

The view in the European Forum Northern Sweden regions on EU Arctic investments

1. Introduction

1.1 EU Arctic Stakeholder Forum consultation

This document builds on the responses to a consultation during January to March 2017 that the Northern Sparsely Populated Areas (NSPA) network organised in its 14 member regions as a part of the European Commission's (EC) initiative on the Arctic Stakeholder Forum. 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*.

For the Swedish regions in the NSPA, the regional EU offices of North Sweden for Norrbotten and Västerbotten and Mid Sweden for Jämtland Härjedalen and Västernorrland, gathered the stakeholder responses to be incorporated in the common NSPA report sent to the European commission as a part of the stakeholder consultation process on the Arctic. This report is in turn a compilation of the views of the four Swedish regions out of the responses and summaries made by the Swedish coordinators at the regional EU offices for the NSPA report.

The aim is to give an overview on the Swedish Arctic regions' perspectives on EU future investment priorities in the northernmost EU, to be elaborated in the Swedish national process as the EU consultation process also involves the government level, and also for the network of Europaforum Norra Sverige (EFNS), on which to build common positions. As the consultation is aimed towards the EC, the consultation and the responses have been mainly in English, as is this compilation.

1.2 European Forum Northern Sweden in the EU and Arctic

EFNS (*European Forum Northern Sweden*) is a network consisting of the four Swedish NSPA regions, aiming to coordinate and promote the four northernmost Swedish regions in the EU and also act on national level in EU affairs of relevance for the regions. The network arranges annual forums and adopts positions on EU policies. Between the forums, appointed politicians and officials from the four regions engage in working groups to follow EU affairs and prepare for the forums and the positions.

The reason behind this cooperation is that the northernmost Swedish regions, as is the case for the whole NSPA, share some common challenges, such as remoteness, climate, long distances and sparse population over vast areas, that is also acknowledged by the EU in for example the regional development fund, ERDF, delivering an extra allocation to the regions in the EFNS. The extra allocation stands for this programming period for more than half of the overall regional funds to the regions and is of course an important part of the EU policies also in the future Arctic context, as that in turn delivers, for the regions and the whole of Sweden, crucial financing for strategic innovation

capacity building. The northernmost Swedish regions are today, very much due to the EU support, in the top league in the EU regional innovation indexes comparison. The territorial cooperation, Interreg, component of these funds, also supports the platform for regional cooperation over the borders in the larger region, which would not otherwise be possible.

The EU, as a significant beneficiary of the forests, marine resources, minerals, energy supplies and high quality research of the NSPA, needs what the northernmost regions can deliver to the markets, but to this also sustainable societies that can be forerunners for the climate efforts, the Arctic being vulnerable and the most affected area for the climate changes, and furthermore bring the local and regional collaboration, being a big part of the northernmost Baltic Sea region, that is a corner stone for keeping the area as a low-tension area. This is in the Swedish national interest and a core part of the EU Arctic policy.

1.3 OECD findings and recommendations to be taken into account

During 2015—2016, the OECD conducted a Territorial Review on the Northern Sparsely Populated Areas, published in March 2017, that captures many observations and recommendations that are relevant for the regional development also in the Arctic context:

<http://www.oecd.org/publications/oecd-territorial-reviews-the-northern-sparsely-populated-areas-9789264268234-en.htm>.

The OECD 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 OECD states that despite challenges the northernmost regions do contribute to the national Swedish economy and that of Europe as a whole, with great potential to deliver even more if given the right support. Given many similarities, there are also great differences in the European Arctic, between the regions and even within the regions, as for example areas of the Swedish interior may be very sparsely populated to a large content, and becoming further depopulated, while the coast in a Swedish context hosts relatively big and also growing cities. The European Arctic is in this sense also the populated and advanced Arctic.

This implies the need for adapted regional strategies and support in close dialogue between the regional, national and also EU levels concerning the final formulation of investment priorities and instruments to support this, with the OECD report delivering valuable knowledge in this respect. The following document delivers in this context an overall input to that dialogue.

As is the case for the NSPA report, this report for the EFNS regions, in the first part outlines (Chapter 3) the investment priorities and in a second part (Chapter 4) discusses more concretely how EU funding programmes should be developed to better serve the region.

2. Stakeholder engagement

This report builds on the responses during the stakeholder consultation process that the NSPA offices in Brussels organised 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. From the Swedish regions, several stakeholders sent in responses (see below).

During the consultation, the NSPA network also arranged two consultation meetings in Norway with Swedish representatives, one in Tromsø on 23 January and another in Kirkenes on 8 February, and the network of EFNS for the Swedish regions hosted one meeting in Skellefteå on 23 February 2017. There were also several smaller meetings in the regions with stakeholders, so as to provide opportunities to comment on the draft NSPA reports made during the process.

Swedish stakeholders engaged in the Arctic Stakeholder Consultation process:

- Region Norrbotten*
- Region Västerbotten*
- Region Jämtland Härjedalen*
- County Council of Västernorrland*
- County Administrative Board of Norrbotten
- County Administrative Board of Västerbotten
- County Council of Västerbotten
- Association of Municipalities Västernorrland
- Luleå Technical University
- Umeå University
- Mid Sweden University
- The Swedish Agricultural University in Umeå
- Interreg Sweden Norway secretariat

*/ The regional development plans, made in dialogue with the regional stakeholders, are the main basis for the inputs from the regions. Norrbotten region furthermore held a specific stakeholder consultation for their political Arctic Platform, engaging:

- *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*: Luleå technical University, RISE SICS North, Swedish Swerea Mefos, Technological student federation.
- *Voluntary and cooperative sector*: Saminourra (Sami), Red Cross, Save the children, Coompanion.

EFNS speakers in the consultation meetings in Tromsø, Kirkenes and Skellefteå*

- Erica Mattsson, Swedish Lapland Visitors Board
- Maria Stenberg, Region Norrbotten
- Mona Mansour, North Sweden European Office
- Jens Nilsson, Member of European Parliament, previously Municipality of Östersund
- John Kostet, Region Norrbotten

*/ At the different consultation meetings, also other regional representatives made comments from the floor, that was noted for the final compilations.

3. Investment priorities

3.1 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 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. It would overall widen the home market within the greater region with many similar business needs. For many smaller communities in the scattered settlements in the Arctic region, not least air connections are the life-line to the world and potentials for businesses and tourism, delivering economic gains to the whole society.

Research and innovation is an essential component to drive the development of transport infrastructure towards sustainable transport systems including operation and maintenance in arctic and sub-arctic conditions with changing climate over the year and need to find more effective ways of transportation and inter-operability over wide distances.

Priority area – Transport infrastructure connectivity:

- The Scandinavian-Mediterranean core network corridor should be extended along the Bothnian extension to the north, to ensure timely completion of the TEN-T rail and road core network in the European Arctic further interlinked to expanding Arctic and Asian connections, integrating the North Bothnia Line, Iron Ore Line and New East Coast Line.
- The railway network needs to be developed in the European Arctic; the Mid Nordic Corridor (Sundsvall-Trondheim) together with the E12 Corridor and the Midway Alignment Umeå-Vaasa to supplement the extension of the Scan-Med corridor and also an upgrading of the Inlandsbanan.
- TEN-T methodology in the context of the Arctic should overall be developed to comprise the Joint Barents Transport Plan.
- Increase flight connections and upgrade of airports to international standards within the Arctic region, both east-west and north-south, as small airports in the region are enablers of lively communities and businesses, their value for local businesses to be reflected in investment plans.
- Roads need also overall to be upgraded and maintained to meet European highway standards as crucial for the Arctic businesses and goods flows from the region to the EU.
- Efficient transport flows in the northern regions need more investments in interoperability of different transport modes and their maintenance, allowing them to be operable through shifting weather conditions, also exploring the potential of intelligent transport systems to meet the specific needs in remote areas with shifting climate around the year.
- Utilise the Northern Dimension Partnership on Transport and Logistics (NDPTL) as a platform to further identify common infrastructure interests in the European Arctic.

3.2 Digital infrastructure – The digital Arctic-society

The EFNS regions show top-of-the line examples on broadband connectivity and e-solutions. The Arctic conditions also foster and demand needs for new e-solutions to cope with service delivery and business growth, also delivering potential new business opportunities. Focus on strategic systematic upscaling of e-society solutions is one of the main recommendations from the OECD, and there are several opportunities in this field if this problem is addressed properly. However, there are still substantial parts of the regions lacking sufficient broadband connections.

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 and build advanced knowledge on automated processes and remote control as the regional process industry is a global leader in this field, possible to take into other sectors.

Solutions developed and tested in the Arctic could be scaled up and brought to the European markets. Focused efforts on research and development on solutions for digitization, both technical solutions as well as tackling societal challenges, including health and education, are key enablers for the future growth of the EFNS regions. The unique conditions for the sparsely populated region can be used to develop and test solutions for digitization that can then be implemented on a global scale, not least in other parts of the Arctic. The Sundsvall airport for example today is testing to remotely run the controls of the Örnsköldsvik airport.

Priority area – Digital ICT coverage:

- Develop full coverage of high-speed internet in all parts of the regions, beyond tipping point of commercial actors.
- Facilitate research development, testing and use of e-health and e-service technologies for the future health and service delivery to the citizens, also giving business opportunities scaled up in other parts of the Arctic and world.
- Overall strategic support for developing new e-solutions for an e-society over the whole EFNS and Arctic region, using the broadband expansion as a platform for a global test-bed for e-solutions.
- Build a telecommunications cable through Northeast Passage to shorten the time-lag for a connected Arctic, as a global climate smart hub for cloud computing infrastructure in the Nordics.
- 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, education and delivery of public services.
- Support knowledge transfer of automation and robotics from the base and process industry to other/new sectors and businesses, potentially delivering new business models and research in the field.

3.3 Sustainable societies and well-being – Building an attractive outward looking Arctic region

Sparse population, together with limited resources of small municipalities, create societal challenges. Even if in general there are well-functioning and well-organised communities in the Swedish European Arctic, the administrations meet increasing strains, being small administrations supporting

vast areas with an ageing population. Not least is this an issue for the future concerning service delivery to all citizens in the regions. Long-term development needs to aim at establishing sustainable and attractive societies to live and work in, giving job opportunities to both men and women and service delivery in line with other parts of Sweden and the EU overall for the Swedish northernmost regions, including also the Sami perspectives.

This implies some compensatory actions on national level and also in the EU, in line with the arguments in the OECD-study on the NSPA. The four northernmost regions make up to 9% of the Swedish population, delivering about the same part of the national GDP and to that substantial parts of the Swedish export values, also in turn creating jobs and connected services and businesses in other parts of Sweden, not least the capital region. The national and EU investments, taking in the extra costs for distances, sparsity, climate and demography should overall reflect this. Relatively small redistributions to compensate for the geography and demography deliver revenue in growth potentials for the regions to the benefit of all Sweden and the EU.

It is in the interest of the EU and the whole of Europe to invest in the Arctic region to create attractive societies to keep it as populated areas in collaboration over all borders as a part of the Arctic objectives set out in the EU policy. This must also include the local and regional authorities, that for sparsely populated areas and border regions play an essential role as facilitators of actions.

Service delivery reaching all parts of the regions and investments in sustainable societies with also cultural and recreational assets, 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 potentials that, beside the nature and an Arctic experience to offer, is dependent on sustainable attractive societies and a lively culture including the traditional Sami livelihood and local interesting experiences to attract visitors. There is a need for product development, improved packaging, and cooperation for this, also being a concrete recommendation from the OECD report on the NSPA towards especially the Swedish regions and national level, to put the tourism strategies in one common Arctic context.

Priority area – Attractive societies:

- Allocate in cooperation with the regional authorities adapted support to the Arctic region within the EU instruments in line with the existing extra allocation in the ERDF and state aid exceptions for the NSPA, due to the remote geography and sparsity.
- Support tourism development and packages via common strategies 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.
- Promote healthy and active lifestyle among young people and to promote healthy ageing.
- 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.

3.4 Education and skills – The competent and inclusive Arctic

The 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. In some cases even areas with high unemployment may have lack of work force with the right competencies, including many small business owners retiring without finding new young people to take over the

business or able to start new businesses to compensate for the loss of old ones. The regions experience overall lack of young and educated employees and many, especially in the smaller communities, lack academic tradition to build on.

Related to this comes the lack of sufficient education and research infrastructure reaching all parts of the regions, which is necessary to ensure the right skills and knowledge development in the region, as the competence needs to increase to keep up with the global competition and in also public service as the whole health sector.

The OECD report on the NSPA argues for efforts to create a more common labour market with common competence platforms to make critical mass for vocational training and a larger work market for employers and employees, also reaching the most sparsely populated areas using for example e-learning technology. This is furthermore of importance to make immigrants coming to the region to both want to and be able to stay and integrate, as an asset in terms of turning the demographic challenge around in the northernmost Europe.

Overall there is the need to make more people to be able to see the potentials in moving to the northernmost regions as attractive societies to live and work in.

Priority area – Labour competence and skills:

- Create common standards in vocational education for borderless competence platforms in the northernmost regions and overall increase student and teacher mobility within the regions and over the regional borders.
- Support better more systematic uptake of e-learning in schools and connected education centers in also remote areas to reach young people with little academic tradition.
- Facilitate co-operation of all relevant stakeholders – businesses, education institutes, labour market organisations – for needed competence efforts including improvement of learning and training using digital support.
- Support entrepreneurship and business skills among young people in all parts of the regions connected to educational and business centres.
- Focus on integration of immigrants and the identification of their skills and competence as a part of filling real regional competence needs.
- Build common branding of the whole northernmost Europe as an attractive region for skilled workers.

3.5 Research and Innovation – The innovative Arctic Testbed for Europe

The research centres in the NSPA do have global excellence in areas connected to the specificities of the Arctic, also receiving for example EU research financing from the Horizon 2020 programme. However, the regional funds and like are the basis that builds innovation capacity in the region with its comparatively small academies in scattered settlements and to a high extent applied research in close collaboration with the local regional actors. 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.

The OECD report on the NSPA regions highlights the importance the establishment of universities and higher education in the regions has had for the local economy. According to the OECD this needs to reach out even more, not least to SMEs in also the more remote areas. The sharing of research

infrastructure and testbeds between the Arctic research centres in areas of competitive advantages can build needed regional growth capacity, and build critical mass to also host international research platforms as a next step. There is for example also a tremendous potential to build a European testbed for space industry, with northern Sweden hosting Europe's only such mainland facilities.

Overall, the EU Arctic "in-house" competence should take stock to establish an Arctic research and educational centre that can attract global competence in the global frontline within, for example, the Barents context, built on several nodes with different competencies in areas such as; land use and natural resources, culture and identity, competition and conflict, health development and the effects of environmental and climate changes on also the societies, life science, indigenous peoples livelihood, Arctic microorganisms contribution to medicine and of course natural resource use, raw material refining, energy system, biomass development and overall cold climate technology and so on, all established world leading research areas at the universities in the EFNS regions.

Test and demonstration in extreme conditions is of growing interest to address the Arctic and European challenges, among others, the climate issue and sustainable raw material processing and overall sustainable societies in extreme environments, taking in also the indigenous people's perspectives. 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. The EFNS and Arctic regions, have the ability to host research and innovation where the unique Arctic conditions can benefit European competitiveness.

Priority area – Regional research and innovation system:

- Build in the sparsely populated areas of the north strategic innovation platforms for SMEs – micro companies – with the public sector, industries and business support organisations as facilitators.
- For this, improve infrastructure for applied research by investing in research infrastructure/test beds/living labs in collaboration between the universities in the European Arctic.
- 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 life science, cold climate technology and sustainable and green solutions for example, including earth observation and indigenous peoples' knowledge, as also competitive advantages for the whole of the EU.

3.6 Bioeconomy and Circular economy – The green environmentally driven Arctic

The northernmost EU is in the global lead with respect to climate efforts and green technology, also in the traditional raw material industry, especially compared to other Arctic areas. To this come new emerging possibilities in e-technology solutions and forest-based bioeconomy.

Overall, the changing climate in the Arctic and the last true wilderness of Europe can act as a driver for the regions to find and act as a test-bed and forerunner for more climate smart and environmentally responsible solutions, also possible to make business of to the benefit of all of Europe, the Arctic and the world. The mostly renewable energy sources (bioenergy, hydropower, wind power, tidal power, excess/waste heat) are concrete examples also put forward by the OECD as sectors for the NSPA to have potentials in, if not already being in the lead.

To this comes unique knowledge in building energy effective in cold climate and overall striving to build sustainable smart cities, as the cities in the Arctic region due to their size and remoteness in many cases are more easily able to do things at full scale compared to larger urban settlements. The most extreme example of this is the moving of the City of Kiruna, being a true test-bed for all of

Europe, but this is also the case for many other cities, already acknowledged by the EU, for example Umeå being a Lighthouse City in the European Innovation Partnership “Smart Cities and Communities”.

Research and entrepreneurial discovery should in this respect be supported, and knowledge and technology exchange between different business sectors across borders is essential for increased investments in renewable, recycling and bio-economy efforts in the European Arctic, to the benefit of the countries and the EU in the future work on the Paris 2030 goals.

Priority area – Green solutions:

- 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.
- Build platforms for smart cities in also remote less urban areas as drivers for sustainable solutions possible to scale up also in bigger cities and urban areas.
- Take stock of the regional energy industry, being mostly renewable energy sources (bioenergy, hydropower, wind power, tidal power, excess/waste heat) to develop further future climate smart energy technology in extreme climate.
- Establish common collaborative research infrastructure in those areas to build capacity for regional innovation and global business opportunities and research excellence.

3.7 Global raw material assets – Arctic smart specialisation to deliver also local long-term values

The OECD highlights the concept of smart specialisation as an important regional development tool, especially for less densely populated economies. The basis for such a strategy is, from the assets the regions possess, to find the niches that can deliver true comparative advantages to take steps up in the value chain to deliver more revenue to the regions rather than exporting bulk raw material, that does not deliver re-investments outside the industry as such to the society around. To some extent it is an issue of building capacity for an innovation system that can cross-fertilize the existing strong clusters to deliver new businesses and in niches of added value, using the assets at hand and turning challenges into opportunities, such as the car testing industry cluster using the cold climate and geography.

The OECD recommends also 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, based on regional strategies as each region needs to find their unique mix of competitive assets and potentials, besides common priorities possible for the whole European Arctic. In general, stakeholders in the EFNS and NSPA would like to see the EU funding to be directed to key sectors to make new and small SMEs establish and grow. Such relevant sectors are being mentioned in the investment priority areas proposed above by the EFNS regions. To this comes the traditional economic base on which to build on.

The innovation system in less dense economies is often driven by entrepreneurs according to the OECD. It is often micro companies that find their niche. Even so, this is to a high extent offset by the big companies in the traditional natural resource branches, including the tourism sector and experience industry that for the Arctic regions is very much based on what the nature together with the close-to-nature cultures, especially the Sami culture and the food traditions, provides. To this

comes more than in other regions the public institutions, not least the health care sector, being a substantial actor in the local community in the northern remote areas.

It is the cross-fertilization and creating critical mass for innovation over the sectors and clusters that can be said to be the smart innovation system in such regions as the EFNS, taking the starting point in the base industry of the regions to step up in value chain and also into the service and creative sectors. This needs to be fostered by the regional development strategy planning with adapted support and instruments from the national level and the EU. This is needed not least to compensate for the rationalising of the traditional industry, leading to fewer employees able to produce more; and furthermore the revenue from the traditional industries is not re-invested in the local societies as it goes to owners outside the regions (mostly the state or global actors), however delivering products, knowledge, technologies and competence to be used for other local niche companies to establish. The challenge is to find those niches and make the companies able to or even want to grow.

Priority area – Smart regional specialisation:

- Support for research and investment in offsets from the natural resource based industry, mining, minerals and forestry, to bring higher value niche product revenues to the regions.
- Service and supply industry including machine technology and sub-tier suppliers that supply goods and services to the key industries in the region can deliver growth potentials for such global niche products.
- Cross-fertilising efforts to bring the existing knowledge and assets in the regions into new sectors and branches, such as the creative and ICT industry and health sector, for more sustainable and attractive societies.
- Expanded support for establishment of new/growing companies using the challenges of climate, geography, remoteness and sparse population together with clean energy, as assets for global businesses, such as cold climate testing, space industry, cooling needs for energy intense industries and more.

4. EU funding programmes in the northernmost Europe

4.1 Good results and benefits for the regions

The EU funding programmes are very important in the EFNS and overall 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 the regions to develop in ways that would not otherwise have been possible. 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. 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.

4.2 Obstacles to overcome for future funding programmes

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. 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. There is however a need for better communication and coordinated efforts towards the regional actors in the regions.

Actors in the northernmost EU are often very small, and some EU programmes are too big for them to participate in. There is also a lack of competence in project development. This is an even larger obstacle for this programming period as some of the universities, used to manage projects, are hesitant to engage in ERDF projects as it is today too complex and the state aid regulations too narrow. For regions as the northernmost Sweden, the universities have been drivers for innovation in also small companies and the overall surrounding society via the ERDF and also when applicable the rural development fund. This means that an important innovation driver and fund management expertise is getting lost when the universities are increasingly stepping away from the ERDF.

One major challenge is that the EU funding programmes 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 fund on the one hand, and to Horizon 2020 project funding on the other hand. 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. This requires a lot of competence and knowledge on EU programmes that small regional administrations and other regional actors do not necessarily have.

Although Sweden in general has well functioning public administrations, they are often very slimmed-down, and for the northernmost regions this means that the administration is very vulnerable and dependent on some few individuals, having also difficulties in being able to reach out to the smallest actors around the vast regions. This should also in an Arctic context be taken into account for the formulation of the programmes, to ease the administrative burden and better coordination between them from national and EU level, together with allocated support to the regional administrations to make the most of the funds.

The EU focus on short term result orientation in the European structural and investment funds, ESIF, overall and specific thematic concentration not adapted to the regional context and needs, is also making it difficult to use the regional funds for needed real long term capacity building that in turn can lead to innovation and game-changing actions in less densely populated areas. For the future, the need for funding instruments for building capacity in regions lacking capital markets and critical mass for investments delivering commercial revenue in the first place, however long-term societal and economic gains if having the tools, has to be taken into account.

This is also a discussion closely linked to the establishments of financial instruments and the so called European Fund for Strategic Investments, EFSI, which may have relevant tools to leverage investments also in the Arctic societies; however, with a need for ground allocations to build on, as capital generally otherwise goes where the capital already is concentrated and can make easiest revenue, and this is in the big markets in the more urban areas. Loan instruments can fulfil a purpose in some areas, but in others, such as building societal capacity and integration in rural and sparsely populated areas, it is less capable without other “ground funding”.

To this comes that especially the European Social Fund, ESF, in Sweden is not mainly aimed at contributing to the competence and skills need on regional level, in line with the idea of capacity building for regional development in the regional development programmes. This becomes a mismatch for the northernmost regional economies, that either need some more competence components in the ERDF or ESF to be more regionally adapted to the true regional needs rather than general national unemployment activities. Also the synergies, co-ordination and complementarity between the ERDF and the rural development fund as regional development tools for the least densely populated rural areas can be better defined.

4.3 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, including the ESF and rural development fund beside ERDF and Interreg. The regions should participate in the formulation of the programmes, and try to engage local stakeholders more in that process.
- *Better co-ordination:* There is a need for an established co-ordination mechanism that would co-ordinate joint projects aiming to solve joint challenges in the Arctic region. Joint information meetings between different programmes should be arranged as this would improve co-ordination and reduce the number of events to attend.

- *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 EFNS 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 is also difficult to give funding in the process of commercialisation due to state aid rules and research competing with business interests, making more efforts needed to be able to support in the phase between starting phase and commercialization.
- *Cross-sectoral and international approach should be enforced:* Multidisciplinary and cross-sectoral cooperation should be emphasised including the component of internationalisation that has had less influence in this programming period, 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 and international collaboration.
- *Funding toward SMEs more directed to facilitation bodies:* For regions as the Arctic, SMEs are often micro-companies, that often need support for innovation and growth efforts, however do not have their own capacity to manage this; and support to SMEs in the Arctic should facilitate more of this support for these companies via public sector and academia and business support networks and projects driven by them, rather than aiming directly at individual SMEs.
- *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 Calotte 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 focusing on the same geography and objectives.

5. Final concluding commentaries

These priorities put forward should be seen as 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 whole of the NSPA, which is an essential growth factor for all stakeholders, also pin-pointed by the OECD in their study.

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 in the European Arctic - 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. The northernmost EU regions also have the potential to foster research and innovation activities including testbeds and research infrastructure to support international collaboration and European development of the key industries of the Arctic region.

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 and a place-based regional development approach in a continued multi-level partnership governance dialogue should be addressed for the next programming period, especially concerning the European Arctic regions.