stress on multidisciplinary, cross-sectoral and international approaches, focussing on the most pressing problems and on efforts to find holistic ways of tackling them. Accordingly, it was proposed that the multidisciplinary and cross-sectoral cooperation aspect should be given more weight in the evaluation criteria adopted by EU programmes in the future. A project for sustainable tourist development, for example, should, therefore, consider issues relating to infrastructure, geology, the environment and culture as well as directly seeking to attract tourists as such. The Norwegian Government suggested in this respect that programme rules and regulations should allow for cross- programme activities and should facilitate cooperation across the various policy areas.

Improving coordination between programmes: A number of stakeholders drew attention to overlaps between EU programmes and programmes managed by non EU countries or organisations, such as by the Arctic Council and its working groups, and stressed the need for the EU to put more effort into coordinating activities and consulting with these. Stakeholders in the NSPA suggested establishing a centre for coordinating joint projects for tackling common problems, which should be located in the Arctic region. They also proposed the organisation of cooperation forums and joint information meetings for different programmes in place of individual information events. In addition, the establishment of EU Arctic Competence Centres was suggested.

Coordinating with other financing sources: According to the Swedish Government, much more could be done to coordinate investment in the Arctic region by aligning and using existing resources in a more efficient way. To this end, the EU should ensure that its programmes are closely coordinated with existing regional initiatives pursuing the same objectives in the same geographical area. According to the Norwegian Government, the new programmes should be designed in a way that ensures effective local, regional and national representation and that strengthens cooperation with the working groups of the Arctic Council and the Barents Euro-Arctic Council.

Using joint research programmes to reduce international tensions: As pointed out by the Danish Government, there is a case for the EU undertaking joint research programmes with third countries not only as an effective way of increasing knowledge of the Arctic region but as a form of 'scientific diplomacy', as a means of reducing tensions with the other countries involved. Such an approach, it is argued, should receive more attention in EU Programmes. In the same vein of sharing information more widely, the Danish Government also proposed that data collected by the military from its activities in the region should be made available to a greater extent for civilian applications.

Expanding the role of regions and of EU regional policy: It was commonly emphasised that a place-based approach should be the guiding principle when planning programmes if they are to respond effectively to regional and local problems and needs. Regional and local authorities should, therefore, continue to participate in the formulation of programmes and involve local stakeholders more in the process.

Protecting indigenous people's rights and interests: There was a call for a means to be put in place for ensuring that EU-funded investment in the Arctic region safeguards the rights and interests of indigenous peoples, such as stipulating that they should be represented on funding programme committees, as suggested by the Saami Council.

4. CONCLUSIONS

The consultation initiated by the Arctic Stakeholder Forum reveals a considerable degree of agreement over the key priorities for EU investment in the Arctic region. There was a common recognition of the need for a profitable and adaptable business sector and thriving local communities to ensure the sustainable development of the region. Accordingly, there was a unanimous call for support for investment in digital infrastructure as being vital for

both economic and social development and a widespread call for investment in better transport links and support of local businesses for the same reason. Many stakeholders also called for the expansion and diversification of tourism, though coupled with better regulation and protection of the environment. There was also agreement that a lack of competence and skills and the existence of a skills mismatch is a major bottleneck to growth in the Arctic region.

It was also widely recognised that the endowment of minerals and renewable sources of energy could play a major role in both contributing to development and combating climate change, to the benefit not only of the region itself but also of the rest of Europe, as in the case more generally of achieving sustainable development in the Arctic. At the same time, there was an equally widespread recognition of the need to ensure that development, if it is to be sustainable, happens in a balanced way, taking account of the impact on both land and sea areas and with due regard to environmental considerations and the interests of indigenous peoples and local communities.

In many ways, the results of the consultation are in line with the Joint Communication from the EU Commission and EEAS, in that there is general emphasis on the need not only to protect the Arctic environment but also to support the region's potential for sustainable economic and social development focusing to a large extent on research and innovation as the means of facilitating this and of responding to climate change. In this regard, the Arctic region can play a crucial role in fulfilling the 17 United Nations Sustainable Development Goals. But development, it is also stressed, needs to be built on scientific evidence, on local knowledge of the region, especially of indigenous peoples, and on increased cooperation across national borders as well as with countries outside of the ASF.

Accordingly, the specific areas in which it is widely proposed that EU funding should be concentrated, in addition to support for local economic activities – based on fishing, hunting, reindeer herding, mining and forestry – and for measures to safeguard the culture and languages of the indigenous peoples, are:

- Digital infrastructure to ensure cost-efficient, high-speed access to the internet and high-quality communications throughout the region, through both broadband and satellite technology, and to lay the basis for sustainable economic development and a range of remote services, such as distance learning, e-government and e-healthcare, and better positioning and search and rescue systems to improve safety.
- Transport to extend and improve the transport network within the region and to improve connections with both other parts of Europe and countries outside, as a means of underpinning economic development but also of making it easier for people to travel around the region as well as visiting other places.
- Renewable sources of energy, investment in wind, tidal and hydro-power, bio fuels and geothermal energy to reduce CO₂ emissions and global warming and to increase the security of supply but also for potential export to other areas, as well as to build up expertise in the technologies concerned.
- Competence platforms and structures for matching skills across borders to facilitate cooperation between businesses, higher education institutes, training centres and employment services and to alleviate a major obstacle to the development of sustainable Arctic economies.
- Tourism, based on the natural attractions of the region to further economic development but coupled with measures to ensure protection of the environment and respect for the interests and ways of life of indigenous peoples and local communities.

It is widely recognised that EU funding represents a major source of support for the sustainable development of the region, but at the same time there are calls for the administration of funding programmes and access to them to be improved and simplified in order to make them more effective. A number of ways of achieving this are identified, including:

- improving information about funding opportunities;

- providing more assistance to applicants;
- reducing the complexity of administrative procedures;
- increasing coordination between programmes and with national and international initiatives and funding sources and the possibilities of cross-funding;
- encouraging closer cross-border cooperation and increasing cooperation with third countries, not least as a means of reducing international tensions, including through support of Barents Euro-Arctic Cooperation;
- giving more weight to multidisciplinary, cross-sectoral and international approaches;
- concentrating funding on the most pressing issues;
- ensuring the involvement of regional and local stakeholders, including the indigenous peoples in planning programmes.

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ARCTIC STAKEHOLDER FORUM

Danish final report on investment priorities in the Arctic

In accordance with the action plan agreed to by the Arctic Stakeholder Forum and distributed to its members on 20 January 2017, and with a view of contributing to the consolidated report to be discussed at the high level meeting in Oulu, Finland, on 15-16 June 2017, Denmark has consulted stakeholders on the different consultation questions identified by the Forum.

Referring to the answers received, cf. Annex 1, the main findings can be summarized as follows:

A. General questions regarding participation in EU programmes

The survey identified challenges in seeking information and staying informed about the Arctic and the EU as well as challenges in finding the resources needed to participate in EU programmes as administrative and financial requirements are often very extensive and vary from programme to programme.

Proposals were made to create an EU/Arctic single entry portal to facilitate the spreading and sharing of information and to consider standardising to the largest extent possible guidelines and requirements for EU-programmes thereby lowering the barriers for participation in EU-programmes.

B. Questions related to functioning of EU-programmes

The survey identified very detailed comments and suggestions for particularly three focus points to remain in the new programming period: 1) positioning, 2) navigation in the Arctic and 3) forecast. Furthermore stakeholders identified the concept of scientific diplomacy as a topic that has not been adequately addressed in the current EU-programmes.

Stakeholders also mentioned overlaps between EU-programmes and programmes managed by non EU countries/organisations, for example with regards to work related to Arctic Council and its working groups, and stressed the need for the EU to increase focus on coordination and consultation with such non EU fora dealing with the Arctic region.

On the positive side stakeholders also pointed to positive results and benefits of EU programmes while highlighting that it was most valuable when programmes were focused (specific geographical areas/research topics) since larger programmes tended to take longer and results could be diffused.

C. Investment in the Arctic region

Stakeholders came forward with a number of suggestions for investments that would benefit several regions, including

- Communication systems and satellite surveillance over Arctic regions
- Research in order to estimate the melting rate of the Greenlandic icecaps and the accelerating seawater rise on a local, regional and global scale
- Improving models of ice cover, sea level rise and its implications is a key component for local and global adaption efforts to climate change – also encompassing new business opportunities
- Research with a view to provide a solid knowledgebase for sustainable investment in the Arctic
- Arctic construction, tourism, social sciences and sustainable energy solutions were also highlighted as relevant investment priorities

Concerning the question as to how the EU could facilitate the realisation of investment priorities in the Arctic, stakeholders suggested that the EU should focus efforts on a series of smaller programmes instead of large programmes over a number of years. Stakeholders also advised to join forces, coordinate and consult with other Arctic fora and non-EU nations to the largest extend possible.

ANNEX 1: Consultation questions and answers received

A. General questions regarding participation to EU programs

1.) Do you feel you have sufficient information about the current EU programmes, if not, what could be done to be better informed?

- The information from the EU regarding Arctic programmes and activities comes from a large number of sources. It takes a great deal of time in order to seek information and stay informed about the Arctic and the EU, for example participating in research programmes or simply accessing available data. Perhaps an EU/Arctic single entry portal could help and ease the spreading and sharing of information. The Danish portal Issaffik could serve as inspiration. Issaffik is a portal where activities of all types are registered and the information is made available to anyone with a password.

- We feel that we have sufficient information in the EU programs in which we are involved.

2.) Have you and/or your institution ever participated in an EU funded program? If not is there any specific reason why you have not participated in an EU funded program?

- The PAPA programme – which was an oceanographic observing program for the Baltic Sea. The EU H2020 GRACE project – which is a project about integrated oil spill response actions and environmental effects

- Danish Geodata Agency have participated in several EU funded programmes.

3.) Can you identify capacity (ex. manpower) and/or resource challenges related to participation in the EU-programs? If so what could be done to overcome these challenges?

- Regarding the PAPA the reporting system was cumbersome and required extra manpower in order to meet the EU requirements. Also the process for applying for projects was very time-consuming and required detailed knowledge about the EU in order to make certain that the application was properly worded and contained the correct information.

- It can be quite challenging to find the resources needed to participate in an EU-project when considering the administrative and financial requirements as they often are very extensive and vary from programme to programme. It would be nice if all programmes

used the same guidelines and requirements, thereby lowering the barriers for attending EU-programmes.

- *It can be a problem that projects are not fully financed as co-funding for new initiatives is not always available.*
- *There is a challenge in having fixed staff on projects as funding varies*

B. Questions related to functioning of EU-programs

4.) Can you identify any topics or challenges that have not been adequately addressed in the current EU-programmes (such as InterregNord, Botnia-Atlantica, Northern Periphery and Arctic, Kolarctic, Karelia, Baltic Sea Region and Interreg North Sea) or in other regional development programs in the High North? Which focus points would you like to see be remained in the new program period?

- *The concept of scientific diplomacy should be mentioned. This is where science and research is used in order to decrease tensions between nations in an area. For example programs where Russia or China could participate with EU countries in programmes and projects that are beneficial to all parties. In addition data and information collected by military platforms should be made available for civilian applications and vice versa – the “dual-use” concept – should be mentioned where relevant.*

- ***Focus point: Positioning***

It is essential to have a geodetic infrastructure available in order to be able to get an accurate position, navigate, map, and land survey. The geodetic infrastructure should be made available for general public use and for research. Accurate positioning is vital in the Arctic. Without accurate positioning, navigation is difficult and dangerous; mapping will be imprecise, rescue efforts more difficult - and the basis for investments uncertain. Moreover, the geodetic infrastructure is vital for monitoring climate changes, ice sheet and ionosphere.

The geodetic infrastructure needs to be supported by a strong communication network in order to ensure smooth data transfer. In Greenland, the geodetic reference is based on a basic GNSS network (CORS) which is not Galileo compatible. There is a large community including public authorities and universities applying for data from the GNSS network. However, the cost to develop and maintain the network is too big for one organisation and data transfer makes it difficult to get real time access to data. To secure the support positioning systems such as Galileo in the future, it is imperative to modernise the network.

- a. It is suggested that activities in relation to the modernisation of the network and an additional geodetic infrastructure is addressed and supported by an EU-programme, since this topic is crosscutting many activities in the Arctic region.*

- b. *It is suggested that a modern data communication system is established in the Arctic in order to get closer to real time data transmission.*

- Focus point: Navigation in the Arctic

The following projects are recommended to improve safe navigation in the Arctic and strengthening of SAR (Search And Rescue):

- a. *Development of a Marine Spatial Data Infrastructure (MSDI) for Greenland + further development of the Arctic-Spatial Data Infrastructure (SDI).*
- b. *Bathymetric LiDAR Pilot project in Greenland to evaluate if the technology can be used to speed up seabed surveying and charting progress.*
- c. *Seabed surveying and chart production of specific remote regions of Greenland , benefitting mining projects e.g.*

- Focus point: forecast

There is a great potential in developing ocean, sea ice and atmospheric forecast for the Arctic. It is obvious that forecasts for this region are especially difficult to predict and, at the same time this, it is the region where the most prolific climate changes takes place on earth. By doing so, forecast from days to seasons and longer will be improved. All this will improve the conditions for local communities, different industries and tourism who all relies on the sea ice and the changes in the extent of the ice cover. There are especially room for improvement in the near coastal regions.

The qualities of the observations are crucial for the quality of the models. Currently there are large observational programs funded in the Arctic which solves the current situation. This being said, the change in the sea ice climate and the extent of this makes it important to continue these programs.

Physical modelling and links to the communities.

- 5.) Can you identify topics in the relevant programs where the results achieved so far do not reflect the initial expectations? What about those topics that have delivered very good results and should be remained?

- *As far as we are aware, the projects and programs have yielded the results they intended.*

- 6.) Are you aware of existing initiatives managed by non-EU countries/organisations/stakeholders that potentially or actually overlap with current EU programmes?

- *There are a number of programmes in the US and Canada which should be investigated for overlap.*

Furthermore there is a tendency that the EU initiates work that is largely covered by other organizations without coordination or consultation with those prior to a project start. An example could be work related to the Arctic Council and its working groups.

7.) Can you identify examples of concrete results of EU- funded projects that could be scaled up and brought to the market for the benefit of the society?

- *No, due to lack of sufficient detailed knowledge about the results of these initiatives.*
- *PolarIce (FP7) has had customer after end of project*

8.) Can you identify examples of EU-funded projects that have significantly benefited your region or culture?

- *No, due to lack of sufficient detailed knowledge about the results of these initiatives. In addition, the results of some of the projects take time to reach a mature enough stage before the benefits can be seen.*
- *A number of EU research programs under H2020, FP7 and earlier has helped improve the knowledge base on the Arctic climate change and adaptation. This knowledge is used in connection to advisory projects regarding for example hydropower, raw materials and drink water.*

9.) What are the greatest successes in relation to EU-funded programmes, theme wise or in relation to functionality, seen from your perspective?

- *It is of great value when EU programmes are focussed on specific geographical areas and encompassing focussed research topics. Larger programmes tend to take longer and results can be diffuse.*
- *It is a unique opportunity to get involved in major cross-border development projects that generate substantial benefits both locally and regionally. In addition, the possibility to network with sister organisations and relevant stakeholders are invaluable.*

10.) Any other remark/comment?

- *The EU should increase focus on coordination and consultation with other relevant and primary fora/organizations dealing with the Arctic region.*

C. Investments in the Arctic region

11.) As you might be aware of, several regions have already identified some investment priorities in their regional development plans. Do you agree with those priorities? Do you have any other suggestions for investments that would benefit several regions?

- *The regional priorities seem well in agreement with regional needs and requirements. The EU should invest in communication systems and more satellite surveillance over Arctic regions.*
- *Investment in research is needed in order to estimate the melting rate of the Greenlandic icecaps and the accelerating seawater rise on a local, regional and global scale. Improving models of ice cover, sea level rise and its implications is a key component for local and global adaption efforts to climate change – also encompassing new business opportunities.*
- *Improved physical modelling and utilization of observations within these.*

12.) What should the EU do to facilitate the realisation of investment priorities in the Arctic?

- *Focus their efforts on a series of smaller programmes instead of large programmes over a number of years. Coordinate and consult with other relevant fora to the largest extend possible.*
- *Continue the good work in the Arctic Stakeholder Forum.*
- *As climate change has increased the potential of utilizing raw materials and other resources, the Arctic has joined a value chain truly global in its scope. More research, capacity building and development of best practices are required to ensure a sustainable economic development of the Arctic. The processing of raw materials requires access to a vast amount of energy. If green technology solutions are not chosen to meet this growing demand, processing will have a negative impact on the local environment and global climate change efforts. New sustainable energy solutions are a key element for a sustainable economic development of the region. These new solutions have the potential to be transferred to other remotely located or isolated communities world-wide.*

13.) Do you have any suggestions on how EU-funding could be better streamlined for a specific area of interest in the region (e.g. connectivity, infrastructure, health, etc.), in order to have a more effective and sustainable impact?

- *Better and cheaper communication and positioning possibilities in the Arctic in order to improve life quality, infrastructure and navigation.*

- *The European Commission could set up the following research topics:*
 - *A research topic on Arctic raw materials.*
 - *A research topic examining the potential of Arctic renewable energy solutions.*
 - *A research topic on changing ice cover and sea-level rise.*
 - *A research topic on Arctic raw materials.*
 - *A research topic examining the potential of Arctic renewable energy solutions.*
 - *A research topic on changing ice cover and sea-level rise.*
- 14.) Can you identify the most urgent opportunities and challenges (within or across different sectors) as you see them?
- *The major challenges in the Arctic are the lack of infrastructure and communications.*
 - *The rapid effect of climate change in the Arctic. New ice-free areas will create new navigation routes and thus require new surveying and charting of the seabed.*
 - *The Commission could set up a research topic on Arctic raw materials, a research topic examining the potential of Arctic renewable energy solutions, and a research topic on changing ice cover and sea-level rise.*
 - *Ice forecast are currently in an immature state compared to weather forecast. At the same time, the extent of the ice cover is changing which can result in new business possibilities. Therefore, it is important to develop improved forecast of the sea ice.*
- 15.) How would you envision the best combination of different EU and other investment/funding mechanisms in the High North?
- *The EU should join forces with other Arctic fora and non-EU nations.*
 - *EU funding should support research which can provide a solid knowledgebase for sustainable investments in the Arctic.*
- 16.) Does your region have a smart specialisation strategy? If yes, is the strategy coordinated with neighbouring regions? Would you be interested in working on a joint smart specialisation strategy?
- *No – except for the specialized work carried out by e.g. the Arctic Council working group – which is coordinated between all Arctic states and indigenous peoples representatives.*
 - *EU funding should support research which can provide a solid knowledgebase for sustainable investments in the Arctic.*

17.5.2017

ARCTIC STAKEHOLDER FORUM

Finnish non-paper

GENERAL

The 2016 Joint Communication “The integrated EU policy for the Arctic” encourages for increased attention from the EU and Member States towards Arctic issues, its challenges and opportunities. The Arctic Stakeholder Forum (ASF) is an important initiative in the 2016 Joint Communication and will serve as a platform for all relevant stakeholders to develop a common strategic framework of the Arctic Europe.

In the run-up to the EU High-Level event on the Arctic and Arctic Stakeholder Forum in Oulu on 15-16 June 2017 this non-paper focuses on the EU’s approach to the investments and infrastructure priorities and on streamlining relevant EU-programs in a concrete manner.

The main objective should be to identify feasible projects in the Arctic benefitting the whole Europe and its countries, regions and people.

It is important to approach the issues in a holistic and cross sectoral way taking into account cross-border cooperation aspects and the global dimension (e.g. long distance pollution, use of arctic expertise globally and best practices promoting safe and secure environment, including maritime environment in the Arctic).

Consequences of the persistently accelerating climate change and the melting ice have global implications. The Arctic is therefore an issue where necessary actions are required in good cooperation with the neighbors of the EU and at the global level.

It is crucial to maintain safe and secure living conditions, protect the environment and mitigate the climate change, but it also important to make full use of the new opportunities. New shipping routes and better access to exploitation of natural resources such as oil, gas, forests and minerals draw global attention, but also challenge everybody to respect the environment.

The long term goal of the Paris agreement requires a significant replacement of the fossil fuels by renewables as well as enhancing energy efficiency and energy savings. Balanced global business approach and sustainable development need to be in the center of consideration.

INVESTMENTS IN THE ARCTIC

This non-paper has two attachments. The first one is the Finnish government policy paper regarding the priorities in the updated Arctic Strategy (26 September 2016) and second one the Action Plan for the Update of the Arctic Strategy (27 March 2017). These two attachments give a comprehensive picture about the investment and infrastructure priorities of the Finnish Government.

Many Finnish representatives of the regions and northern cities have also contributed to the consultations of the Arctic Stakeholder Forum. Those and other regions do contribute a lot to the European economy and deliver added value to their countries and the EU.

The EU and its Member States are significant beneficiaries of the forests, marine resources, minerals, energy supplies and high quality research of its northern regions. The EU should support the northern regions to become a competitive and attractive environment for new businesses and to become better place to live for all its inhabitants, including indigenous communities.

Finland highly appreciates the work done at the Northern Sparsely Populated Areas network (NSPA) and by the OECD and their contributions concerning the Arctic Stakeholder Forum and European investment priorities in the Arctic regions.

Finland supports continued and strong EU policy in the Arctic. To focus the common challenges and goals of the EU, to support jobs and growth and sustainable development, it is important to try to achieve the best possible mix of big and smaller grants and other financial support. That should be based on identification of feasible projects in the Arctic benefitting the whole Europe and its countries, regions and people.

The EU's overall and regional development can be supported by better and more intelligent transport systems and infrastructure of roads, such as an access to the Arctic Ocean, railway, maritime transport, air traffic, ICT, education, innovations and research among many other things.

Special priority should be given to the Arctic region and Northern Sea Route as well as cable connection to Asia. Finland also stresses the importance of cross-border cooperation and development of fluent and secure border crossings as means to promote regional development, mobility and people-to-people connections.

ARCTIC RESEARCH AND INNOVATIONS

To benefit from the Arctic opportunities and to deal with challenges efficiently, strong and continuous investments in Arctic research and innovation are needed. Increasing human activities will lead to growing demand for the best available scientific knowledge, as well as testing and training of cold climate solutions. To this end, Horizon 2020 and future framework programs should include Arctic research in a strengthened, concise and coherent manner.

Innovation friendly markets and growth efforts can be supported by public procurements, which promote demand for new and applicable solutions and create incentives for companies to engage in research and development activities.

Innovative technologies are a must in pursuing cleaner environment and avoiding the negative consequences of climate change. Europe should be a strong forerunner in using more environmentally friendly industrial and business solutions.

The EU should take all possible advantage of companies having experience and knowhow in working in arctic conditions. The expertise builds on engineering, efficiency and innovative, advanced technologies. The EU should promote high sustainability performance and safety standards, snow-how and winterization, as well as operations in cold and other demanding environments. It is important to support developing operational reliability and practices of engineering, design, management, digital solutions and risk prevention systems among many other things.

Europe can act well and in accordance with its goals to support economic growth and creation of jobs in the Arctic and at the northern areas respecting simultaneously all commitments linked to the environment and climate change.

As chair of the Arctic Council 2017-19, Finland welcomes the opportunity to strengthen the cooperation between the EU and the Arctic Council and together with the EEAS and the Commission has invited the Arctic Council Member States – which are not members of the EU - to participate in the High-level Event and in the Stakeholder Conference in Oulu. They are the EEA countries Norway and Iceland, Canada, the Russian Federation and the United States.

Finland's chairmanship priorities in the Arctic council are environmental protection, connectivity, meteorological cooperation and education. These are all areas where the EU has a lot at stake, and we should look for synergies between the Arctic Council priorities and the implementation of the EU's Arctic communication.

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The Government's strategy session on 27 March 2017

ACTION PLAN FOR THE UPDATE OF THE ARCTIC STRATEGY

Introduction

The action plan for the update of the Arctic Strategy concerns the following priorities in the update: Finland's foreign and EU policy in the Arctic region, Finland's arctic expertise, sustainable tourism, and infrastructure solutions that support these. The action plan was prepared in accordance with the specification and follow-up procedure of the key projects in the Government Programme, as applicable: the key objectives and measures for the priorities were made concrete and, where possible, concrete schedules for progress were provided. The implementation of these will be reported and

monitored by the preparatory body (Arctic Officers Network) and the Government's strategy session, coordinated by the Government strategic secretariat. The ministries responsible for each priority have produced the content of the respective priority. The ministry with the main responsibility for the priority has compiled the content. The decisions on financing will be made in connection with the preparation of the General Government Fiscal Plan and the National Budget.

The responsible ministries

the ministry with the main responsibility in bold

- Arctic Foreign and EU policy: **MFA**, PMO, Mol, MoD and MoE
- Commercialisation of arctic expertise: **MEAE**, MoEC, MTC, MoAF, MoD, Mol and MoE
- Sustainable tourism: **MEAE**, MoAF and MoE
- Infrastructure: **MTC** and MoF

Key measures

Arctic Foreign and EU policy

- Application of Finland's Arctic Council chairmanship
- Strengthening of the EU's Arctic policy
- Enforcement of the Paris Climate Agreement and multilateral environmental agreements
- Promotion of synergies in Arctic and Nordic matters

Commercialisation of Arctic expertise

- The thematic entity of Arctic business
- Launching of the broker function (ArcTraDe)
- Space incubator
- Commercial utilisation of the training and research functions of the defence and rescue services administration and Nordic Coast Guard Cooperation

Sustainable tourism

- The Arctic sustainable tourism destination programme
- Making the Arctic aspect an asset in Finland's international tourism marketing strategy

Infrastructure

- The North-East Passage telecommunications cable project
- Including the Arctic railway in bilateral discussions
- Report on how to implement a wireless network in the Arctic region
- Development of the operations of the Sodankylä Satellite Ground Station
- An operational programme for satellite navigation
- Creation of Arctic Spatial Data
- Infrastructure
- Report on the Helsinki-Tallinn railway tunnel
- Improvement of Finnish national roads 21 and 4

Background

On 26 September 2016, the Finnish Government outlined the priorities of the Arctic Strategy. The main elements of the Arctic Strategy published in 2013 are still valid. The update of the strategy defines Finland's role and the Government's objectives in the development of the Arctic region in more detail. Finland wants to produce key solutions to various problems related to Arctic development by providing innovative products and practices. The sensitive Arctic environment and the principles of sustainable development will be taken into account in all operations in the Arctic region. Finland's arctic expertise, sustainable tourism and infrastructure are the priorities that are particularly highlighted.

The Ministry for Foreign Affairs was in charge of preparing the section on the priority related to foreign and EU policy in the strategy update. With regard to Finland's possibilities to have an influence, the key elements include full application of Finland's chairmanship in the Arctic Council, strengthening of the EU's Arctic policy, enforcement of the Paris Climate Agreement and global environmental agreements and the promotion of synergies in Arctic and Nordic matters.

The objectives related to arctic expertise as defined in the strategy remain topical issues. Arctic research has been reinforced by various means. In practice, all the measures identified in the 2013

strategy have either been put into practice or they have become an established part of activities. It is necessary to make efficient use of research in areas such as decisions on land use, the use of natural resources, working in cold conditions and energy-efficient construction. With regard to the creation and utilisation of business opportunities, it is essential to maintain, develop and market the arctic expertise.

Increasing travel business in the Arctic region requires responsibility: the vulnerability of nature, the rights of indigenous peoples and the need to ensure safety and quality must be taken into account. The programme for sustainable tourism destination pays attention to all aspects of sustainability. Successful implementation of the programme requires tailored cooperation across sector boundaries. The Arctic aspect is raised to spearhead Finland's international tourism marketing strategy. The goal is to boost the attributes related to 'Arctic'.

The central infrastructure solutions are connected to the reports prepared on the North-East telecommunications cable, the Arctic region's wireless network project and the Helsinki-Tallinn tunnel project. Once the reports have been completed, it will be possible to create a broader vision of the infrastructure and to take a stand on the projects in the Government.

Priority 1: ARCTIC FOREIGN AND EU POLICY

Finland's Arctic foreign and EU policy is based on cooperation in the EU, the Arctic Council, the Barents Euro-Arctic Council and the Northern Dimension. Participation in Nordic cooperation strengthens Finland's arctic role. Finland's foreign and EU policy in the Arctic region also includes taking into account the interests of indigenous peoples and supporting international environmental cooperation concerning the Arctic region.

Full application of Finland's two-year chairmanship of the Arctic Council, starting on 11 May 2017, is important with regard to the effectiveness of Finland's Arctic foreign policy. During this period, Finland will be steering the work of the Arctic Council, aiming to retain stability and strengthen Arctic cooperation. At the same time, Finland will consolidate its bilateral relations with the member and observer countries. Finland will strengthen its country brand and promote its arctic expertise. Furthermore, Finland holds the chairmanship of the Arctic Coast Guard Forum, and the Arctic Economic Council has a Finnish chair from 2017 to 2019, which will increase Finland's influence.

Finland sees the EU as a key actor in the Arctic region and supports efforts to consolidate the EU's Arctic policy. According to the EU's global strategy for foreign and security policy, it is in the EU's strategic interest to keep tensions in the Arctic regions at a low

level. From Finland's perspective, Arctic policy should be made one of the priorities of the EU's external relations. As the strategic importance of the Arctic region is increasing, the EU's common foreign and security policy should pay more attention to it. With respect to this, Finland will keep the situational picture up-to-date.

Finland supports the reinforcement of the EU's position as an observer in the Arctic Council and will bring this matter forward also during its chairmanship. Finland will influence the implementation and monitoring of the EU's third Arctic Communication at the national and EU levels in accordance with Finland's Arctic Strategy and the policy lines of the Ministerial Committee on EU Affairs (27.5.2016/UM2016-00451). At the call of Finland, the European Commission and the European External Action Service will arrange a high-level meeting and an Arctic stakeholder forum on 15 and 16 June 2017 in Oulu in order to enforce the Communication. Finland considers the balanced approach included in the EU's Arctic Communication (2016) very important. In addition to global objectives, it takes into account the special questions related to the Northern regions of Europe, such as Northern Finland.

Finland emphasises the EU's focus on employment, growth, investment, infrastructure projects, environmental issues, the battle

against climate change and adaptation to it, renewable energy and Arctic research and innovation. Particular attention is paid to sustainable commercial projects that can be promoted by means such as the EU's Arctic policy.

Finland will ensure that Finland's Northern and Arctic policy lines will be reflected in the EU's decision-making also in the future. Finland will promote the full application of the financing opportunities provided by the EU in Arctic and Northern regions and will make every effort to ensure financing in the EU's next multiannual financial framework period 2021–2027. The efficiency of the synergy benefits of the EU's Arctic policy with the implementation of the cohesion policy will be improved.

The Nordic Council of Ministers (NCM) finances cooperation projects that promote sustainable development in the Arctic region (about EUR 1 million per year). Finland supports the use of Nordic funds to finance projects that are in line with its priorities and will ensure that the NCM's updated Arctic cooperation programme to be confirmed in June 2017 will include the priorities that are important for Finland. In addition, Finland will work to ensure

that the EU's Arctic policy can be applied in the context of Nordic cooperation frameworks. The NCM is an observer in the Arctic Council.

In the Barents Euro-Arctic Council, Finland will continue to promote the objectives of the Arctic Strategy in cooperation with Finland's Barents counties. Finland will promote regional dialogue between the EU, Russia, Norway and Iceland to secure the Northern dimension cooperation. Furthermore, Finland will contribute to the improvement of the operating conditions of the Northern Dimension transport and environmental partnerships. A further objective is to find methods for the concretisation of bilateral Arctic partnerships between Finland and Norway and between Finland and Russia.

Enforcement of the Paris Climate Agreement and multilateral environmental agreements is important for the environment and people of the Arctic region. Finland enforces these agreements, promotes initiatives in Arctic cooperation that support their enforcement and highlights the perspective of the Arctic region in conferences of the parties to the agreements.

Priority 2: COMMERCIALISATION OF ARCTIC EXPERTISE

The opportunities for the commercialisation of Finnish arctic expertise are mainly based on the large theme areas and drivers of the Arctic region: climate change mitigation and energy solutions, maritime safety, construction and functional infrastructure, and digital services and functional data transfer. Finnish expertise can be exploited in fields such as energy-efficient Arctic construction (including timber construction), sustainable energy solutions and functional community development. Finland can be profiled as a model country for bio-based and circular economy.

The sensitive Arctic environment and challenging natural conditions emphasise the importance of know-how and knowledge of the conditions, and the requirements related to the functionality and reliability of products and services are particularly emphasised. This requires the ability to understand the conditions in which Finnish products will be used.

Finnish experts and authorities involved in defence and rescue services administration and border guard cooperation possess a high level of Arctic knowledge and skills. There is potential for the commercialisation of the extraordinary circumstances know-how possessed by the Finnish public administration.

The visibility of and demand for Finnish energy-efficient and sustainable construction know-how should be improved. Energy-efficient construction and, on the other hand, techno-functional special issues related to Arctic construction, as well as construction products produced by the woodworking and quarrying industries,

are examples of top-notch Finnish expertise. Arctic energy technology and municipal engineering constitute a material part of construction activities, and the use of renewable energy in arctic conditions is a special question that needs focusing on.

The strengthening of Arctic bioeconomy partnerships combines cooperation in the various fields, including forests and fields, land use, aquatic natural resources (fish and water, blue bioeconomy), food and adaptation to climate change. The topics are also strongly linked to Arctic biodiversity and genetic resources, as well as the development of climate resilience, but also in a broader sense to sustainable use of natural resources and responsible conduct. The know-how of Finnish Arctic bioeconomy and the development of new business activities in the Arctic bioeconomy R&D sector must be supported. The establishment of new types of partnerships between actors such as the public and private sectors, the improvement of the operating conditions of companies and the increased networking between bioeconomy actors promote the achievement of these objectives.

Because of our geographical location, nearly all fields of research possess knowledge and skills related to Arctic conditions and cold climate. In Finland, Arctic research is carried out by universities of applied sciences, scientific universities, research institutes and companies. Finland's areas of special expertise include versatile scientific and technological research related to cold conditions, snow, ice and the composition of air, as well as interdisciplinary and social research expertise, which is particularly important as a basis

for decisions concerning new financial activities. Research related to cold conditions know-how is important for the Finnish economy, and an adequate quantity of resources should be invested in it.

The opportunities provided by the EU's Horizon 2020 programme and LIFE financing for the financing of research must be used more efficiently nationally. In addition, we must influence the content

of the next Horizon 2020 work programme (2018–20) and the upcoming 9th research framework programme of the EU, so that they will include research priorities related to the key questions of the Arctic region. Particular priorities include climate change and sustainable development, as well as various logistic and digital solutions.

Measure 1: The thematic entity of Arctic business

The objectives

The objective is closer programme cooperation between Tekes (the Finnish Funding Agency for Technology and Innovation) and Finpro in order to create Arctic business (particularly the marine industry and the digital solutions serving it). The goal of the programme cooperation is an extensive reform of the entire marine industry network to better meet the new needs of demand. The future of sea transport is strongly based on autonomy, which requires adding completely new knowledge, skills and solutions to the traditional vessel development process. The new needs for knowledge and skills are strongly related to the development of cybersecurity, telecommunication solutions, remote operation of vessels and

autonomy, as well as the safety and environmental friendliness of ice-going vessels. This requires strengthening the entire network and the new knowledge and skills.

Measures

Supporting more extensive development of Arctic business by renewing the services and programme functions of Tekes and Finpro as part of a more extensive growth agenda in 2017
Supporting the creation of an unmanned sea transport ecosystem and a related joint development roadmap in order to implement autonomous and unmanned sea transport.
DIMECC Oy will coordinate the operations of the ecosystem, partially financed by Tekes.

Measure 2: Launching of the broker function

The objectives

The cold climate know-how of Finnish companies, research institutes and the academic world is not clearly visible to international companies and organisations. The broker function facilitates matching the needs of international organisations and Finnish know-how. In addition, it will organise seemingly scattered knowledge and skills so that they are more easily identifiable and available to the buyer.

Measures

Preparing and carrying out competitive bidding to find the provider of the broker function
Carrying out the ArcTraDe project (Prizztech) 2017–2018.

Measure 3: Space incubator

The objectives

Finland will establish a space incubator, partially financed by the European Space Agency (ESA), to promote the translation of space technology into practical applications. The incubator will serve start-up companies that work with the utilisation of space technology (spin-off and spin-in companies). The incubator is part of a larger Arctic business development network within the scope of ESA financing. In order to diversify the operations, the incubator will include a programme function aiming for piloting and demonstrations (IAP) and a technology transfer programme function, which is in preparation. The objective is to give a boost to the business of 50 start-up companies in five years.

Measures

Completing the negotiations for an agreement between ESA and Aalto Start-Up Center, assisted by Tekes
Launching the operations in spring 2017.

Measure 4: Commercial utilisation of the training and research functions of the defence and rescue services administration and Nordic Coast Guard Cooperation

The objectives

The knowledge and skills of the Finnish experts and authorities are at a high level. Forms of using and highlighting their know-how include, for example, various Arctic region research, development, exercise and training activities. The special know-how of the defence and rescue services administration and the Coast Guard Cooperation in our Northern conditions should be more efficiently utilised in the export of know-how.

Measures

Implementing the Arctic Maritime Safety SARC project, which will lay the foundation for the grounds of cooperation between the authorities

Utilising the Pilot Course in Winter Navigation more extensively, such as in connection with the global Polar Code training

Studying possibilities to establish a virtual Arctic training centre within the EU and/or NORDEFECO framework, serving the land, naval and air forces.

Utilising the opportunities provided by the European Defence Agency's (EDA) Arctic project led by Finland, 'European Maritime Capabilities in the Arctic', and by the polar region research cooperation (ICE PPR), in large projects in which there is demand for Finnish know-how.

Priority 3: SUSTAINABLE TOURISM

Tourism in the Arctic region is strongly based on the area's special natural conditions and business built around them. There is also a global interest in the Arctic region, for reasons such as the consequences of climate change. Integrity of nature, flora and fauna, clean air and water, polar nights, midnight sun and silence,

as well as the unique culture of the region, are attraction factors around which Arctic tourism is built. The balanced development of the means of livelihood in the region requires sustainable coexistence of different industries and strong management of the environmental and socio-cultural effects.

The objectives

Travel destinations will be developed to make them more sustainable, so that they are financially sound, customer-driven local communities and cultures, as well as international-level centres that respect the Arctic natural environment.

Responsibility know-how and responsible conduct at tourism companies and destinations will be increased (this will be monitored).

Awareness of Finland as a responsible country of tourism will be promoted.

Positive economy and employment effects will be increased.

The sustainability of the Arctic bioeconomy will be increased, so that its added value for the tourist trade becomes concrete (e.g. Arctic food, natural water resources, renewable energy and timber construction as part of the travel experience).

Measure 1: The Arctic sustainable tourism destination programme 2017–2019

The objectives

Actors in the tourist industry will be committed to the Arctic travel theme.

The criteria and concept of Arctic tourism will be agreed on together.

Seasonal variation will be balanced by developing new products. Awareness of Finland as an Arctic country of tourism will be improved.

Growth and employment will be increased.

Measures

Analysing the current status of the sustainable tourism programmes of travel destinations, as well as the ways of cooperation with the region's other companies existing at the interface (June 2017).

Implementing an information campaign for tourism actors and for trades at the interface on the significance of responsible tourism, highlighting best practices, the benefits for companies and the effect on Finland's image. Committing the actors to work to achieve the joint goal. (The information campaign will start in August 2017.)

Preparing and launching a responsible tourism and communication training package for companies and destinations, utilising existing research data and programmes (to be completed in December 2017).

Creating the Responsible Visit Finland concept and an umbrella label, and implementing the label to provide support for those companies and destinations that systematically apply sustainable development programmes to the development of their own operations. Utilising existing assessment methods (to be completed in December 2017).

Supporting regional productisation and packaging by companies and destinations (e.g., with national parks and indigenous peoples), relying on the principles of responsible tourism (implemented throughout the project).

Carrying out the Responsible Arctic Finland marketing/sales campaign for tourists through social media channels and specialised tour operators (to be completed in April 2019).

Measure 2: Making the Arctic aspect an asset in Finland's international tourism marketing strategy

Identifying Team Finland actors and tourism actors that utilise the Arctic aspect and committing them to the Arctic theme (September 2017).

Carrying out background studies to support decision-making (November 2017).

Carrying out a target group/country study and distribution channel analysis (traditional and digital) on the attractiveness of Arctic products (tourism + other) (February 2018).

Modifying the stereotyped view of the Arctic aspect of Finnish tourism to develop an attribute that is good for all seasons and

portrays the country from a broad perspective. Preparing a concept for the development and promotion of Arctic tourism in cooperation with the major regions (April 2018).

Launching the Arctic tourism programme on the basis of the results (May 2018).

Developing a communication and marketing concept and a product offering model for the whole of Finland (November 2018).

Implementing the communication and marketing strategy related to the meaning of 'Arctic' (December 2019).

Priority 4: INFRASTRUCTURE

Finland wants to grow and improve its competitiveness through Arctic activities with due respect for the Arctic environment. A high-quality digital and physical infrastructure will provide the opportunities for the growth of business in the Arctic region. In

The objectives

Finland will be developed into a node of telecommunications between Europe and Asia, attracting telecommunications and software investment to Finland.

The utilisation of the Galileo, GPS, Glonass and Beidou satellite systems in Finland will be ensured, particularly in the Northern areas. It is possible to ensure digital services and, for example, automatic driving through satellite navigation everywhere in Finland.

addition, it will improve the region's vitality, link the Arctic region to Europe, Asia and the global centres of economic growth, and increase investment in Finland.

Good communications required by industry and commerce will be ensured in Northern Finland.

Transport corridors that connect the Arctic regions with Europe and constitute a natural part of the international transport network will be created, strengthening Finland's competitiveness in the global economy.

Measure 1: Promoting communication connections and spatial data infrastructure in the Arctic region

The North-East Passage telecommunications cable project for connecting Asia and Europe will be implemented in such a manner that a company can be established by December 2017 and the construction started at the beginning of 2019.

The surveying of the possibilities to implement a wireless network in the Arctic region will continue.

The Sodankylä Satellite Ground Station will be developed into

a more extensive station that focuses on Arctic operations and produces satellite-based data related to the safety and reliability performance of society as well as climate change (environmental data such as snow, ice and soil frost and weather condition data).

An action programme for the efficient utilisation of satellite navigation in Finland will be prepared by summer 2017.

Arctic Spatial Data Infrastructure (Arctic SDI) will be created, aiming to collect data from the Arctic region and to produce a common base map for the presentation of Arctic data.

Measure 2: Analysing the need for transport corridors connecting the Arctic regions with Europe and improving communications in Northern Finland

An analysis of the technical, financial and social aspect of the Helsinki–Tallinn railway tunnel will be carried out by the FinEst Link project in July 2018.

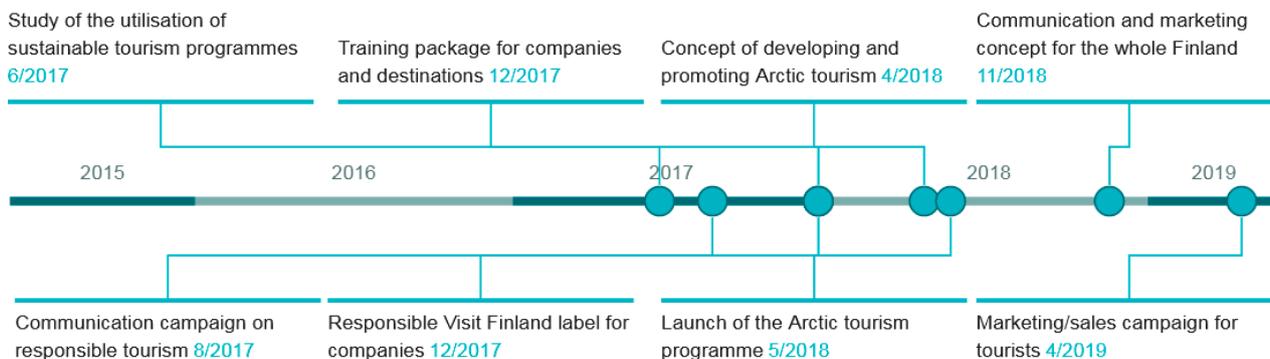
The question of the Arctic railway will be included in bilateral discussions.

Finnish national road 21 will be improved to meet the needs of industry and commerce (in 2017).

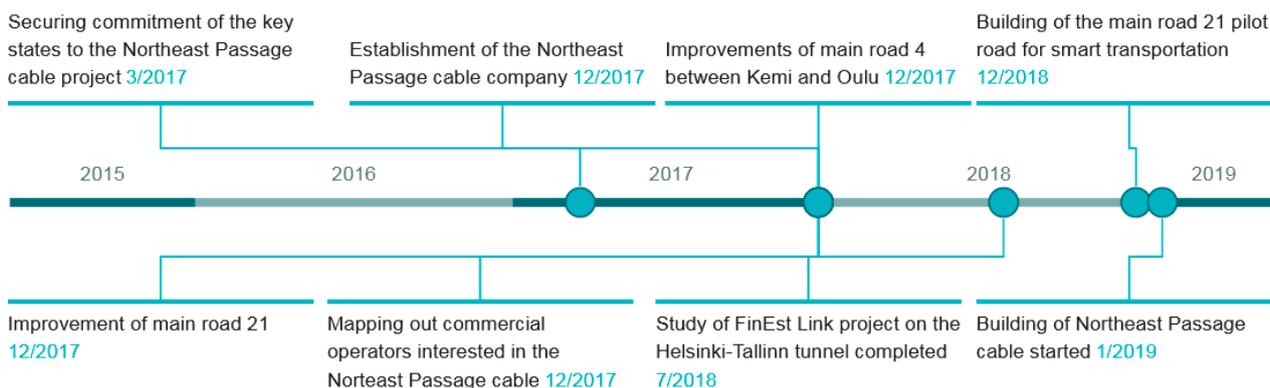
The section of Finnish national road 21 located in Muonio will be built into a smart road by the end of 2018.

Finnish national road 4 will be improved between Kemi and Oulu as part of the Bothnian Arc and the TEN-T core network (in 2017).

Sustainable tourism, example image



Infrastructure projects, example image





The Government's strategy session 26.9.2016

GOVERNMENT POLICY REGARDING THE PRIORITIES IN THE UPDATED ARCTIC STRATEGY

Finland's Strategy for the Arctic Region was published in August 2013. The Government's goals were further defined in the update to the Strategy regarding the development in the Arctic region and Finland's role in the region. In addition, the goals and measures of the current Strategy are reviewed from the perspective of the goals and key areas defined in the Government Programme and the Strategy's measures are prioritised. The recommendations put forth in the reports published in 2015, *Growth from the North* and *A Strategic Vision for the North*, and the EU's Arctic Communication published in April 2016 were taken into consideration in the update.

Desired development in the Arctic region

The global significance of the Arctic environment is increasing. The prevention of harmful impacts of climate change, environmental protection and key international issues enhance the dialogue on arctic issues. Continuous and active international cooperation contributes to solving emerging conflicts through negotiations. Although targeted by growing interests, in terms of security policy the Arctic region will remain stable.

It is possible to maintain the unique Arctic environment through joint contingency

and protection measures. New opportunities are opening up as the significance of the Arctic region increases. As a result, opportunities can be benefited from in bolstering employment and welfare within the limits of sustainable development. Also these principles are based on broad international consensus. While the vitality of Arctic communities and indigenous peoples increases, versatile networks become more concentrated both among and between Arctic communities.

Finland's foreign and EU policy in the Arctic region

Finland aims to strengthen security policy stability in the Arctic and enhance the vitality of the region, in line with the principles of sustainable development. The Government's objective is to ensure that Finland is a leading actor in international Arctic policy, both in the EU and globally. A further aim is to produce key solutions to problems in Arctic development by providing innovative products and practices. By making even better use of Finnish expertise in developing the Arctic region Finland can achieve significant impacts

on growth and employment also at domestic level. The promotion of the interests of indigenous peoples is among the key elements of Finnish Arctic policy.

To strengthen the visibility and impact of the Arctic policy, ongoing and soon to start Finnish Presidencies especially in the Arctic Council and the Arctic Economic Council will have to be made use of effectively; this will benefit both international dialogue and Finland's Arctic policy. The goal-oriented work must continue also after Finland's

Presidencies. Based on shared norms, Finland promotes stability and security in the region by developing broad-based multilateral cooperation. Special emphasis is placed on promoting cooperation within the two main tasks of the Council, environmental protection and sustainable development.

Finland sees the EU as the key actor in the Arctic region and supports efforts to consolidate its Arctic policy. From Finland's perspective, Arctic policy should be made one of the priorities of the international relations of the EU.

Priorities in the update of the Arctic Strategy

The main elements of the Finnish Arctic Strategy published in 2013 are still valid. Finland wishes to achieve growth and competitiveness, for example, in the cleantech and bioeconomy sectors via Arctic operations, with due respect for the environment.

Finland responds to the climate change and environmental protection challenges through international cooperation. The main channels of influence are the Chairmanship in the Arctic Council and international agreements and organisations.

Arctic approach is one of the central viewpoints in implementing key projects of the Government's action plan. It is particularly important to take it into account in the key Government projects on employment and competitiveness, for example in measures

related to cleantech and bioeconomy. Furthermore, the growth programmes of Team Finland, promotion of tourism and Finland's country brand also contribute to the implementation of the Arctic policy.

To benefit from Finland's northern location and its expertise in operating in cold conditions, the Government will enhance the use of the existing aid instruments, particularly the growth programmes of Finpro and Team Finland. The Government seeks to remove legal and other barriers, for example to the free movement of labour in the Nordic countries and to selling ice-breakers to the United States. The Government also promotes large infrastructural projects and bringing together Finnish consortia and Finland's Arctic travel brand.

Particular attention in the update will be paid to three questions:

Finland's arctic expertise, sustainable tourism and infrastructural solutions

1 The objectives related to *arctic expertise* as defined in the Strategy remain main topical issues. Arctic research has been reinforced by various means and all the measures identified in the 2013 strategy have either been put to practice or they have become an established part of activities. It is essential to make efficient use of research regarding, for example, working in cold conditions, energy-efficient construction and maintenance of stability. To uphold, develop and market arctic expertise it is central to create business opportunities and to benefit from them.

2 Increasing *travel business* in the Arctic region requires responsibility that takes into account the vulnerability of nature, the rights of indigenous peoples and the need to ensure safety and quality. The programme of sustainable travel destination pays attention to all aspects of sustainability. To implement the programme successfully, tailored cooperation over sectoral boundaries is required. The Arctic aspect is raised to spearhead Finland's marketing strategy for tourism; the goal is to boost the attributes related to 'Arctic'.

3 The central solutions of *infrastructure* are connected to the reports being prepared on the north-east telecommunications cable, the region's wireless network project and the Helsinki-

Tallinn tunnel project. After the reports have been completed it will be possible to form a broader vision of the infrastructure and to take a stand on the Government's projects.

Follow-up on the updated Strategy

A concrete plan of action will be made on the basis of the updated Arctic Strategy. Its implementation will be followed and assessed at the Government's strategy sessions. The Government strategic secretariat will prepare

in cooperation with the ministries a concrete plan of action where each priority sector and the contents, schedule and responsible party of key measures will be defined.

PRIORITIES IN THE ARCTIC STRATEGY

ARCTIC FOREIGN AND EU POLICY

- Strong role during the Arctic Council presidency
- Synergy of Arctic and Nordic matters
- Benefiting from the BEAC and presidency
- Bilateral Arctic partnerships
- Leadership in the EU Arctic policy
- International environmental agreements and cooperation

SUSTAINABLE TOURISM

- Sustainable travel destination programme
- Tailored cooperation among sectors
- Spearheading marketing of international tourism
- Developing stopover services

ARCTIC EXPERTISE

- Benefiting from research
- Maintaining, developing and marketing expertise in cold conditions
- Creating business opportunities and benefiting from them

Finland aims to strengthen environmental protection and security policy stability in the Arctic region and to boost the region's vitality within the framework of sustainable development.

FINLAND'S GOAL IS TO BE

A leading actor in the international Arctic policy

AND

A key provider of solutions to problems in Arctic development



By utilising better our expertise to develop the Arctic region it is possible to achieve significant impacts on sustainable development and employment also on national level. Promoting the interests of indigenous peoples plays a central role in Finland's Arctic policy.

INFRASTRUCTURE

- Report on the north-east cable
- Preliminary report on wireless network
- Other development of infrastructure



Näringsdepartementet

Avdelningen för hållbar tillväxt, Enheten för regional tillväxt och EU:s sammanhållningspolitik

Swedish input to EU Arctic Stakeholder Forum consultation

Introduction

In accordance with the action plan agreed to by the Arctic Stakeholder Forum and distributed to its members on 20 January 2017, Sweden has developed an input outlining key priorities and considerations.

A. General questions regarding participation in EU programmes

Sweden sees a great potential in deepening the cross-border co-operation in the Arctic areas. It can be things like sharing research infrastructure, joint solutions for transport and logistics and improved service for citizens and businesses. We need to be better at using the tools that we have for this such as the Nordic, European and Arctic platforms for co-operation.

The EU funded Interreg programs can play a vital role in realising this potential through linking the cross-border activities better to the general political framework as well as to regional and local initiatives and programs.

We also need to start a deeper dialogue with on how we can to develop the cross-border co-operation to ensure that it addresses our joint priorities in a focussed way.

B. Questions related to functioning of EU-programmes

- Better co-ordination: There is a need for an increased co-ordination of projects aiming to solve joint challenges in the Arctic region. Good examples could be used from the EU Strategy for the Baltic Sea Region where extensive work has been done to further align

different programs and financial resources to address common challenges.

- Cross-sectoral and international approach should be enforced: Multidisciplinary and cross-sectoral cooperation should be emphasised including the component of internationalisation. The focus should be on identifying and addressing the most urgent challenges and that this should be done in a comprehensive and coherent way.
- Co-ordination with other financing sources: When it comes to better co-ordination of investments in the Arctic much more can be done to align and use the existing resources in a more efficient way. In order to have more coherence and avoid overlaps of activities the EU should develop a deeper dialogue with existing regional initiatives focusing on the same geography and objectives.

C. Investment in the Arctic region

The Swedish government has identified a number of investment priorities that is important to highlight in the Arctic context. This is not an exhaustive list but needs to be complemented by regional input and priorities.

Transport and connectivity including digital connectivity

- Sustainable and efficient transport solutions are essential for the long term development of the Arctic regions. More investments in interoperability of different transport modes and the maintenance of infrastructure is crucial if the whole potential of the region is to be explored. The transport solutions need to operate through shifting weather conditions and geographical pre-conditions. It is important to explore the potential of intelligent transport systems in meeting the specific needs in remote areas.
- Upgrade the basic road system to meet European highway standards as these are crucial for the Arctic businesses and goods flows from the region to the EU.
- Support tourism development and packages via common strategies, improved accessibility and better co-operation in areas such as nature tourism, hunting and fishing tourism, mining tourism, and cultural tourism including Sami tourism, to establish an Arctic Nordic brand.

- In relation to telecom, the strategic objective is to give the population and commercial actors in the Arctic access to cost-effective and leading it and telecom technology. Infrastructure that supports telecom solutions in the fields of for example eHealth, eEducation, eGovernment etc. are important for the population and businesses in Sweden as a whole, as well as in sparsely populated areas including the Arctic.

Research innovation and skills

- Address the bottlenecks to growth in the lack of skills in key development area. Increase matching of skilled labor across the borders with a focus on the business needs. Create borderless competence platforms through the development of common standards in vocational education. Increase student and teacher mobility within the regions and over the regional borders.
- Engage with SMEs in smart specialization based on identified regional strength. Utilize the strategic innovation platforms to interact with innovative SMEs linked to key priorities and initiatives.
- Invest in and utilize infrastructure for applied research such as research infrastructure/test beds/living labs in collaboration between the universities in the European Arctic.
- Further develop Arctic knowledge in the research institutions, in areas such as life science, cold climate technology and sustainable and green solutions, including earth observation and indigenous peoples' knowledge.

Green solutions:

- Investments in full-scale bio-refineries are essential to support the emerging bio-economy (including forest based biomass) development in its full value chain as a business driver for the European Arctic.

- Support the full value chain of mining and mineral and other raw material industry to make it more environmentally sustainable and integrated in circular economy.
- The Swedish government supports the initiative to develop a test bed facility at the Kaunisvaara mine site, Pajala municipality. The test bed, Arctic tests, aims at providing test facilities for testing technology in and mine rehabilitation techniques in cold climate and also to provide pilot plant for small scale testing of processing techniques. Increased co-operation in the Arctic region around this initiative would be beneficial.
- Use the experience of the northern cities to build platforms for smart cities in remote less urban areas. Utilize the unique knowledge gathered in Kiruna and Gällivare in moving their central areas. Identify sustainable solutions possible to scale up in bigger cities and urban areas.
- Develop future climate smart energy technology in extreme climate by working with the regional energy industry. Enhancing renewable energy sources such as bioenergy, hydropower, wind power, tidal power, excess/waste heat.

Follow up - EU Arctic Policy

Suggested priorities for EU Arctic investments for MFF 2020
Norwegian non-paper

STREAMLINE ARCTIC TERRITORIAL FUNDING

European Territorial Cooperation. Revise the programmes for the coming period to better fit the opportunities and challenges in the Arctic. Coordinate and streamline calls for proposals on specific themes to create better synergies between the programmes.

In order to achieve the aims of creating synergies, increasing impact, and improving coordination of programmes, we suggest fine-tuning the current programmes and priorities so that they are better adapted to the specific challenges and opportunities in the European Arctic and near-Arctic areas. Financial mechanisms could be better aimed at supporting locally initiated ideas and projects, with a view to stimulating cross-border and transnational cooperation to the advantage of the people living in the region. We also suggest that the programme rules and regulations should allow for cross-programme activities, to enhance broad cooperation across this huge area.

One possibility is a transport corridor project, covering the Northern Periphery and Arctic and Baltic Sea Region programme areas. Joint projects on other themes could also be developed. Common partner forums and common calls for proposals for projects on specific themes, under some or all of the ETC/ENI programmes in the Arctic could also be considered. As a pilot, a joint call for proposals could be made for the three ENI programmes in the north: the Kolarctic, the Karelia and the South-East Finland/Russia programmes. The theme could be a common opportunity or challenge for the people living in the area in question, and could be defined jointly by the programmes.

Experience gained and new ways of working, that have come to light during the Interreg Northern Periphery and Arctic Programme pilot activity¹ in 2016-2017, should feed into the revision process for the next period.

This approach would make it easier to:

- identify synergies
- attract a good number of qualified and suitable project proposals
- improve coordination between local, regional and national funding opportunities.

¹ The Interreg NPA is piloting activity aimed at bringing together **a network of managing authorities and stakeholders** from various regional development programmes in the European part of the Arctic. It is to facilitate the exchange of information, plan and coordinate calls for proposals and monitor the impact of programmes on the region. The new collaborative network will also be open to participation by relevant national and international financing instruments. Based on the extensive work and experience of the programmes, the network feeds into the work of the stakeholder forum in identifying the research and investment priorities. (Joint Communication on EU Arctic Policy, April 2016)

Better coordinated calls could focus on innovation and entrepreneurship, clusters, capacity building and knowledge creation, smart specialisation, tourism, institution building etc. Where useful, the programmes could operate cross-border thematic networks at local and regional level.

The new programmes should be designed to ensure effective local, regional and national representation, and strengthen cooperation with the WGs under the Arctic Council and the Barents Euro-Arctic Council.

When formulating new calls and measures, opportunities for women and young people should be taken into account, as a deficit in women is a challenge in parts of the Nordic Arctic region.

Dialogue with Arctic indigenous peoples and local communities is crucial to ensure that their views are heard and their rights respected.

STRENGTHEN ARCTIC CONNECTIVITY

Space – address Arctic user needs in Galileo, Copernicus and GOVSATCOM

Space-based applications and services are necessary to:

- achieve efficient monitoring and increase understanding of the environment and climate change in the Arctic.
- increase general connectivity in the Arctic
- ensure sustainable maritime activities including rapid search and rescue operations in the Arctic.

We suggest that the MFF for 2020 reaffirms strong support for services, and for coverage and performance of Galileo and Copernicus in the Arctic. This could include an MFF contribution to an Arctic pilot mission in ESA with potential for future inclusion in Copernicus/Galileo services. An EU GOVSATCOM programme should also contribute to better connectivity in the region.

Stimulate broadband roll-out in the Arctic

Connectivity is key to overcoming the obstacles of distance and taking advantage of the opportunities in the Arctic. Norway supports EU use of ERDF and Connecting Europe Facility funding opportunities to stimulate broadband roll-out in EU Arctic member states (North Sweden and North Finland). Some connectivity needs may be best met by satellite-based services.

Invest in an efficient search and rescue system for the whole Arctic

There is currently no complete search and rescue coverage in the Arctic Ocean.² We suggest that the EU participates in multilateral funding to establish efficient systems for search and rescue in the Arctic, cooperating closely with existing organisations such as COSPAS-SARSAT.

Use of ERDF funds to implement the Joint Barents Transport Plan

Implementation of the Joint Barents Transport Plan is the most efficient way to improve physical connectivity. The Regional Transport Network of the Northern Dimension simplifies planning of infrastructure improvements on the most important routes for international traffic in Belarus, EU member states, Norway and Russia. The European Commission, Germany, Finland and Norway are

² See for instance the Arctic Marine Shipping Assessment <http://pame.is/index.php/projects/arctic-marine-shipping/amsa>

currently donors to the Northern Dimension Partnership on Transport and Logistics (NDPTL) Support Fund. The EU could contribute by aligning structure fund investment in infrastructure in Arctic EU countries to the Joint Barents Transport Plan. Similarly, the EU could engage in the Barents Euro-Arctic Transport Area (BEATA). This is a working group at national level between Russia, Norway, Finland and Sweden, with the objective of developing an efficient transport system in the Barents region, enhancing connectivity between the Barents countries and links to world markets.

INVEST IN ARCTIC EDUCATION AND OPEN THE PROGRAMMES FOR ALL ARCTIC NATIONS

A skilled workforce is a critical factor for Arctic economic development and competitiveness.

The EU Arctic policy highlights the importance of international cooperation in the field of education. At present, student and teacher mobility, the establishment of professional networks and projects are being hampered by the fact that only five out of eight countries are programme countries. To remedy this situation we suggest that EU:

- Opens Erasmus+ and Horizon 2020 to all the eight Arctic states. This could be done by establishing an “Arctic window” in the programmes.
- Facilitates “peer learning activities” within the EU programmes, including the education and research programmes, and others.
- Supports the Finnish initiative in Arctic Council to establish a network programme for the education of teachers in the Arctic "Teacher Education for Diversity and Equality in the Arctic".
- Aligns ASF funding with the Nordic Council *Nordjobb* initiative to enhance youth skills development.
- Invests in collaboration efforts between Arctic universities, such as the Joint Arctic Agenda

AMBITIOUS PUSH FOR THE ARCTIC ENVIRONMENT – EU participation in the environmental working groups under the Arctic Council

As described in the EU Arctic policy, climate change, pollution, increasing accessibility, alien species and expanding economic activity are putting growing pressure on the environment in the polar regions. The IPCC has emphasised that climate change drastically increases the risk of biodiversity loss, especially when combined with other pressures such as habitat change and pollution. EU participation in the environmental working groups³ under the Arctic Council, and the alignment of funding to these groups, is welcome and would help to address the challenges described.

RESEARCH – LAUNCH A FOCUSED ARCTIC RESEARCH AGENDA IN FP9

The EU Arctic policy, the Arctic Council, the Nordic Council and the countries in the region have all defined specific challenges that need to be addressed through research. Norway and the EU share

³ These are [Arctic Contaminants Action Program \(ACAP\)](#), [Arctic Monitoring and Assessment Programme \(AMAP\)](#), [Conservation of Arctic Flora and Fauna \(CAFF\)](#), [Emergency Prevention, Preparedness and Response \(EPPR\)](#), [Protection of the Arctic Marine Environment \(PAME\)](#) <http://www.arctic-council.org/index.php/en/about-us/working-groups/pame>.

the view that better knowledge of the Arctic is fundamental to respond adequately to the challenges. The research needs should be addressed through cooperation between the EU and the Arctic countries, based on continuity in recruitment and observation activities and efficient systems for dissemination and collaboration.

The EU is a major contributor to Arctic research. Norway, as a partner to the EU research programmes, would encourage the EU to strengthen research on Arctic issues. The main priorities of the EU Arctic policy are in line with Norwegian priorities: 1. Climate Change and Safeguarding the Arctic Environment; 2. Sustainable Development in and around the Arctic and 3. International Cooperation on Arctic Issues. Of special importance is international cooperation on scientific infrastructure and data. It is important that the EU takes part in and contributes to established international programmes, like SAON and GEO under the Arctic Council, in order to avoid initiating new and competing projects.

CULTURE–DEVELOPMENT SCHEMES AND DEVELOPMENT OF LOCAL COMMUNITIES IN THE ARCTIC

We suggest the establishment of specific financing schemes or mechanisms for developing local and Arctic culture. Local culture is important for the development of local communities and people-to-people cooperation, as well as for economic development, for instance the tourist industry.

The development of both nature-based and culture-based tourism in the Arctic is increasing. We underline the importance of drawing up a code of conduct and maintaining a genuine dialogue with indigenous and local communities in the development of tourism. This is also stressed by the Sami Parliament.

FOSTER NETWORK COOPERATION

The OECD Territorial Review for the Northern Sparsely Populated Area underlines the potential of increased use of e-technologies.

We propose the establishment of networks and meeting places to foster innovation partnerships with the private and community sectors, taking smart specialisation strategies into account. Norway is prepared to take an active part in such a process.

Arctic Stakeholder Forum: Contribution from the Government of Iceland

4 May 2017

Iceland welcomes the opportunity to exchange views with the EU on the importance of the Arctic. In light of the up-coming Arctic Stakeholder Forum and high-level meeting in Oulu, Finland, on the 15-16th of June, Iceland would like to present the following views.

The importance of the Arctic for Iceland cannot be overstated. As one of the eight Arctic States the developments in the region have a direct impact on Iceland and its communities. We have therefore in our policies emphasized the importance of international cooperation when it comes to climate change, protection of the environment and sustainable development. Active international cooperation on the Arctic with interested and concerned partners is therefore an integral part of Iceland's Arctic policy.

Iceland has in the last few years cooperated with the EU on matters related to the Arctic region and has provided input into the recent EU policy-making on the Arctic.

Given the close cooperation, both with the EU and on a bilateral level with individual Member States, the cooperation on the Arctic has in recent years grown considerably. More dialogue and practical cooperation is now ongoing than ever before. Many states, institutions and regions have put forward their concrete plans and policies for the Arctic. This underlines how important the region and its future political, economic and environmental developments are, both to Arctic and non-Arctic states.

Iceland would therefore like to use this opportunity to express its willingness to continue the good cooperation and active discussions with the EU. From Iceland's perspective it is important to look at ways to develop the region and its communities. In this light, we would like to emphasize the following:

Focus on science, research and education

There is a need to further invest in scientific research. Long-term observations and monitoring in the Arctic on climate, cryosphere, marine and terrestrial aspects of the Arctic environment should be expanded and efforts increased. This will advance knowledge and information about the changes in the Arctic region and in that way not only contribute to the better

knowledge about the Arctic environment itself but as well how the changes in the Arctic can affect other regions.

Infrastructure – investments and development

The Arctic is sparsely populated and access to infrastructure limits the development in the region. Further emphasis should be made in developing infrastructure for the benefit of the region and its inhabitants. In some cases, improvements can be made to existing infrastructure and in some instances, there is a need to build new installations and invest in innovative technologies and particular to look at broadband infrastructure and connectivity in the region so the communities and regions can have access to the same level of services in this field as in many other regions.

Safety, situational awareness, rescue and response, communications

Considering increased interest in the Arctic, traffic in the region has increased considerably and will probably continue to increase and expand into new areas. There is a need to focus on situational awareness and adding capacity to be able to respond when emergencies arise in the region. Lessons learned from emergency exercises has shown that considerable gaps exist in communication and rescue assets in the region.

Trade and tourism

The Arctic is linked to the rest of the world through trade and tourism. Considerable part of that trade is with the Member States of the EU and this is particularly true for the European Arctic, it's trade ties to Europe are strong and extensive. Research has shown that value creation in the Arctic regions is high and for those regions the European market is an important market. Increasing tourism to the Arctic has helped to develop further ties between Europe and the Arctic.

Transport, shipping and logistics

Ongoing developments in transport and logistics will provide additional growth in the region in the future. Already, growth in shipping and aviation sector has expanded the economy of the region and with further development of infrastructure, resources and more people to people contact this trend will continue.

Energy

As a leader in renewable energy and technology in that field, Iceland has a specific interest in expanding the share of renewable energy in the region. Already, innovation in this sector is

lowering investment costs and providing new opportunities in the sector of renewable energy. Increasing the share of renewable energy and finding ways to increase energy efficiency in the region will allow the region to grow its economy in a sustainable way and better the living conditions for the inhabitants of the region.

Climate change

The Arctic is warming at least twice as fast as the rest of the world. This will have profound effects in the region. The ratification of the Paris Agreement is a very important milestone and the implementation of the goals in the agreement are of fundamental importance to the Arctic region. For the Arctic states, it is necessary to focus on international cooperation to meet the goals in the agreement. It is further important to seek ways to mitigate the effects of a warmer Arctic and find ways to increase the resilience of the communities so they are in a better position to deal with the consequences and challenges of a warmer temperature in the Arctic.

Iceland would like emphasize that existing cooperation is broad and extensive. Icelandic institutions have participated in EU funded programs and for example take part in existing Horizon 2020 program on many levels. Furthermore, through other cooperation mechanisms on a regional level, such as the Barents Euro Arctic Council and the Northern Dimension and the cooperation within the Arctic Council, Iceland and the EU cooperate extensively, both on a practical level in research and concrete projects as well as through political dialogue.

Iceland welcomes the engagement and interest the EU shows in the Arctic. We look forward to the up-coming events in Finland in June and the discussions on how to better streamline EU funding opportunities relevant for the Arctic region.



Input to Arctic Stakeholder Forum from stakeholders in Greenland

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This document with Greenlandic remarks and information is supplied to the European-Commission as part of the process of giving input to the EU on how to improve conditions for cooperation between Greenlandic (Arctic) Stakeholders and the EU. DG Mare under the European-Commission send questions on 15 January to relevant Arctic countries in order to obtain this input. The Government of Greenland has after receiving the questions held an EU-Arctic Stakeholder meeting in Nuuk, Greenland, followed by a process where Greenlandic stakeholders could send in remarks and input to the Government of Greenland on the EU-questions. This document is the result of the process in Greenland.

Respondents during the collection of input from relevant stakeholders in Greenland are inter alia: educational and research institutes, private and/or consulting companies, municipalities, the government and the regional advisory group for NPA.

The structure of this report will be following the set-up of the questions (from DG Mare) sent out to the stakeholders in Greenland, and after having received comments and suggestions from stakeholders, the input have been written together. When there are suggestions for solutions these are underlined in the text below.

1. Do you feel you have sufficient information about the current EU programs, if not, what can be done to be better informed?

It seems as if one only gets relevant information regarding EU programs if one somehow has been involved in the EU programs before and this is mostly the case for private and/or consulting companies in Greenland.

Otherwise many feel that there is not enough information about the possibility to participate in EU funded programs. When you do know or learn about the opportunities, it is still difficult to maneuver within the EU system in order to find out what the requirements are for project proposals. There seems to be a substantive knowledge gap regarding the possibilities with the EU programs.

Solution

Several stakeholders suggested that a concise brochure, or something like that,

where all the programs and their information are listed in a clear and understandable manner should be developed.

Another suggestion was that interested parties could send project proposals or request for cooperation with Greenlandic stakeholders to relevant institutions and organizations when a concrete application round starts and that concrete information regarding the proposal should be included in the inquiry.

More direct information flow to persons involved in any program related work should be considered. For instance, monthly / quarterly newsletters including information about relevant programs could be sent to stakeholders.

Enabling stakeholders to stay updated and for them to be able to keep track of which project types and initiatives that are eligible for EU support would be an improvement and be beneficial.

Briefing/information meetings for relevant stakeholders where companies/institutions that have experience in participating in EU-funded programs could perhaps be organized periodically, so that practical experiences and good advises could be shared. These events could help to demystify the EU program system.

2. Have you and/or your institution ever participated in a EU funded program?

If not, is there any specific reason why you have not participated in a EU funded program?

Most Greenlandic institutions and organizations that get involved in EU programs are invited by others (for example EU member states) to join a project proposal.

Most of the respondents who have participated in a EU funded program have participated in the NPA or NPP.

One institution had participated in Horizon 2007-2013 and one company had participated as an Associated Partner (AP) in a project funded by the EU.

One company informed that EU had played a role in the funding of the airports in Nuuk and Ilulissat in the late 1970's.

3. Can you identify capacity (ex. manpower) and/or resource challenges related to participation in the EU-programs? If so what can be done to overcome these challenges?

Many companies and institutions in Greenland have administratively small capacities - with few human resources and limited financial resources. This makes it difficult to live up to the often non-transparent and bureaucratic reporting system related to EU funded projects, in addition to the resources needed when trying to create an overview of the potentials of project

opportunities available. Greenlandic personnel who deal with the EU programs are also not always equipped to help sufficiently.

Participating in a EU funded project is time consuming and takes a lot of effort. It is challenging for small companies to apply for and participate in the large EU programs not least because of many references to law, regulation etc., that are unknown to many companies and institutions in Greenland.

It can be difficult to get an overview of the application process for an EU project proposal and the preliminary preparation to get at project proposal through the EU system can be quite challenging and very resource demanding.

It is often difficult to pinpoint exactly how much time you have to invest in the application process, which perhaps might not even lead to a positive outcome. Similarly, it may be difficult in advance to foresee how much time you need to commit, if the application is accepted. Many institutions and companies have plenty to do in their daily work, so it can be difficult to prioritize new and extra work where they do not quite know how much time they need to allocate. Also not knowing what they might get out of the application itself, does not help either.

There are several challenges when participating in EU funded projects. One challenge is that entities/people who are not involved in the programs usually formulate the program objectives. Sometimes this makes the objectives out of place or too stringent.

Another challenge is that the projects almost never start in Greenland. This means that there are a lot of invitations to projects that could be relevant to our work and functions, but rarely addresses problems that are current in Greenland.

An entirely different challenge a company from Greenland has experienced is the delay of payment in the claim process. The experience is that they had to wait for payment of claim for almost a year. It is an economic risk that small companies and institutions struggle to cope with. However Greenland Business (a company in Greenland) has made a system today that ensures that refunds can be paid without waiting for the claim process. This is accessible by paying a fee to Greenland Business.

It is essential and a prerequisite to have dedicated and skilled administrative/financial assistants to keep track of the various deadlines and requirement for reporting to the EU. This however is costly and can be difficult to finance even for large institutions and companies in Greenland.

There is a need for persons with the knowledge of the application system to help stakeholders get over the hurdles of getting an overview of the EU system and requirements.

Solution

A possible solution is to set up a full time localized/regionalized entity, that can facilitate cooperation and dialogue between the local business communities, the local institutions and the Government, so they can work together on developing EU projects and projects relevant for other externally funded development programs. The entity could also help with services for potential applicants to understand the EU project application system.

It will be valuable, if resources can be allocated to the official secretariat of the NPA-program, in order to communicate the achievements of the different projects to all regions in collaboration with the regional RCPs and to ensure that the stories and experiences are spread out to all relevant stakeholders. Today the communication is handled by the individual projects and the possibility to succeed is therefore highly dependent on the participants and their ability to communicate widely and effectively. This suggestion could ensure that successful projects and their processes could inspire and motivate in different regions. Even though the region might not have participated in a project. This will ensure a more lasting benefit and ensure accessibility of the results of the projects to all stakeholders.

To keep relevant stakeholders in Greenland up to date through frequent administrative courses on the EU programs is something that could be offered by EU.

It would be appropriate to have more counselling support to potential and active partners in order to help understand the processes and logics of the EU programs.

As a minimum the following services should be offered:

- a. Publish newsletters several times a year, informing about possible participation in EU projects as well as projects funded by other programs.
- b. Allocate resources for concrete assistance during preparations for the application and help support project participants in the often difficult and non-transparent EU reporting system and the requirements for accounting etc.

4. What can you, your institution or your region, do to get more involved in the EU-programs?

In order for the project proposals to go all the way to approval in the EU system, and for the proposals to go more smoothly through, there is a feeling that it is most optimal to have a partner and preferably one from a EU country.

One municipality in Greenland has joined a Danish EU regional office in hope of easing the challenges and gaining more knowledge through the regional office. Alliances seem to be important to have in order to be more successful.

There seems to be a need to prioritize the written application process more than what is the case today. However, the reason for this not being the case so far, is the fact that the application success rate is generally low, so here the

question of how to prioritize the resources in order to be successful comes up again.

There seems to be an expectation that the process of obtaining EU-funding is very difficult for small organizations to handle from a resource point of view. But the stakeholders are open to be assisted when trying to get investments and participation from the EU.

It would be beneficial to further develop existing networks with other Nordic regions and research units and thus create a framework for future applications to the EU programs. As well as closer cooperation with regional businesses in order to participate in EU funded projects. Most regional companies rarely have resources to obtain any external financing for international projects due to their small sizes.

A very important task is to ensure synergy with the results of projects. Today it seems that the results from EU funded projects are often not disseminated. This is a pity since the results often can be of interest or inspiration to other Greenlandic stakeholders. If you are not an active participant in a project, it is difficult to get to learn and benefit from other project experiences.

5. Do you have any other suggestions for investments that would benefit your region?

Following financing needs in Greenland for the coming years are identified:

a. Fisheries

- Fisheries are a very important area for Greenland and innovative projects regarding sustainable and more efficient exploitation of the fish products is something that has great interest.

b. Infrastructure.

- In this period of time the Government of Greenland has focus on developing several airport projects in order to lower the costs for both domestic and international air transport in Greenland. This for Greenland is a very important area to focus on. EU-funded infrastructure financed programs should have a longer profile (30-40 years) and should consider relevant optionality/flexibility as for repayment structure.
- Renewable energy, primarily hydropower plants is an area which Greenland is really focusing on, when it comes to sustainable development and mitigating climate change.
- Energy optimization of the existing housing facilities and possibly incorporate new technologies to reduce consumption from heating where oil is utilized.
Development of ventilation systems adapted to Arctic conditions to improve indoor air quality and mold problems. Existing systems are not optimal because they are developed in countries with moderate temperatures.
- In a sparsely populated and very dispersed country tele- and internet

communication is a very important area to develop.

c. Education.

- Continued and increased investment in education is absolutely necessary in order to achieve a sustainable development in Greenland.

d. Tourism

- The tourism sector is also growing in focus as a way to achieve sustainable and economic development in Greenland. In the coming years the important projects are very much infrastructure-related in order to build up the capacity and quality of the tourism sector. Foreign investment is necessary in this area.

e. Research and knowledge

- Research has been a quite active sector for a long time in Greenland but there is still great interest for innovation and development in this area.
- Establishing knowledge centers in Greenland and somehow making sure that assessments and research that is being done in Greenland also benefit the people of Greenland is very important. Knowledge is fundamental in order to achieve sustainable development in a country.

f. Business development.

- Development of the food sector, including the development of activities that increases the value of local natural resources – local food products.
- Development of micro-business, including upgrading the skills of unskilled workers in traditional industries.
- Development of innovative projects and framework conditions for micro-enterprises and to develop innovation centers.

g. Social innovation.

- Development projects for children and youth working in the outer periphery regions, including the efforts and struggle against suicides.
- Development projects within the elderly sector in the outer periphery regions.
- Development projects related to inclusion of marginalized workers in small settlements in the outer periphery regions.
- Development of new forms of public consultation.
- Development of civil society so that voluntary work is increased and improved.

6. Do you have any suggestions on how EU-funding could be better streamlined for a specific area of interest in the region (e.g. connectivity, infrastructure, health, etc.), in order to have a more effective and sustainable impact?

EU programs have to be easily accessible and flexible.

It takes presence to better streamline a specific area of interest. It is a challenge for companies/institutions spanning all over Greenland to engage with a large complex foreign institution/organization like the EU.

A Greenland situated consultancy / advisory office and/or a task force with enough resources could be a solution.

There are a lot of similarities between the Arctic countries, but there are also huge differences and these need to be remembered when developing projects and application processes.

Specific EU-program related questions

7. Can you identify any topics or challenges in the region that have not been adequately addressed in the current EU-programs? (inter alia; Northern Periphery and Arctic or Horizon2020) or in other regional development programs in the Arctic?

See answer to question number 5.

Following suggestions are identified:

- a) Adaptation to climate change in Arctic communities.
- b) Improved focus on Arctic engineering.
- c) Infrastructure: An expansion of the airports in Greenland in Nuuk, Ilulissat and Qaqortoq, will ensure connection from Greenland directly to the large international transport networks for the benefit of for example tourism and freight transport.
- d) Research and innovation in topics that can increase the development of new industries and create jobs to the benefit of the Arctic societies.
 - There is a need for research and development of affordable, robust and sustainable engineering solutions that can also fulfill environmental demands under the constraints of the harsh Arctic climatic and infrastructural conditions.
- e) How to save energy in a small isolated community (5000 people) without physical connection to other communities, other than when people travel by boat or airplane.

8. Have you faced any challenges in participation to the current EU-programs or in other regional development programs in the Arctic? How would you tackle them if new programs were to be designed?

One would think that the project in itself is the hardest part, however writing the application, and the final report is as time consuming as the project itself.

It is a huge challenge for a small institution/company to be responsible for such detailed accounting reports.

Solution

It may also be helpful to allocate resources to an adviser who can help create the necessary stability of a project going forward, when you also have to make

sure that you comply with all the EU regulations.

9. Can you identify topics in the relevant programs where the results achieved so far do not reflect the initial expectations?

The results meet the expectations in general, but in Greenland all conditions/circumstances surrounding a project are much smaller than in other countries, so the solutions cannot always meet local expectations.

10. Could you name examples of concrete results of a EU- funded project that could be scaled up and brought to the market for the benefit of the society?

In general there is still a need to gain more experiences with the ongoing projects in which we are involved. But some respondents highlighted that there might be some of the projects that could be beneficial to scale up. The EU Leonardo da Vinci project: COMBAR I & II were mentioned as examples. Another example is the NPP Regina project. This project is specifically intended to result in the development of a manual that could be used for peripheral areas in the planning of large-scale projects in the local area.

11. Could you name examples of EU-funded projects that have significantly benefited your region?

CLIM-ATIC (2003-2013 NPP) was mentioned by some of the respondents.

The construction of the existing Nuuk Airport and Ilulissat Airport in the late 1970's was founded by EU and marked a significant change from helicopter based transport to fixed winged transport.

12. Any other remarks?

No remarks.

Arctic Stakeholder Forum:

Contribution from the Government of the Faroe Islands

11 April 2017

• Introduction

As a non-EU nation in the European Arctic, the participation of the Faroe Islands in cross-border programmes together with the EU on Arctic matters takes place within the Northern Periphery and Arctic Programme (NPA). In this programme, the Faroe Islands make their own contribution to the joint financing.

Although the Arctic Stakeholder Forum is not specifically addressing Arctic priorities in the European programme for research cooperation (currently Horizon 2020), it should be noted that the Faroe Islands have participated as associated country in this cooperation since 2010, a fact not mentioned in the EU's 2016 Joint Communication on the Arctic.

Further details of Faroese participation in both NPA and Horizon 2020 are found in Annex 1.

A full consultation on the specific questions in the Action Plan developed for the Arctic Stakeholder Forum has not been undertaken in the Faroe Islands, given that much of this is related to an assessment of the functioning of a wider range of EU funding programmes to which the Faroe Islands, as a third country in relation to the EU, does not have access.

However, with respect to participation in the NPA, one of the challenges identified from the Faroese point of view is the need for a more differentiated approach to the concept of "small-scale", with a better focus on micro-solutions appropriate to a very small country like the Faroe Islands.

Below is an overview of current priority areas for the Faroe Islands in terms of cooperation, development and investment. These are drawn from, amongst other sources, the Faroese national strategy for the Arctic (2013) as well as priorities highlighted by the Faroe Islands in other fora for cooperation, including the Arctic Council, the Nordic Council of Ministers and the Nordic Atlantic Cooperation (NORA) and the NPA.

In general terms it should be emphasised that the Faroe Islands is an active player in both Arctic and Nordic cooperation, as outlined Annex 1. An overview of relevant Faroese stakeholders in Arctic cooperation, including government, research, monitoring and educational institutions and relevant municipal and business associations is contained in Annex 2.

Finally, a key reference resource of relevance to those interested in the development potential of the West Nordic region of the North Atlantic and Arctic is the 2011 OECD Territorial Review of the NORA Region: The Faroe Islands, Greenland, Iceland and Coastal Norway¹.

¹ [OECD Territorial Reviews: NORA Region 2011: The Faroe Islands, Greenland, Iceland and Coastal Norway](#)

- **Cooperation, development and investment priorities**

Marine resources – sustainable fisheries and aquaculture

- Developing the blue bio-economy through innovation to ensure sustainable use of marine resources
- Developing value-added and niche products from the marine sector; stimulating research and innovation to make best use of the resource based and create new jobs in the fisheries sector
- Aquaculture - knowledge and technology transfer and exchange of best practices

Maritime industries and services

- Developing the Faroe Islands as a service hub for shipping and other maritime activities across the Arctic and North Atlantic
- Strengthening collaboration in the Arctic to develop maritime industries and ensure appropriate shipping regulations, SAR collaboration and marine environmental protection

Energy

- Petroleum: prospects for production in the Faroe area; new licensing for exploratory drilling in 2017
- Renewables: collaboration on technological innovation for dedicated island solutions, based on the wind and the sea, and experiences with developing self-reliant energy grids

Island, remote and small-scale solutions

- Promoting approaches relevant to islands and small and remote communities across the Arctic
- Addressing demographic challenges in a small population

Transport and communications

- Developing infrastructure solutions suited to, and necessary for, a remote archipelago, including sub-sea and mountain tunnels and inter-island ferry and helicopter services

Digitalization

- Development of a fully digital infrastructure for public and private communications and services

Education & culture

- Promoting educational cooperation in and about the Arctic region, with a focus on circumpolar educational collaboration & mobility (e.g. West Nordic Studies) and distance learning
- promoting cultural and linguistic diversity and exchange across the Arctic

Tourism

- Developing sustainable tourism with appropriate management, coordination and regulation, with a continued focus on branding and marketing and an enhanced focus on nature conservation and new regulations in this regard.

Health and genetics

- Investing in biotechnological research, innovation and development projects in cooperation with researchers from the EU, the Nordic countries and the Arctic, in areas including health, food development, marine bio-technology and human genetics.

Creative industries

- Faroese policy in support of enhancing creative Industries primarily aims to strengthen the infrastructure and knowledge base for growth in creative and cultural fields in the Faroe Islands, also promoting more and better organized collaboration in the Nordic and Arctic regions.

The Faroe Islands in the Arctic – an overview

- **Strategic Assessment 2013**

The Government of the Faroe Islands commissioned in 2012 a strategic assessment to provide a deeper and broader understanding of the challenges and potential of the Faroe Islands in the years to come and their place in the future development of regional cooperation. The task was to examine in more detail how the Faroe Islands can best adapt to changing circumstances while creating and benefitting from new opportunities.

The Faroe Islands are also part of the joint Kingdom of Denmark's Strategy for the Arctic 2011-2020, together with Denmark and Greenland. As many aspects of the joint strategy relate to areas for which the Faroe Islands have exclusive competence, the national Faroese strategy was developed as a basis from which to develop more dedicated actions plans in areas of particular relevance and interest for the Faroe Islands.

The assessment, "[The Faroe Islands – a nation in the Arctic](#)", was presented to the Prime Minister in April 2013, and discussed in the Faroese Parliament in November the same year.

- **Arctic Council and related cooperation**

The Faroe Islands have been an active participant in the Arctic Council, in a joint delegation together with Greenland and Denmark, since the late 1990's, as well as taking part in the environmental cooperation (AEPS) prior to the establishment of the Arctic Council. Participation in the Arctic Council is at both ministerial level, official level (SAO) and at the expert level. Faroese government officials, as well as agency and research experts take regular and active part in the Arctic Council Working Groups such as SDWG, AMAP, CAFF and PAME and relevant projects and task forces related to these. In addition, the Faroe Islands have a permanent seat in the Arctic Economic Council.

The Faroe Islands are also a separate signatory to the legally binding agreements concluded under the auspices of the Arctic Council, on Search and Rescue and Oil Spills, as these also cover areas for which the Faroese Government has exclusive competence.

The Faroe Islands participate jointly with Greenland in the negotiations regarding the future management of fisheries in the Arctic High Seas, with a view to becoming a Party (Denmark in respect of the Faroe Islands and Greenland) to a new Convention.

Other regular high-level Arctic fora in which the Faroe Islands regularly participate include the Arctic Circle in Iceland, the Arctic Frontiers Conference in Norway and the Arctic Futures Symposium in Brussels.

- **Nordic Council of Ministers – Arctic Programme**

The Faroe Islands take an active role in the Nordic Council of Minister's Arctic Expert Committee, the purpose of which is to provide advice to the Ministers for Nordic Cooperation and the Nordic Cooperation Committee on matters relating to the Arctic. This includes the Nordic [Arctic Cooperation Program](#), which provides funding for projects, processes and initiatives that promote sustainable development in the Arctic and benefit the people of the Arctic under the conditions generated by globalization and climate change.

The overall objective of the programme for 2015-2017 is sustainable development, with four priority themes: the people of the Arctic; sustainable economic development; environment, nature and climate;

and education and skills enhancement. Projects with Faroese participation have included “Waste water treatment in the Northern Arctic Areas”, “Living museum in the Arctic”, “Seabird harvest in the North Atlantic”, and “ZORRO” (Infectious Zoonotic Diseases Transmissible from Harvested Wildlife to Humans in the European Arctic).

- **NORA – Nordic Atlantic Cooperation**

The [Nordic Atlantic Cooperation](#), NORA is an intergovernmental organization under the Nordic Council of Ministers. The NORA region includes the Faroe Islands, Greenland, Iceland, and coastal Norway (the 9 coastal counties of Norway, from Finnmark in the north to Rogaland in the south).

The NORA countries are associated by their geographical location and by shared characteristics, common challenges and historical, institutional and cultural links. NORA’s goal is to contribute to the creation of a vital and dynamic North Atlantic region, characterized by a strong and sustainable economy. To help achieve this goal, NORA supports collaboration between businesses and research and development organizations in the region.

NORA is financed by the Nordic Council of Ministers, supplemented by national grants from the four member countries. The North Atlantic region is an integral part of the Arctic. As such, its challenges, as well as geographical and social conditions, are similar to those across the Arctic. The cooperation with the Nordic countries’ western neighbours, especially Canada and Scotland, is considered a natural part of the cooperation in the NORA region.

The Faroe Islands hosts the NORA secretariat in Tórshavn. In addition, regional contact persons are located in Iceland, Greenland, Western Norway and Northern Norway.

- **NAUST: North Atlantic Development Strategy**

NORA serves as secretariat for the process to develop a North Atlantic Development Strategy (NAUST), initiated by the Nordic Council of Ministers. The initiative will identify a synthesis of key themes of particular relevance to the North Atlantic part of the Nordic region, and propose an implementation model for improved coherence. The overall aim is to strengthen Nordic cooperation in this part of the Nordic region. It builds upon recommendations from the 2011 OECD Territorial Review and an evaluation of NORA in 2004. A working group will present a strategy proposal later in 2017.

- **West Nordic Studies - circumpolar cooperation in education**

In the autumn of 2015, the University of the Faroe Islands, the University of Greenland, University of Akureyri in Iceland, the University of Iceland and the University of Nordland, Norway, launched a new international and interdisciplinary Master’s program in [West Nordic Studies, Governance and Sustainable Management](#). This provides students with a unique opportunity to take part in shaping the West Nordic region of Greenland, Iceland, Faroe Islands, and coastal Norway, offering the possibility for a more diversified educational experience and enhanced mobility within the region.

- **West Nordic Council - parliamentary cooperation**

The [West Nordic Council](#) is a parliamentary cooperation comprised of members of the Faroese, Greenlandic and Icelandic parliaments. Arctic affairs and common challenges related to changes in the Arctic are regularly addressed. The West Nordic Council meets annually with the European Parliament’s delegation for relations with Switzerland and Norway and to the EU-Iceland Joint Parliamentary Committee and the European Economic Area (EEA) Joint Parliamentary Committee (SINEEA Delegation).

- **NATA – North Atlantic Tourism Association**

NATA, the [North Atlantic Tourism Association](#) is an organisation that promotes and supports cooperation in tourism for the West Nordic countries: Greenland, Iceland and the Faroe Islands.

NATA's vision is to promote the West Nordic countries as a tourist destination; to encourage coordinated marketing of the region; to help improve the quality of tourist services in the region; to build partnerships between the participating countries, and to promote knowledge sharing, product development and innovation

NATA offers grants and travel support for projects that reflect its mission, i.e. to promote cooperation in tourism between Greenland, Iceland and the Faroe Islands.

COOPERATION WITH EU PROGRAMMES

- **Northern Periphery & Arctic Programme**

The Faroe Islands have participated in the Northern Periphery and Arctic Programme, formerly the Northern Periphery Programme since its second programme period began in 2001. Many stakeholders from both the research and business sectors in the Faroe Islands have benefitted from active participation in arrange of projects supported by NPP/NPA over the years.

These have included the following: Secure, WaterPro, BUSK, CraftREach, Cereal, Cool Route, Water (Warning of Algal Toxin Events), NOCRY (Northern Creative Youth), Economusées Northern Europe and Northern Maritime Corridor. Further details can be found on the NPA website.

The NPA secretariat has its offices in the North Atlantic House in Copenhagen together with the Representation of the Faroes in Denmark.

- **Horizon 2020**

The Faroe Islands first became an associated country to the EU's Seventh Framework Programme for Research (FP7) in 2010. In 2014, the Faroe Islands and the European Commission concluded a new agreement on science and technology, providing for the continued role of the Faroe Islands as an associated country to Horizon 2020, as well as observer status in ERAC (European Research Area Committee).

In this relatively short period of independent participation as associated country, project applications with Faroese participation have had a high success rate, including a number with specific relevance in the Arctic and North Atlantic regions, such as: EduArctic, NAACLIM, SALSEA-Merge, INTERACT, ClimeFish, PrimeFish, EUROFLEETS2, PARASITE, Blue-Action and AtlantOS. Further details on these projects can be found on [CORDIS](#) - the Community Research and Development Information Service of the European Commission.

STAKEHOLDERS IN THE FAROE ISLANDS

- **Parliament, Government & public administration**

Parliament of the Faroe Islands (Løgting), www.logting.fo

Government of the Faroe Islands – www.government.fo

- Prime Minister's Office www.tinganes.fo
- Ministry of Foreign Affairs and Trade www.uvmr.fo
- Ministry of Education, Research and Culture www.mmr.fo
- Ministry of Fisheries, www.fisk.fo
- Ministry of Health and the Interior, www.himr.fo
- Ministry of Transport, Infrastructure and Labour and Communication www.smr.fo
- Ministry of Social Affairs – www.amr.fo
- Ministry of Finance www.fmr.fo

Association of Municipalities www.kf.fo

Association of Outlying Islands www.utoyggj.fo

- **Research, higher education and monitoring**

Faroe Islands Research Council (Granskingarráðið) – www.gransking.fo

University of the Faroe Islands (Fróðskaparsetur Føroya), www.setur.fo

Faroe Marine Research Institute (Havstovan), www.hav.fo

Natural History Museum, National Faroese Heritage (Søvn Landsins), www.savn.fo

Environment Agency (Umhvørvisstovan), www.us.fo

Agricultural Agency (Búnaðarstovan), www.bst.fo

Faroese Geological Survey (Jarðfeingi), www.jardfeingi.fo

iNOVA Research Park, www.inova.fo

Public Health Institute (Deildin fyri Arbeiðs- og almennaheilsu), www.health.fo

- **Business**

House of Industry (Vinnuhúsið), www.industry.fo

Visit Faroe Islands, www.visitfaroeislands.fo

FOIA - [Faroese Oil Industries Association](http://www.faroeseoilindustries.com)

Faroe Islands Maritime Service, www.maritime-services.com

FAS - Faroe Islands National and International Ship Register, www.fas.fo

Building strong and smart communities: NSPA proposal for EU investments in the Arctic

Introduction

This document summarises the responses to a consultation that the Northern Sparsely Populated Areas (NSPA) network organised in its 14 member regions for the European Commission's initiative on the Arctic Stakeholder Forum in January-March 2017. The Forum was set up by the EC to identify key investment priorities for EU funds in the Arctic region.

The NSPA network represents close collaboration between the four northernmost regions of Sweden (Norrbotten, Västerbotten, Jämtland Härjedalen and Västernorrland), the seven northernmost and eastern regions of Finland (Lapland, Northern Ostrobothnia, Central Ostrobothnia, Kainuu, North Karelia, Pohjois-Savo and Etelä-Savo) and North Norway (Finnmark, Troms and Nordland). These regions are also referred to as the *European Arctic*.

The NSPA has 5 persons for every square kilometre, for a total of about 2.6 million people over an area of 532 000 square kilometres. These regions share a similar natural environment – a harsh climate, abundant natural resources, relative lack of agriculture in some of the regions, a strong potential for renewable energy, long distances from markets, and high cost of land transport.

However, **despite some challenges, the NSPA-regions have great potential to contribute to the European economy**, and they already deliver added value to their countries and the EU. The OECD Territorial Review on the Northern Sparsely Populated Areas¹, published in March 2017, points out that “realising the growth opportunities for these regions is linked to the identification of absolute advantages. These vary by region and primarily include minerals and energy, fisheries and aquaculture, forestry, renewable energy and tourism-related services. -- The key policy question is **how to add value around the unique assets** by reducing bottlenecks and supporting enabling factors for productivity growth such as **skills, innovation and infrastructure.**”

The EU, as a significant beneficiary of the forests, marine resources, minerals, energy supplies and high quality research of the NSPA, should facilitate the sustainable development of the region. The European Arctic has a *great potential to serve as a living lab or test bed* for new climate- and environment-friendly technologies and innovative solutions to deliver public services.

The aim of the NSPA is to develop the region to become a competitive, interesting and robust environment for new businesses to grow and invest in, and an attractive place for people to live. This report outlines the NSPA views on how the EU could facilitate this development. Part 1 outlines the investment priorities in the region, whereas Part 2 discusses how EU funding programmes should be developed to better serve the region. Part 3 draws some conclusions.

¹ OECD Territorial Review on the Northern Sparsely Populated Areas contains several policy recommendations on regional, national and EU level. The study can be accessed [here](#).

About the consultation process

For this report the NSPA offices in Brussels organised a stakeholder consultation in January – March 2017. The consultation questions were prepared together with the European Commission. Stakeholders were invited to participate in the consultation by sending written comments to the consultation questions. In addition, two NSPA consultation meetings were held in North Norway, one in Tromsø on 23 January and another in Kirkenes on 8 February. One meeting for the Swedish regions was held in Skellefteå on 23 February. (For more information about the process, see Action Plan in the Annex 1).

The offices received input from numerous stakeholders, such as regional and local administrations, politicians, business representatives, associations, networks and research and innovation institutions (full list of respondents in the Annex 2). After the consultation, the NSPA Forum and the Steering Committee discussed the preliminary findings in Brussels on 14 March, and all respondents also had an opportunity to comment on the draft report, before it was delivered to European Commission DG Mare on 7 April 2017.

1 Investment priorities in the NSPA

This section outlines the areas of investments that the stakeholders in the NSPA wish to prioritise. Each paragraph aims to answer the questions *what (should be prioritised), why and how*.

1.1 Transport infrastructure – Connecting the Arctic region

The need to develop transport infrastructure is perhaps the most crucial matter in the European Arctic, and is also well recognised in the Joint Communication on the Integrated European Union Policy for the Arctic. The OECD study on the NSPA puts forward investments in infrastructure as the most important key enabler for the development of the regions in the European Arctic. Lack of transport infrastructure creates a bottleneck to cross-border co-operation and hinders the development of the region. Improved transport infrastructure within the Arctic region, and to other European regions (both east-west and north-south connections) would facilitate better access for Arctic goods (such as seafood, minerals, wood, food) and services to the EU internal market.

It would also facilitate the development of local industry: businesses cannot grow across the borders without sufficient road, rail, maritime and air connections. Those connections are also needed to enable people to meet more easily. This, in turn, would widen the local labour markets in the region and the common research areas between universities, reducing unemployment and helping companies to attract the required skills.

Proposed actions:

- TEN-T methodology in the context of the Arctic should be developed to comprise the [Joint Barents Transport Plan](#).
- Utilise the Northern Dimension Partnership on Transport and Logistics (NDPTL) as a platform to further identify common interests in the European Arctic.
- The railway network should be considerably developed.²
- The Scandinavian-Mediterranean and the North Sea-Baltic TEN-T core network corridors should be extended along the Bothnian extension³ to the north, to ensure timely completion of the TEN-T rail and road core network in the European Arctic.
- The Eastern Corridor (Savon rata, Karjalan rata and Saimaa Canal waterway), The Mid Nordic Corridor (Sundsvall-Trondheim) together with the E12 Corridor and the Midway Alignment Umeå-Vaasa and Arctic Corridor should be developed to supplement the extension of the Scan-Med and North Sea Baltic corridors.
- Increase flight connections within the Arctic region, both east-west and north-south: small airports in the region are enablers of lively communities and businesses, and their value for local businesses should be reflected in investment plans.
- Roads: upgrade and maintain roads to make them meet European highway standards.

² There is a strong support in the regions for the expansion and development of railway connections in the European Arctic. Among others, the following alternatives were mentioned in the consultation: From Rovaniemi to Kirkenes (and further to Murmansk); from Skibotn to Kolari; upgrading the Ofofbanen or Innlandsbanan; further develop Karelia Silk Road from North-Karelia to mid-China.

³ The Bothnian extension consists of North Bothnia Line, Iron Ore Line, including a connection to the Port of Narvik and New East Coast Line and mainline railway Helsinki-Tornio.

- Shipping could be considered as a green alternative to freight transport in areas of the Arctic where this is applicable.
- Develop the ports to facilitate export to the European and global markets.
- Invest in interoperability of different transport modes and their maintenance, allowing them to be operable through shifting weather conditions of all four seasons.
- Explore the potential of intelligent transport systems.

1.2 Digital infrastructure – The digital Arctic e-society

There are still regions in the NSPA that lack sufficient broadband connections. Focus on strategic systematic upscaling of e-society solutions is one of the main recommendations from the OECD, and here are several opportunities in this field if this problem is addressed properly. Good connectivity is a vital element in regional development, and digitalization is almost an imperative in numerous sectors. Improved broadband infrastructure would allow the regions to become leaders in digital economy, such as sustainable data industry. It would also enable better use of e-health technologies, distance learning and other types of service delivery, which are vital solutions in sparsely populated regions. Digital infrastructure is also increasingly important to traditional livelihoods, such as reindeer herding, to enable the use of modern technology. It would also facilitate distance-clustering in various sectors for smart specialisation. Finally, solutions developed and tested in the Arctic could be scaled up and brought to the European markets.

Proposed actions:

- Develop full coverage of high-speed internet, also in regions beyond tipping point of commercial actors.
- Build a telecommunications cable through Northeast Passage (see Lipponen, Svento 2016) to support cloud computing infrastructure.
- Focus efforts on research and development of digital solutions, both focusing on technical aspects as well as tackling societal challenges including business models in different sectors, such as health and education.

1.3 Health and well-being – Building attractive Arctic societies

Sparse population together with limited resources of small municipalities create societal challenges. Diverse recreational activities contribute to citizens' well-being, which in turn is an important factor impacting people's decision to live in the region. This also interlinks to tourism as an emerging industry with great potential, which is dependent on sustainable attractive societies and a lively culture.

Proposed actions:

- Facilitate exchange of health workers and competence in the region.
- Facilitate development, testing and use of e-health technologies.
- Promote healthy lifestyle among young people.
- Support associations, voluntary organisations and cultural events; in particular, culture and language of the Sami people.
- Utilise the Northern Dimension Partnership in Public Health and Social Well-being (NDPHS) as a platform to further identify common interests in the European Arctic.

1.4 Education and skills – The competent and inclusive Arctic

The NSPA regions experience a skills mismatch in their labour markets. While some areas experience a high rate of unemployment, others struggle to find suitable workforce with the skills needed. The regions also experience lack of young and educated employees. Also, the OECD has identified this challenge, and recommends that the NSPA work towards a common labour market.

Related to this comes the lack of sufficient research infrastructure, which is necessary to ensure high education, the right skills and knowledge development in the region.

Proposed actions:

- Create common standards in vocational education in the NSPA.
- Increase student and teacher mobility across borders.
- Support uptake of e-learning in schools.
- Facilitate co-operation of all relevant stakeholders: businesses, education institutes, labour market organisations etc.
- Support entrepreneurship among young people.
- Focus on integration of immigrants and the identification of their skills and competence.
- Build common branding of the NSPA region as an attractive region for skilled employees.

1.5 Innovation support – Arctic Testbed for green solutions

The research centers in the NSPA do have global excellence in areas connected to the specificities of the Arctic. However, the basis for regional innovation capacity depends on connecting the research to applied science towards the local community. SMEs in remote areas are often micro companies that need to build capacity for innovation and growth in close partnership with others. Research infrastructure and testbeds function as hubs for innovation where research organizations, the public sector such as health care, SMEs and Industry come together.

Test and demonstration in extreme conditions is of growing interest to address the Arctic and European challenges, among others, the climate issue and search and rescue. The NSPA regions are in the global lead with respect to climate efforts and green technology, also in the traditional raw material industry. To this come new emerging possibilities in e-technology solutions and forest-based bioeconomy and blue economy. The regions have research competence and actors in key industrial areas that also, through collaboration between the academia and surrounding society in the regions, can deliver unique test-beds/living labs for development of sustainable solutions and societies on even a global scale.

Proposed actions:

- Improve infrastructure for applied research by investing in research infrastructure/test beds/living labs in collaboration over the borders.
- Build strategic innovation platforms for SMEs – micro companies – with the public sector, industries and business support organizations as facilitators.
- Take advantage of the Arctic “in-house” knowledge in the European Arctic research institutions, as local and global drivers for development in areas such as cold climate technology and sustainable and green solutions.
- Support the emerging bioeconomy including forests and marine environment in its full value chain as a business driver for the European Arctic.

1.6 Key Industries – Arctic Smart Specialisation

Due to increased focus on environment and climate, both the private and public sector in the NSPA must find new, more sustainable sources of income. Therefore, entrepreneurial discovery should be supported, and knowledge and technology exchange between different business sectors across borders is essential. However, this can be a challenge in sparsely populated areas with long distances.

The OECD recommends that NSPA work together on a joint Smart Specialisation strategy, supported by the national governments, the EU and the Nordic Council of Ministers. Several respondents to this consultation expressed their interest in working on such a strategy, adjusted to the special conditions in the NSPA region⁴. There are some key industries common to the NSPA regions, and to make the most of these industries, the principles of smart specialisation could be applied. In general, stakeholders in the NSPA would like to see the EU funding to be directed to the following key sectors:

- Industries in the **bioeconomy and circular economy** framework, (building on forests, agri-food and marine resources) as the most prominent sectors in the NSPA.
- **Tourism**: Joint product development, improved packaging for clients, and better co-operation across borders.
- **ICT**: digitalization, including health, well-being and ageing, robotization and automatization.
- **Energy industry**: Mostly renewable energy sources (bioenergy, hydropower, wind power, tidal power, excess/waste heat), energy technology.
- **Mining, minerals and chemicals**: research and investment in the full value chain to make it more environmentally sustainable, including mine water management.
- **Service and supply industry including sub-tier suppliers** that supply goods and services to the key industries in the region.
- **Machine technology and industry**.
- **Search and rescue and emergency preparedness**, including commercial development, research and innovation within the field of earth observation.

⁴ The analysis and recommendations by the OECD lead to a conclusion that smart specialization traditionally can be driven by institutions and structures, funded by public funding. There are some regions in the NSPA with internationally competitive research centres, but most of the regions lack a university or any other formal research centre. In rural and low density economies, the innovation system is mainly driven by entrepreneurs. Smart specialization strategies in the NSPA must be tailored to this context, and this finding should be recognized by the EU.

2 EU funding programmes in the NSPA

This section explains how the NSPA regions experience the EU funding programmes relevant to the Arctic, and outlines suggestions for improvements.

2.1 Good results and benefits for the regions

The EU funding programmes are very important in the NSPA regions to facilitate cross-border co-operation and sustainable development of the local communities. There is a clear interest in increased participation in the programmes.

EU programmes have contributed to breaking existing structures, implementing new ideas and strengthening strategic co-operation between neighbouring regions. The EU funds have also enabled the development of businesses, improved transport infrastructure and decreased unemployment, allowing our regions to develop in ways that would not have been possible without EU support. The EU programmes contribute to developing new project-based job opportunities for competent people, thus making it possible for them to stay in the region.

Furthermore, the programmes have provided opportunities for networking and collaboration with top-level researchers and other stakeholders, including policy makers. The regions have been able to influence EU-level policies and bring them to practice on a regional level. Participation in projects has also allowed regions to make European-level comparisons that would not have been possible within the national funding programmes.

The current thematic priorities of the EU funding programmes continue to be relevant and cover practically all relevant fields of interregional co-operation. They might seem similar and overlapping, but it is important to note that the programmes have different investment priorities, address different actors and have different ways to address common challenges. However, better co-ordination between the programmes is needed, as suggested in Paragraph 2.2.

2.2 Challenges and how to solve them

The respondents emphasised the generally positive experiences and good results of the programmes, but also identified some challenges related to the EU funding programmes. Participation in the programmes seems sometimes too complicated compared to potential advantages and positive outcomes of the participation. Actors in the NSPA are small, and some EU programmes are too big for them to participate in. For example, SMEs in the NSPA are rather micro-enterprises than small and medium-sized compared to their counterparts elsewhere in Europe. There is also a lack of competence in project development.

One major challenge is that the EU funding programmes operating in the Arctic have different practices for submitting applications and reporting. Application procedures and reporting rules are also often too bureaucratic. Furthermore, there are different practices regarding the application of state aid rules to the regional development funding on the one hand, and to Horizon 2020 project funding on the other hand. This requires a lot of competence and knowledge on EU programmes that small regional administrations and other regional actors do not necessarily have. In addition, there are different practices in the three NSPA countries for interpreting EU rules and regulations and

allocating funding, which means that there is no level playing field for project development across the NSPA region.

When it comes to information about the programmes, some respondents felt that it is not easily available, or there is too much and too complex information, whereas others found the information available useful and sufficient. It was also pointed out that the “Financing of the Barents Cooperation – Report from the BEAC Ad Hoc Working Group of Financial Mechanism Study” is a very useful source of information regarding current EU programmes, and should be updated in the future.

Proposals for improvements

- *Role of the regions should be enhanced:* Place-based approach should be the guiding principle in planning of the programmes. This is essential if the programmes are to respond to regional and local challenges. The regions should continue to participate in the formulation of the programmes, and try to engage local stakeholders more in that process.
- *Better co-ordination:* One might consider establishing a co-ordination mechanism that would co-ordinate joint projects aiming to solve joint challenges. This should be located in the Arctic region. Another option could be thematic co-operation forums for different programmes. Joint information meetings between different programmes should be arranged, instead of individual information events. This would improve co-ordination and reduce the number of meetings. Also, the potential establishment of an EU Arctic Competence Centre was raised. Alternatively (or in addition), there should be a strong act of *simplification*, where one option could be to reduce the number of priorities and programmes. However, while improving the co-ordination of the programmes, the primary focus should continue to be on solving the challenges of each programme region.
- *Same rules for all EU funding programmes:* Eligible direct and indirect costs should be the same for all EU funding programmes in the Arctic. Rules on how to calculate costs and what, how and when to report should be the same. The way state aid rules are interpreted should be the same regardless of the type of programme and the participating country.
- *Less bureaucracy:* It should be taken into consideration that the regions where Arctic-relevant EU funding programmes operate are democratic, applying principles of good governance, and therefore numerous reporting obligations should be reduced. There should be more trust in the local accounting practices that have shown to work well in the NSPA region, based on historically good audit results.
- *Programmes should fund the whole product development cycle.* Some respondents pointed out that the projects operating on the lowest technology readiness levels do not get enough funding. It was also pointed out that the process of commercialisation is not eligible for funding.
- *Cross-sectoral approach should be enforced:* Multidisciplinary and cross-sectoral cooperation should be emphasised when evaluation criteria of the future EU programmes are designed. For example, a project related to tourism development should also consider issues related to infrastructure and geology.

- *Funding should be received already from the start of the projects:* The fact that in some cases project funding will be reimbursed only after the project has started is an obstacle for small stakeholders' participation. In addition, some seed money facilitating the project development phase should be allocated to small project participants, especially SMEs.
- *Co-ordination with other financing sources:* When it comes to better co-ordination of investments in the Arctic, it was pointed out that the Nordic Council of Ministers and North Atlantic Council complement the EU funding programmes. In order to improve co-ordination of investments in the Arctic region, the EU should focus on co-operation with existing initiatives to create an Arctic investment vehicle, such as the Arctic Investment Protocol of the World Economic Forum and the Arctic Economic Council. The EU should also create and test new mechanisms that enable investments.

3 Conclusions

The first part of this report has outlined investment priorities that are common to the 14 NSPA regions. These priorities should not be seen as competing, but mutually reinforcing each other. For example, investing in broadband would allow increased use of e-health technologies, facilitating innovation, employment and well-being in the region. Furthermore, investing in transport infrastructure would not only allow Arctic products to access the EU market, but also facilitate the expansion of local labour markets, and help businesses and research institutions to exchange and share resources. These actions would facilitate better integration between cities and rural areas in the NSPA, which is an essential growth factor for all stakeholders in the region.

The OECD study sends a clear message to the national governments and the EU to continue to ensure that the unique characteristics of the NSPA regions - a harsh climate, long distances from markets, and a small number of isolated settlements - are effectively incorporated into national and European-level policy settings for regional and rural development, and service delivery. As the Joint Communication points out, special EU funding should continue to facilitate sustainable development in the European Arctic. In line with this, the national allocation for regional development in Norway should be maintained.

EU funding programmes in the European Arctic have already significantly contributed to the development of the NSPA regions and facilitated co-operation across borders. There is a strong interest and demand in EU funding programmes in the regions also in the future. However, issues related to better co-ordination and simplification should be addressed in the next programming period.

The NSPA wishes to thank the European Commission for this opportunity to contribute to the process of identifying key EU investment priorities in the Arctic. We look forward to the next steps of the process and are committed to continuing the close dialogue with the Commission.

Annex 2: Participants to the consultation

The following stakeholders from the NSPA participated to the consultation process:

North-Sweden

- Norrbotten region
- Västerbotten region
- County Administrative Board of Norrbotten
- County Administrative Board of Västerbotten
- County Council of Västerbotten
- Luleå Technical University
- Umeå University
- The Swedish Agricultural University in Umeå
- Norrbotten made a stakeholder consultation for their Arctic Platform engaging:
 - All the Municipalities: Politicians, municipal directors and business support directors
 - Business sector: Chamber of Commerce, Federation of business owners, Junior achievement, Swedish Lapland Tourism, SSAB, Vattenfall and smaller companies
 - Research and Academia: RISE SICS North, Swedish Swerea Mefos, Technological student federation
 - Voluntary and cooperative sector: Saminourra (Sami), Red Cross, Save the children, Coompanion

Mid-Sweden

- Region Jämtland Härjedalen
- County Council of Västernorrland
- Mid Sweden University
- Interreg Sweden Norway secretariat
- Association of Municipalities Västernorrland

North Norway

- Troms County
- Municipality of Alta
- Nordnorsk reiseliv
- The Norwegian Barents Secretariat
- Origo Industry Park
- Barents Regional Youth Council
- Salten Regional Council

East- and North Finland

- Pohjois-Savo Region
- Kainuu Region
- City of Oulu
- City of Oulainen
- The Regional Council of North Karelia
- The University of East Finland
- The Karelia University of Applied Sciences
- Joensuu Science Park
- European Forest Institute
- The Regional Council of Pohjois-Savo
- Finpro Region
- The Regional Council of Kainuu
- Kainuun Etu Ltd
- Kajaani University of Applied Sciences
- Kainuu ELY Centre
- Kajaani University Consortium
- The City of Kajaani
- Cemis Ltd
- Kainuu Vocational College Region
- The Regional Council of Lapland Region
- The Council of Oulu Region
- The City of Oulu
- The City of Oulainen
- The University of Oulu
- Thule Institute
- Sodankylä Geophysical Observatory
- The Regional Council of Central Ostrobothnia
- The Regional Council of South Savo

NSPA speakers and commentators in the consultation meeting in Tromsø, January 2017

- Anne Husebekk, UiT - The Arctic University of Norway
- Juha Ala-Mursula, City of Oulu/ BusinessOulu
- Erica Mattsson, Swedish Lapland Visitors Board
- Gunnar Kvernenes, Innovation Norway Arctic
- Sven-Roald Nystø, Árran Lulesami Center
- Mari Stenberg, Norrbotten Region
- Kristiina Jokelainen, Regional Council of Lapland
- Jarle Aarbakke, Municipality of Tromsø
- Gunn-Britt Retter, Saami Council
- Willy Ørnebakk, Troms County Council
- Rune Arnøy, Port of Narvik

NSPA speakers and commentators in the consultation meeting in Kirkenes, February 2017

- Rune Rafaelsen, Municipality of Sør-Varanger
- Paula Mikkola, North Calotte Council
- Oddgeir Danielsen, Northern Dimension Partnership on Transport and Logistics
- Trond Hansen, Arctic Skills project
- Mona Mansour, North Sweden European Office
- Remi Strand, Finnmark County Council
- Young-Sook Lee, UiT – The Arctic University of Norway
- Felix Tschudi, Tschudi Group
- Harri Mäki-Reinikka, Ministry of Foreign Affairs, Finland

NSPA speakers and commentators in the consultation meeting in Skellefteå at EuropaForum North Sweden, February 2017

- Jens Nilsson, Member of European Parliament, previously Municipality of Östersund
- John Kostet, Region Norrbotten

Saami Council – 7 April 2017

EU Arctic Stakeholder Forum Sápmi Report

“We do not need much – but we need it even more”



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ATTACHMENTS

Attachment 1	Extraction from the EU document: “JOINT STAFF WORKING DOCUMENT Implementing EU External Policy on Indigenous Peoples “ (Brussels, 17.10.2016)
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1 Introduction

The Arctic Stakeholder Forum is set up as a temporary forum, until the end of 2017, bringing together EU institutions, Member States and regional and local authorities to identify key investment priorities and ways on how to better streamline EU funding programmes for the future. The Saami Council has taken on the task to prepare a report for the EU Arctic Stakeholder Forum on the Saami peoples' investment priorities. This document contains a wide range of investment needs. During the next steps of the process we will also carry out some prioritizing of the needs.

1.1 The Sápmi Report Process

The Saami Council report is based on a background paper prepared based on interviews with some Saami institutions and organisations. These were selected based on their mandate and tasks, and that their visions are expected to be on the Nordic Sápmi level. We reached out to the Saami Parliaments, education and research institutions, as well as some other competence institutions.

The background paper was presented at a consultation meeting in Tråante – Trondheim February 7. The invitation to the meeting was sent to several institutions and organisations. The meeting was open and announced on Saami Council's Facebook page that has 2300 followers. The meeting was attended by 26 participants, representing 20 different institutions and organisations. A representative from D.G Mare, European Commission, attended the meeting. The participants and the invitees were informed of the opportunity to submit written input until February 23.

The questions discussed at the consultation meeting, were:

- Do you see any additional investment needs for your culture or region, in addition to the ones identified in the background paper prepared by the Saami Council?
- What do you see as the main challenge holding back your institution to better benefit the current EU programmes?
- Do you see any challenges or restrains caused for your livelihood or culture by previous investments supported by the EU programmes, if so, what do you think should be done to avoid such challenges or restrains in the future?
- What in your opinion is important to take into consideration when planning to invest in Saami regions?

The final report is based on the background paper and the input from the consultation meeting.

2 Program Areas

The feedback from the Saami institutions focused more on some areas than others. It might be that the institutions we contacted were dominantly education/research and political institutions. We have tried to divide the identified investment needs into sections, but some of the needs are also crosscutting several sections.

2.1 Education and Research

Research and science builds societies. Saami people's knowledge has built Saami societies over millennia. This knowledge is transferred from generation to generation, it is rooted in place and activity and is often not documented in books or other media. By non-indigenous, it is considered non-academic and is therefore often not considered valid nor respected by the greater society in the same way as western science. Until recently, the documentation of Saami knowledge has mostly been conducted by non-Saami. The Saami people has, however, increasingly taken on the academic excavation themselves. To face the present challenges in society and culture there is an immense need to strengthen the field of education, research and science, in all fields. The Saami society need sustainable holistic science, science that build the societies, and should, where appropriate, be rooted in the Saami knowledge. It is important to increase the cooperation between the researchers and traditional knowledge holders, and to find ways and means to do this in a respectful manner.

In working with the knowledge foundation, there is a need to both document the cultural heritage, as well as to document the Saami knowledge connected to it. Through history many Saami artefacts are brought out of Sápmi and stored outside of Sápmi. The Saami museums are requesting to get these returned, but most of the museums do not have acceptable facilities to store the items in required conditions. Some heritage sites in Sápmi are vulnerable to climate change and are getting covered by the moving tree lines, due to longer growing seasons and change in the local climate. This threatens to cover sites important for the Saami both for culture and documentation of presence that might be basis for claiming rights.

To strengthen the education infrastructure, there is a need for satellite campuses with high speed internet connection to offer distance education to where the Saami live and work. Such facilities would serve many purposes in the communities. This infrastructure would ensure among other things more teachers, that is saami speaking for all subjects, as well as saami language teachers and teachers with competence in Saami culture.

Saami research institutions faces challenges with capacity to take on all the research the saami society and the global community express needs for. The Saami institutions often see larger institutions manage to get around and end up receiving support and conduct research on Saami themes/fields. Research that the Saami community rather would like to be conducted by Saami people themselves. On one hand, there is a need for small grants to start-up Saami research initiatives. On the other hand, there is also a need for Saami institutions to expand their networks to be stronger partners with institutions outside the Saami community.

Investment needs:

- strengthen Saami institutions through small grants for Saami research;
- support partnerships among Saami research/education institutions, develop a staffed network for better coordination between the Saami institutions;
- support partnerships between Saami institutions and other indigenous peoples' institutions/organisations;

- establish culture centres/thematic information centres that will share information about Saami culture to visitors; as well as schools;
- strengthen the capacity in Saami institutions to become better partners to institutions in the greater society;
- bring Saami museums up to standards that can safely store Saami artefacts waiting to be returned to Sápmi;
- a feasibility study of requirements for Saami society to establish a solid network of cross-border satellite campuses.
- establish a duodji academy (Saami handicrafts academy);

2.2 Business and enterprises

In the greater society, there are huge investments in academia that supports the knowledge foundation for development of livelihoods such as agriculture and fisheries. There is a need to connect the Saami livelihoods to academia, as well. The Saami academia need to contribute to build Saami societies, including its livelihoods such as reindeer herding, traditional fisheries, and other activities such as hunting and gathering.

At the same time the Saami culture face challenges in getting their products effectively out to the market, often due to a combination of businesses being small or micro sized and a market within Sápmi fragmented by national borders. While the borders are challenging for most products, the food products face additional challenges with restrictive regulations that hinder traditional practises in food production.

The market for Saami duodji (handicrafts) is mainly among the Saami people themselves for our daily use and the best arena for selling duodji is Saami festivals. The borders is a barrier for the producers due to toll and regulations and the producers face challenges in crossing borders within Sápmi with the products. This makes the market much smaller, than it potentially could be.

Saami enterprises are often micro-enterprises. Recently there has been focus on entrepreneurship and innovation within culture based enterprises as; design, art, music, literature, tourism etc. Small enterprises, with young entrepreneurs, should have appropriate facilities for advice and support to succeed.

Investment needs:

- feasibility study for the export of reindeer products;
- market structures such as fish reception and processing facilities, infrastructure for slaughtering facilities;
- incubator for saami enterprises;
- a Saami business council;
- aim for a toll-free area to strengthen Saami business opportunities across the borders where Saami live;
- authentic tourist industry, that do not misappropriate Saami culture;
- invest around Saami festivals;
- establish a Saami livelihood/business fund, to increase the risk capital for Saami enterprises.

2.3 Infrastructure

Compared to central Europe and capital regions of the Nordic countries, Sápmi is more densely populated. The communities are relative small and distances are long. The demography is vulnerable in the sense that young people are forced to either move far to seek higher education or remain in the traditional livelihood. The combination of the two should be made possible. The people that remain in traditional livelihoods should also be given the opportunity to receive a diploma based on their professions. Surely, youth should be encouraged to travel abroad to gain knowledge and experiences from other areas, if they so wish. With today's technology, a wide spectrum of opportunities could be provided, even for small communities. This will even out the disadvantages small communities have compared to the greater society, and it would equalize the distance and ease the activity across national borders in Sápmi.

Investment needs:

- ensure high speed internet connection to where the Saami people live their lives, aim for internet in every lávvo;
- community centres with studio opportunities to receive lectures form central institutions or to connect with other students;
- increase collective transportation in particular better bus and flight schedules.

2.4 Small investments

The Saami communities has already multiple institutions compared to many other indigenous cultures worldwide. There are institutions such as museums, education centres, language centres, culture centres, nature centres, media, health institutions and so on, but the institutions are often small with only a few employees and often with vulnerable and limited sources for funding, compared with the greater societies institutions. Due to restrictions from many funding sources, the capacity to apply for external funding and flexibility regarding own share for larger funding applications are limited. Many of these institutions are still considered large in Saami scale and are of utmost importance to build a modern knowledge based society with employment opportunities for people with higher education in these communities. Many larger funding opportunities calls for partnerships in the project applications. Very few Saami institutions seems to be solid enough to become strong partners together with similar institutions in the greater society, and the Saami institutions are the ones that often must adjust their needs to match up with a possible partner's agenda and the funding sources agenda. Even a small grant, that small institutions can handle or work in partnership with other small institutions, will have a great positive impact in the small Saami institutions. The needs might be small – but are much more needed and much can be accomplished with small money.

Investment needs:

- establish a small Arctic grants fund, like Nordic Council of Minister Arctic funding program and World Bank Small grants fund;
- small grants to be received at the beginning of the project, not after, to avoid challenges with implementing the project due to lack of liquidity;
- Support the Álgu Fund established by the Arctic Council Permanent Participant to strengthen the participation in the Arctic Council and the contributions to the Arctic Council activities.

2.5 Health

The Nordic countries hold a high level of health service for the public. The principle of equal treatment for all is strong. Although, the Saami population are still not receiving treatment with equal value as the public, as their cultural differences and different values are not recognised. This is especially important when it comes to psychological treatment and well-being.

One step in getting culturally appropriate health care in place is through the education system, both to recruit Saami to take health care education and to provide cultural and language training for non-Saami health professionals working in areas with Saami population.

The Saami people live scattered and the communities are relatively small. It cannot be expected that all kinds of health service are provided everywhere. New technology has a protentional to be useful while breaking down the distances and help high level specialist health service to be available more widely.

Investment needs:

- strengthen research on questions related to Saami health;
- training of healthcare people at northern universities about Saami culture, offer benefits for employees in Saami areas that hodl such knowledge;
- ensure the local health institutions have the capacity to train their personnel without relevant cultural background, to treat Saami patients;
- support development of technological solutions and infrastructure to facilitate training/education programs about Saami culture and language for nurses, doctors and others working in health care and psychiatry;
- support development of technological solutions and infrastructure so Saami specialist services can provide online treatment services, in particular Sámi Norwegian National Advisory Unit on Mental Health and Substance Use (SANKS) that holds unique expertise for which there is great need all over Sápmi;
- Strengthen existing Saami specialist health institutions, such as SANKS, to be able to provide services all over Sápmi;

2.6 Saami Languages

The Saami people live in four countries, and all national borders through the Saami peoples' region are drawn north-south/vertically. The Saami languages, and thus Saami communities' natural movements and connections are established east – west/horizontal. That means that every Saami language and dialect is traditionally used in two or three different countries. Small numbered languages are thus faced with additional challenges and made smaller by national borders. The Saami Parliaments have established one joint Saami languages centre, *Sámi giellagáldu*, to promote Saami languages. This is a language support structure which is in place but that has an unsecure funding situation.

The Saami languages are small in terms of number of speakers, but rich when it comes to knowledge about nature and Saami livelihoods like reindeer herding and fisheries, hunting and gathering. For Saami languages to be useful on all arenas, language users want to experience that the Saami languages develop the same technical services, such as correction and translation programs and speech synthesis, like any other language. For these developments big data collections are needed. It is also important for the *Sámi giellagáldu* to constantly work with new Saami terminology to keep pace with the societies needs and terminology development. Quite some work is already done within electronic correction programs and use of Saami fonts for different platforms. These platforms and technological

opportunities is developing rapidly and the Saami language technology development is struggling to keep up.

Film production serves several purposes. It is an important tool in language development and promotion and it is a mean for the Arctic Indigenous Peoples to tell their own stories. It is in particular important for Sami children and youth to see films with a content and language they can identify themselves with. A strong Saami film industry in the Nordic countries has an economic and cultural potential for growth. A Sami Film Fund for feature length and drama series productions will increase both Saami and international co-productions in the Saami areas. Studies have shown that state investments in the film industry pay off in large numbers.

Investment needs:

- ensure the continuation of *Sámi giellagáldu*;
- keep investing in technology opportunities for Saami languages;
- training programs to increase the number of Saami speakers;
- increase support for Saami media;
- a Saami Film Fund that contributes to increase Saami film production.

2.7 Protection and Emergency Preparedness

With climate change, there are more avalanches, more frequent extreme weather, unsafe ice on lakes and rivers, the latter also caused by hydro power plants and el stations. Increased tourism in the Arctic and in mountain areas in Sápmi has caused an increase in situations where tourists need to be rescued. In areas where national rescue service has shortage of knowledge and capacity, it is the Saami reindeer herders with local knowledge that are called in to assist. Even though this is not their job and their lives are put at risk, and their contribution is not complemented for, they step in to save lives. Better monitoring and better emergency solutions to increase safety for all, is needed.

Greater demand for resources and better access to previously inaccessible areas triggers more resource extraction in Sápmi. This leads to more traffic with off road vehicles in vulnerable nature leaving deep traces on the surface. There is little regulation and monitoring of this traffic. Surveillance is also needed to monitor illegal tourist traffic in the same areas.

Investment needs:

- enhance the warning and rescue technology in areas were Saami people live and work;
- establish tourist trails where visitors can move safely and where there are ensured reception facilities for emergency calls and phone lines;
- a system to monitor the increased off road traffic in Saami areas;
- educate the local rescue team in mountain rescues / storm rescues/ avalanche rescue;
- offer first aid training for people working in Arctic regions to be better assistants in emergencies.

2.8 Large Investments

Among indigeneous peoples the Saami people are quite well organised and quite some structures are in place in the Saami socitey. Many inittaitives suffers, however, with underinvestment in facilities. Among them are museum buildings to share our own history as well as satisfactory storage facilitites in

existing museums that would allow reception of Saami artifacts removed by early scientist and stored in museums around the world. A long known need is also a theater building to house the Saami National Theater “Beaivváš”, which has grown out of local community house stage since its establishment in 1981. There is also a mismatch in funding for crossborder Saami initiatives such as the Saami Film Fund and language initiatives such as Saami Giellagáldu.

Large (in Saami scale) investments needs:

- Saami Theater building;
- Samien Sitje museum building in south Saami area;
- Sámi Giellagáldu (cross border/all Saami language institution);
- Bååstede, returning of Saami artefacts to Sápmi project;
- to establish facilities for Sámi Norwegian National Advisory Unit on Mental Health and Substance Use – SANKS, around in Sápmi;
- Saami representation in Brussels

3 Obstacles to Access EU Funding

During the consultations, it was widely recognized that a Saami representation in the EU/Brussels is needed. Many reasons for this became clear during the Saami Council’s Arctic Stakeholder Forum process.

3.1 Complex EU Programs

The EU structure feels very complex and difficult to understand. It would be useful to know how and when EU can be of help for Saami institutions. A forum where the Saami institutions share the knowledge about the EU System would be useful to guide them through the process and enlighten them about the opportunities.

Some expressed frustration with the EU funding system, which they have some experience with, as it is getting more and more challenging to get through with applications. Many expressed that the application process is very resource demanding, and often the Saami institutions do not have the capacity to take it on with small staff and unsecure outcome. The reporting system is also very resource demanding, and often not included in the funding. Saami projects often face difficulties with getting the additional funding needed to accompany an EU project application. The small Saami institutions do not simply fit into the same conditions as are set for the large majority institutions. “In the application you either have to lie or let the opportunity pass”, one of the participants said.

Even institutions considered large in Saami /Arctic context, and that have capacity to establish internal support groups to work on EU applications, find the structure with EU Funding (Horizon 2020) to be far too complex and to resource demanding to undergo.

The Saami Parliaments also recognize this challenge. One of them said they have sent in a request to the national authorities and asked them to provide support for the Saami Parliament to access EU Funding programs.

A Saami representation in Brussels could facilitate a support forum for Saami Institutions to better access EU Funding programs.

3.2 Impact the Policy Development

Several participants pointed to EU policy development as a venue to ensure Saami interests. There are many different EU policies that might be of interest and importance for the Saami people. Some of them were brought up during the consultation process. These were issues related to develop policy to safeguard indigenous peoples’ intellectual property rights; to protect traditional Saami fjord fisheries; predators threatening the reindeer herds, and so on.

EU needs to be a responsible funder and be careful about where their funding ends up and what kind of investments are supported. A mechanism need to be in place to ensure that EU funded projects and programs do not disrespect indigenous peoples rights in any way. One way could be to ensure Saami representation in the funding program committees, that could help monitor how EU funded projects will impact indigenous peoples. In cases where EU funded programs have violated indigenous peoples rights, EU should have a mechnism to help those impacted to protect their right in a complaining system or in court. A process to outline such a mechnism for this is needed.

The various fields of policies need to be addressed already while it is under development, and to ensure early intervention in development or changes in policies. Saami presence in Brussels is strongly needed.

4 Protection of Saami Peoples Rights in EU Investments

In general, from a Saami perspective it is essential to ensure that EU investments in Saami regions are carried out with free, prior and informed consent by the Saami communities impacted. This is particularly important with large construction projects, extractive industries or tourism projects. The EU funding mechanisms should also cover the needs in Saami society and ensure the same access to funding. Cultural institutions are needed to share our culture.

We have noticed the discussion on building a railway from Northern Finland to the Arctic Ocean with Kirkenes as a potential end station. This will be a huge investment that will cause immense encroachment in land that is without much previously established infrastructure. Such a rail development will potentially have large impact on Saami culture and solid Environmental and Social Impact Assessments must be carried out well in advance of this project, including impact on saami culture and livelihoods.

Concerning Indigenous peoples rights, the internal EU policy and EU Arctic Policy should hold the same standard as the external policy when it comes to human rights and indigenous peoples' rights. This is outlined in the "JOINT STAFF WORKING DOCUMENT Implementing EU External Policy on Indigenous Peoples " (Brussels, 17.10.2016).

Big investments and infrastructures established in Sápmi, and that is benefitting the whole EU and the countries world wide should ensure that some percentage of the profit is left to the people living their lives in the area. There should be a mechanism in place to facilitate this. The benefits could be used as our own share in investments projects outlined in this paper.

ATTACHMENT 1

Extraction from the EU document: “JOINT STAFF WORKING DOCUMENT Implementing EU External Policy on Indigenous Peoples “ (Brussels, 17.10.2016).

These principles, to be applied in EU strategies and financing instruments including through mainstreaming, include the following:

- the indigenous peoples' right to their "self-development", including the right to object to projects, in particular in their traditional areas, and the right to obtain compensation where projects negatively affect their livelihoods;
- the full and effective participation of indigenous peoples at all stages of the project cycle (in development cooperation) and the importance of building the capacities of organisations representing indigenous peoples;
- the inclusion of the concerns of indigenous peoples into the political dialogues with partner countries.

Ways to improve the implementation of EU action for the benefit of Indigenous peoples: Enhanced opportunities for dialogue and consultation:

- Systematically include indigenous peoples issues, including implementation of the UNDRIP, in all political and human rights dialogues with countries and regional organisations where the issue is relevant, in particular in Africa and Asia. In this context, consultations with representatives of indigenous peoples would be crucial
- Continue engagement with partner countries and in multilateral fora to address threats to indigenous human rights defenders and to indigenous peoples' land and resources. This could include threats that arise in the context of efforts for environment, biodiversity and cultural heritage protection, and for climate change mitigation and adaptation as well as in development, trade and business activities⁵⁵.
- Explore the possibility of conducting regular High-Level EU-Indigenous Peoples dialogues, within existing resources, to inform and underpin EU external action policy and its implementation on matters affecting indigenous peoples worldwide. Such a dialogue could also serve the needs for the exchange of best practices for the implementation of e.g. the UN Guidelines on Business and Human Rights.

4. Ensure the participation of indigenous peoples' representative organisations in the Policy Forum on Development (PFD), the EU's multi-stakeholders' space for dialogue on development policies⁵⁶.

Mainstreaming UNDRIP principles in the EU's external actions

- Systematically include references to indigenous peoples in policy documents such as the Human Rights and Democracy Country Strategies and the Road Maps for EU engagement with civil society as well as in structured sector-specific dialogues with various stakeholders.
- Further promote awareness of indigenous peoples' rights when assessing impacts of a proposed trade action as provided for in the Guidelines on the analysis of human rights impacts in impact assessment for trade related policy initiatives⁵⁷, including in context of trade agreements. Regard for indigenous peoples' rights is included in the monitoring of the Generalised Scheme of Preferences Regulation (in particular the GSP+ scheme), and in in the FLEGT VPAs.
- Use the EU's rights-based approach to development (RBA) as the main vehicle to integrate the rights and issues of indigenous peoples in the EU's implementation of the 2030 Agenda, notably by ensuring their full participation and free and prior informed consent in a meaningful and systematic way in EU-funded programmes and projects. For example, regarding budget support, further integrate the UNDRIP standards based on full participation and free and prior informed consent of indigenous peoples into the structured rules to manage the specific risks of budget support at all stages of the process (from identification to implementation). Operationalising a meaningful participation of indigenous peoples would notably entail: a) improving the stakeholders analysis⁵⁸, b) enhancing the

sectoral policy dialogue, and c) including concerned indigenous peoples' own representative institutions in the monitoring process. Such an approach would be conducive for ensuring attention to the development priorities of indigenous peoples, including livelihood development and market access. ^[1]_[SEP]

- To avoid duplication of efforts and to increase the effectiveness and adequacy of development support for indigenous peoples, strengthen the coordination between experts from EU institutions and EU Member States in further developing mechanisms for consultation, coordination and implementation.
- As part of EU's support for 2030 Agenda, the Indigenous Navigator project remains relevant in order to generate consolidated data, making indigenous issues visible and measurable for all relevant sustainable development targets.
- Step up efforts to build the capacity of indigenous peoples' organisations, including their own decision-making institutions, to develop networks among themselves at national and international levels, including with "European" indigenous peoples, and to effectively participate and engage, through representatives chosen by themselves, in decision-making at local, national, regional and international levels on matters that affect their rights.
- Continue and expand EU support to National Human Rights Institutions (NHRIs) to effectively promote and protect the rights of indigenous peoples.
- Continue support for the ratification and implementation of ILO Convention 169 in partner countries.
- Continue active engagement with indigenous peoples and UN Member States to fulfil the WCIP Outcome document's recommendations to the UN. These include the Human Rights Council's review of the Expert Mechanism on the Rights of Indigenous Peoples; and the on-going deliberations at the General Assembly to enable the participation of indigenous peoples' representatives and institutions at the United Nations on issues affecting them.

14. Support the implementation of the decision in the UNFCCC COP21 (Paris Agreement) to establish a platform for sharing of best practices on climate change mitigation and adaptation between indigenous peoples and UNFCCC parties.

15. Prepare to showcase in partnership with indigenous peoples the EU policy on Indigenous Peoples, taking into account the EU and its Member States activities, as a contribution to the high level meeting of the UN General Assembly in 2017 in commemoration of the 10-year anniversary of the UN Declaration on the Rights of Indigenous Peoples.



Consultation on EU investment priorities in the Arctic Response from the City of Oulu Finland

The City of Oulu would like to present the attached memorandum to express our views on EU investment priorities in the Arctic. Oulu prioritise following areas:

Interconnected Arctic transport and infrastructure

- Oulu presents following projects to be included to the next review of the TEN-T Core Network and Corridors on EU level:
 - Bothnian extension
 - New core port Oulu – Raahe, deepening of the Port of Oulu
 - New core airport Oulu
 - New TEN-T core road connections to the Arctic
- A trans- Arctic data cable is a important European investment creating the shortest and the safest route between Europe and Asia, increasing also productivity of the Arctic economy.

Smart Sustainable Arctic

- Arctic university cities like Oulu, Rovaniemi, Luleå, and Tromsø together have great capacities to develop smart, sustainable, liveable Arctic cities and communities with greener, smarter solutions that would bring added value also for European competitiveness and growth.

Competent, Attractive Arctic

- Oulu has a strong ICT ecosystem. In 5G development led by Oulu University, Nokia and VTT we are the global leader. This is why **Oulu is well equipped to act as a pilot area for digitalisation in the Arctic and Europe.**
- Start-ups and SMEs need better national and European support and financial instruments for different stages of development to secure their innovation, growth and entering new markets.

Collaborative Arctic Europe- together we are stronger

- Arctic Europe collaboration between Arctic cities and urban regions in the North of Finland, Sweden and Norway aims to ensure synergies and pooling of existing resources in order to create added value to region as a whole and to have better joint outreach also internationaly.

CITY OF OULU 20.2.2017

Riikka Moilanen
Chair, City Board

Matti Pennanen
Mayor

Oulu – Capital of Northern Scandinavia

The Oulu Region with 250 000 people is the fastest growing economic region in Scandinavia. City of Oulu with 200 000 people and one of the youngest population in Europe, is the largest city in the European High North and 5th largest city in Finland. Oulu has a versatile business structure in the fields of basic industry, chemical industry, wood refining and metal industry.

Internationally, Oulu is known especially for its innovative potential, ICT competence and high-tech companies. Oulu has two universities, there are nearly 30,000 students in the city, and a third of the inhabitants have a university degree.

Our goal is to emphasise Oulu's role as a major actor and the largest city in the European High North. Oulu is active in taking initiatives in the international networks focusing on the Arctic as this area offers exceptional potential for sustainable economic growth for whole of the Europe.

Investment priorities

City of Oulu agrees with preliminary findings of the NSPA and OECD study concerning the Arctic investment priorities. However, City of Oulu would like to elaborate further and emphasize following investment priorities with potential added-value for the entire Arctic and Europe:

1) Interconnected Arctic

Future TEN-T Core Network: High accessibility, cross-border infrastructure and data connectivity is vital to the peripherally located Arctic cities and communities. For Europe to utilize the growth potential of the Arctic Europe, the link to the TEN-T core network corridors should be planned now in co-operation with Norway, Finland and Sweden as a long term project covering 15-30 years with coherent and comprehensive financial arrangements. Also the possibility to establish access to the Arctic Ocean should be investigated.

The region needs not only North-South but better East –West connections with all transport modes. Functional flight connections play an important role in the integration of people and economic life in the area as well as creating growth and jobs.

In terms of the extension of the TEN-T core network, it is vital for Arctic development that the following projects are presented and approved at the next review of the TEN-T Core Network and Corridor on EU level to the European High North:

- Bothnian extension
- New core port Oulu – Raahe, deepening of the Port of Oulu route is the most important investment in the future for industry
- New core airport Oulu - The strategic aim of Oulu include defining Oulu Airport as an international transit airport
- New TEN-T core road connections to the Arctic

Arctic connectivity: A trans- Arctic data cable is a crucially important European investment creating the shortest, and also the safest route between Europe and Asia. Increased connectivity at the Arctic region will accordingly increase productivity in the Arctic region economy and enable further digitalization of the communities and services, especially in the north most part of Arctic region.

The cities within the shoreline of Arctic Ocean would greatly benefit of the increased connectivity. Not only the data centres and IT companies, but also global oil & gas companies, mining industry and other industries would benefit from the increased communications and access to global cloud services. Furthermore the increased connectivity within the Arctic region will enable the sparsely populated areas of the region to invest into smart city development, attracting even more growth and investments into areas.

A study by Chalmers University of Technology in 2011 (Ericsson, Arthur D. Little) showed that

- 10% increase in broadband penetration raises per-capita GDP growth by 0.9-1,5 percentage points
- 10% increase in broadband penetration is associated with 3.6% increase in efficiency.

In addition to the tangible benefits above, the increased communication will foster co-operation between the arctic cities, overall improving the quality of life. The regional operators are already in talks about co-operation for building better connectivity and connections to the future Arctic Connect.

2) Smart Sustainable Arctic

Urbanization is a trend in the Arctic too. Oulu together with other major cities in the European Arctic provides an intense, innovative and productive ecosystem in which RDI- actors, entrepreneurs and businesses thrive, delivering growth and jobs for Arctic inhabitants.

Without sustainable and liveable cities and communities where individuals and families are happy to live, Northern Europe and the Arctic area will not deliver potential added value for the Europe as a whole. The realisation of smart, sustainable society development in Arctic cities and communities require holistic and integrated approach to economic, social, environmental and spatial planning as well as innovation in service delivery, benefiting from digitalisation. Also more attention should be paid to how the circular economy could provide a development model to achieve more sustainable production and consumption also in the Arctic.

Especially Arctic university cities like Oulu, Rovaniemi, Luleå and Tromsø together have great capacities to develop greener, smarter solutions that would not benefit only the European Arctic itself but would also bring added value for European competitiveness and growth.

In the field of smart city development, City of Oulu is investing in integrated urban planning, sustainable, smart built infrastructure and digitalisation of public services, especially in the fields of e-health and education. Oulu is committed to the Covenant of Mayors for Climate and Energy.

3) Competent, Attractive Arctic

Smart specialisation: Oulu implements smart specialisation through Oulu Innovation Alliance (OIA), which is an interdependent partner network between education, research, business and the public sector committed to a joint strategic agreement. A joint target is to increase attractiveness and competitiveness of the region by creating thriving and mutually supportive business ecosystems relying on high knowledge base and a new generation of technology innovators. According to present agreement renewed in 2016, OIA is based on five ecosystems:

- 1) Industry 2026: High added value bio and circular economy, metal and machinery manufacture industries, energy industry and resource efficiency
- 2) OuluHealth: Individualized health, effective services and products, smart hospital
- 3) Northern Attractive City: Integrated planning, novel urban services and tourism
- 4) ICT and digitalization: 5G, big data and industrial internet to support other ecosystems
- 5) Agile commercialization: radical upgrade of sales competence

Start-ups, business growth and entering new markets: Oulu region is an internationally recognized center of technology and expertise. Oulu, through Oulu innovation Alliance, is constantly working to build and play the innovation ecosystem to generate, develop and deliver a technology-based or business-model innovation. During the last years of renaissance, Oulu has managed to attract exceptionally large amount of investments. In 2014-15, 70% of all foreign ICT R&D investments in Finland were made to Oulu. Oulu inspires new business. During the last 3 years, more than 500 startup companies have started operations here employing more than 1800 people. Also the venture capitalists keep seizing the opportunities by investing 45-50 million euros every year to provide favorable grounds for innovations to flourish.

To ensure that businesses, especially start-ups have what they need to get established, grow and stay in the Arctic, following issues need to be addressed:

- 1) Better financial instruments for different stages of development of SME's. Innovative start-ups face several barriers for accessing finance for innovation and growth.
- 2) Better support for SMEs expanding into international markets (international product commercialization, distribution channels, partners)
- 3) Investments for logistic and infrastructure supporting international business development
- 4) Investing in high quality of local education and research institutions and infrastructure

OuluHealth: In the field of health, for last five years Oulu has invested in OuluHealth, which is advanced public- private ecosystem of health sector stakeholders. As a result so far there is significant growth of local businesses in terms of new jobs, turnover and

export turnover. OuluHealth has a national leadership in the digitalisation of social and health care services. Additionally Oulu has been chosen as a 3 star reference site for European Innovation Partnership on Active and Healthy Ageing, coordinated by the EU Commission. There are number of international partnerships created internationally to boost scaling-up. There is novel, integrated innovation platform for companies. However, continuing investments and secured basic funding would be needed to secure and to scale-up the ecosystem operations.

ICT and digitalisation: Over the coming years, ICT and digitalisation is expected to be the single most significant employer, creator of economic value and source of export revenue in the Oulu region. Particularly in the area of telecommunications, there is high-profile international know-how, research as well as education in local companies and RDI organisations. The areas of strength include 5G development, printed intelligence, data security, Big Data, IoT and software development. For example, Oulu has a growing FinTech industry, with two major banks, OP and Nordea, having established their development centres in Oulu. The ecosystem's goal is to generate 100 new jobs in the industry by 2018. The City of Oulu is coordinating together with Estonia and the City of Sofia EU's Urban Agenda for Digital Transformation.

Northern Attractive City and Sustainable Tourism: Connection of Arctic urban culture, cultural heritage, arctic food products and technical visit and school camps to sustainable tourism based on wild-life and nature experiences stands out as an opportunity not sufficiently explored and developed in the European Arctic. Oulu has yet untapped potential in transforming a high-tech business, IT and educational city near to nature-based attractions to a dynamic city for leisure travellers, especially in Asian market. Arctic tourism development in Oulu and in the Arctic as a whole requires investments in accessibility, infrastructure, digitalisation, product development, international marketing and entering new markets. Sustainable tourism development requires also the development of travel chains with the region, cross-border and internationally, linking the various sites as well as different means of transport and bringing in new service elements.

4) Collaborative Arctic

Oulu welcomes the finding made by both EU Commission as well as OECD study that addressing the shared challenges and opportunities facing the European Arctic will require an enhanced approach to cross-border collaboration focusing on key enabling factors of growth and productivity. A unique feature of the region is already the broad range of cross-border networks and partnerships in place.

Oulu has been actively promoting the enhanced collaboration of the Arctic cities and urban regions in Northern Finland, Sweden and Norway. This Arctic Europe collaboration aims to ensure synergies and pooling of existing resources in order to create added value for all stakeholders, to region as a whole and to have better joint outreach also internationally.

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