An impact evaluation of the Northern Periphery and Arctic Programme 2014-2020: Final Report

Northern Periphery and Arctic Programme 2014-2020

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Executive Summary

The aim of the report is to assess the contribution of the four programme priority axes of the 2014-20 Northern Periphery and Arctic (NPA) Programme to their objectives and the contribution to implementation of the horizontal priorities. The Programme has achieved a strong start to the 2014-20 period although it is still at an early stage for measuring impact. An assessment of medium-longer terms impacts from the past programme period shows a positive picture of impact sustainability with improved access to services being one of the key strengths. Area experiences of project impact vary, with place-specific factors (including type of partner, partner roles and domestic frameworks) conditioning impact.

Detailed case studies are used to establish, for each Specific Objective, the causal link between project results and observed development in the programme area. A range of impacts can be established including:

- new SME links to R&D institutes/public sector supporting economic development;
- new business growth opportunities;
- improved service provision to remote communities;
- changing attitudes and perceptions;
- future oriented strategic partnerships and transnational links; and
- growing local capacity to engage with macro development issues.

NPA projects address the horizontal themes through the contribution of direct and associated project results and the relevant impact of operation and implementation. The Programme also launched micro projects with the aim of building capacity and experience for participants from specific under-represented groups. Intensifying future contributions would be supported by a push beyond 'stock' answers, increased direct engagement with under-represented groups and the wider dissemination of results.

The NPA Programme and its projects have pursued active Arctic links, as well as other strategic links, following the groundwork prepared by its predecessor programme, NPP. Under the coordination of the NPA, various ETC programmes operating within the Arctic are working more closely together as part of an Arctic Network. The NPA role in the network: acts as a catalyst for interaction, supports synergies and complementarities with relevant programmes and strategies, enables exchange of information; delivers targeted support in relevant thematic areas; and enhances the profile of stakeholders in the region. NPA projects also have an Arctic focus and impact on issues such as sustainable use of resources, Arctic entrepreneurial spirit, cold climate opportunities and overcoming critical mass, and benefit stakeholders within and neighbouring the Arctic. Looking to the future, the post 2020 programme should continue to build and develop practical cooperation between INTERREG Programmes with an Arctic geography.

The NPA is delivering impact for a range of beneficiaries and at variety of different levels. Beneficiaries include the Programme’s planned target groups but also wider communities and stakeholder groups. The focus on tangible outputs is a strength of the Programme and has led to the development of transferable concepts, ideas, services and tools. The magnitude of impact can be highly significant for individuals, organisations and localities at the same time as providing a locally-based way of addressing macro development issues. While the mechanisms that lead to wider and durable impacts are complex and often beyond the control of the Programme or stakeholders, the
research suggests that cumulatively at national and transnational scales, impacts demonstrate an increased capacity for external engagement and collaborative action on key development issues.

**The transnational dimension brings a distinct added value** in a number of ways. The cross sectoral and transnational links enable local stakeholders to access new know how and tools, re-evaluate their own unique strengths and opportunities and build capacity for change. Transnational impact can also be seen at regional, national and EU levels through, for example, increased policy coherence and cohesion, regional partnership and new innovative approaches.

**The impacts of the Programme are anticipated to grow/persist.** Results are being produced that target specific development needs on the ground as well as wider strategic issues of relevance to local and regional development in the area. The emerging impacts are in line with Europe 2020, horizontal themes and the wider Arctic dimension. In the context of uncertainties including Brexit and proposed transnational programme reforms, further programme actions can be taken to maximise ongoing impact and prepare for the 2021-27 period. Peer learning, for example, could be used to beneficial effect in: the transfer of project results to aid impact durability; the exploration of synergies with other programmes and funding instruments; capacity building and integration of new partners.

In terms of a future NPA Programme, recommendations include: continued focus on niche topics of particular development benefit to specific geographical characteristics of programme area; strengthening and greater definition of Arctic dimension as well as integration of ‘near neighbours’; and retaining sufficient flexibility for bottom-up development of projects.
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IMPACT EVALUATION OF THE 2014-2020 NORTHERN PERIPHERY AND ARCTIC PROGRAMME

- Objective: assess the contribution of each of the four programme axes to their objectives and the contribution to implementation of the horizontal principles.
- The evaluation draws on case studies, focus groups, interviews and desk research.
- NPA has made good progress, but is still at an early stage for measuring impact.
- Past, 2007-13, NPP experience shows a positive picture regarding the sustainability of project results.
  - Improving access to services is one of the key strengths.
- Significant shifts in the NPA policy environment have taken place but the value attached to territorial cooperation is a notably stable theme.
- Area experiences of project impacts will vary considerably, with place-specific factors conditioning impact.
1. INTRODUCTION

The overall objective of the impact evaluation of the 2014-2020 Northern Periphery Programme is “to assess the contribution of each of the four programme axes to their objectives and the contribution to implementation of the horizontal principles”. The work also assesses the impact of the Programme in relation to Europe 2020 targets. The overall approach to the work is detailed in an Inception Report, submitted to the Programme’s EVA Group in March 2018 and described in Figure 1. The work draws on extensive research as well as additional supporting briefing papers that provide further detail on key themes, e.g. understanding longer term impact, Arctic, and post 2020.

Figure 1: Evaluation approach and methods

- Theory-based approach
- Existing data sources utilised to avoid duplication of effort, continuity with previous studies & sensitivity to respondent fatigue
- Range of research methods adapted to each task
- Tracking medium-term project impact of 2007-13 NPP projects
- Project review 2014-2020
- 12 in depth regional case studies
- Interviews with wide range of Programme and project stakeholders ranging from programme-level to end users
- Focus group to discuss and test preliminary conclusions
- Involvement of programme stakeholders through ongoing communication

The approach recognises that impact is experienced variously at different levels, in different areas and over different timescales, e.g. taking time to develop. Therefore, the research and analysis:

- tracks the medium-longer term impacts of past 2007-13 projects in order to establish the extent to which it is realistic to expect medium-longer term impacts in the current period;
- considers strategic/programme level actions as well as direct project activities; and
- uses in depth regional case studies to identify the scales of territorial impact, and the extent to which impacts are attributable to programme activities.

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1 Paper on case study selection submitted to EVA Group May 2018. The case studies were selected based on a mapping exercise of project partners in order to ensure geographic and thematic balance, a range of project types and a balanced critical evaluation, as opposed to simply identifying best practice.
2. PROGRAMME IMPACT

In order to set the Programme impact in context, key considerations are:²

**Progress**

The Programme achieved a strong start to the 2014-2020 period: many projects are well advanced, leading to early results; participation is balanced across the programme area, with a wide range of stakeholders involved; projects are underway for each Specific Objective; and output targets are mostly overachieved. However, at the time of writing, not all the relevant final reports are available and it is noted that in many areas impacts will take more time.

**Time**

Time is required to build, develop and establish mid-term and long-term impacts. Surveying projects from the 2007-13 NPP allowed the evaluation to assess the scope for mid-term project/programme impacts.³ Overall, based on the questionnaire, a positive picture emerges regarding the sustainability of project impacts. Beneficiaries were asked whether project impacts are still being felt. Responses show that 46 percent of impacts, corresponding to 82 individual impacts, are still felt today while only 13 percent of impacts reported in final reports are no longer having any effect.

### Figure 3: Sustainability of project impacts reported in 2007-2013

**Does the project continue to make the same positive impacts as reported?**

- Yes: 41%
- No: 46%
- I don’t know: 13%

Source: Evaluation Team

### Figure 4: Development of the impact over time

**Has the positive impact ... ?**

- increased: 52%
- remained the same: 38%
- decreased: 9%
- I don’t know: 1%

Source: Evaluation Team


³ The detailed results of this work is detained in an accompanying briefing paper, see Wergles, N.et al. (2018) Impact evaluation of the Northern Periphery and Arctic Programme 2014-2020: Analysis of survey data – technical note, EPRC, September 2018. The survey has also been reopened, in order to fill gaps in responses.
Figure 5: Types of long-term project impacts

Figure 5 shows the types of impacts. “Improving access to services” was one of the key strengths of the 2007-13 NPP Programme. Out of the 82 sustainable impacts, 52 percent have even increased since the end of the project.

In order to maximise impacts, NPA actions must be rooted in area needs and be responsive to change.

Peripherality and low population density remain key shared development concerns and link to a number of development opportunities and challenges (see Figure 6). However, since the Programme was launched, a number of new issues have intensified/come to the fore. Following the economic crisis, economic recovery now continues across the programme area. Development issues linked to migration, population change and social cohesion are the focus of public and policy attention. In the fields of environmental protection and climate change, technological advances and new research highlight development concerns, such as the impact of microplastics on the marine environment, and new solutions/adaptations are now being pioneered.

Figure 6: Programme Area: Key Characteristics

- Unevenly distributed and increasingly concentrated
- Out-migration, brain drain and ageing populations
- Pressure on welfare systems
- Migration and social cohesion

Low population density

- Distance between settlements
- Time, distance and cost of travel to main settlements
- Reduced market access
- Impact of EU border uncertainties

Low accessibility

- Primary and renewable resources
- Pressure on natural environments

Abundant natural resources

- Dependence on natural resources
- Significant public sector employment
- Impact of Brexit and external trade links on sectors and areas

Low economic diversity

- Increasing environmental challenges
- Need for adaptation and management of natural resources

High impact of climate change

Source: Evaluation Team

Images: images: https://c1.staticflickr.com/2/1058/1173295174_17e6cf3ea8.jpg; http://s0.geograph.org.uk/geophotos/04/60/42/4604240_dd7cba37.jpg;
Significant shifts in the wider policy environment have also taken place. The UK vote to exit the EU has led to fears over the negative impact of Brexit on EU cooperation, collaboration and interaction in Scotland and Northern Ireland. The UK government Treasury has extended its guarantee for UK partners. However, concerns remain about the impact on long-standing, productive networks, and the capacity to maximise impact in the medium-longer term. Also influencing the medium-longer term environment for Programme impacts are wider trends promoting and developing territorial and sectoral policy synergies such as Arctic Territorial Cooperation and future proposals on the future of Cohesion policy.\(^5\) However, despite major uncertainties, debates and upheavals, the value attached to territorial cooperation is a notably stable theme.

Area experiences of project impacts will vary considerably, with place-specific factors conditioning impact. Conditioning factors include the type of partner represented. Part of the value of NPA projects is their capacity to involve a diverse range of partners. However, the type of partner involved will affect the type and extent of, particularly initial, impact. For some areas, a regionally influential, well-networked partner may be involved, e.g. a regional authority, while in others it could involve a highly specialist institution bringing niche expertise. Another important factor conditioning regional impact is the lack of organisations, in some parts of the programme area and in some thematic areas, with the necessary capacities to participate in transnational projects. An analysis of the territorial distribution of project partners per SO for the 2007-13 and 2014-20 periods revealed regional clusters of project activities. This clustering of project activities in certain regions can be partly explained by the presence of institutions in those regions that are particularly active in the programme. The programme has built up strong links with a number of project partners over successive programme periods. These partners are now highly valued and experienced and can be involved in a number of projects\(^6\) – thus can contribute to ‘clustering’. The effect is particularly notable where partners are strategically well placed to act in a variety of thematic areas, e.g. a University or local authority.

Partner roles within the project also have a part to play. Lead partners potentially have a wider appreciation and role in transnational impacts while project partners with a specific role can have an understanding of impact in a specific areas/sector. Domestic conditions in the programme area and in specific regions also shape impact, with take up and adoption informed by domestic needs and policy trends, with things like institutional support and resources playing a role. The role and importance of individual ‘champions’ who drive and encourage participation is also important to recognise, both as a strength to be preserved, but also as a weakness as this can easily be lost if the individual moves on.

Because of these differences, generalisations from case study findings regarding regional Programme impacts have to be done with caution.

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\(^6\) Also worth noting is that the idea of ‘repeat customers’ to the programme has drawn some concern in the past, but it should be noted that both the programme and the project partners have evolved together and are tackling new activities and issues in new ways.
IMPACT CASE STUDIES

Methodology paper prepared on case study selection

- Focus on the remotest & most sparsely populated regions
- Balanced representation of all 6 SOs
- Use of sample regions for determining result indicator baselines
- Contribution to programme result indicators
  - One of the two case studies/SO directly contribute to result indicator
- Contribution to the Arctic dimension
- Balanced representation of the NPA countries
- Dialogue with programme authorities

Impacts:

- Increased knowledge base, connectivity and profile in new business opportunities for specific sectors and markets
  - Business growth
  - Competitiveness
  - New start-ups
- Improved service and capacities in business support
- Productive SME-R&D–public sector links in new place-relevant areas of economic development leading to new forms of funding, research activity etc
- New implementation frameworks and management systems delivering administrative and environmental efficiencies
- Capacity in digital service delivery
- Capacity to act on energy saving and renewable energy
- Increased efficiencies in service delivery to remote communities
- Increased transnational and international profile
- Changes in attitudes and perspectives
- Strategic partnerships and international ties
- Local-capacity to engage with ‘macro’ development issues
- Community resilience
2.1 Impact Case Studies

Case studies are a central element of the research - key to establishing the causal link between project results and observed development in the programme area. In order to ensure a balanced representation, the following criteria were applied.

| 1. Representation of the programme area’s remotest and most sparsely populated regions; |
| 2. Balanced representation of all 6 programme objectives (SOs); |
| 3. Consideration of the sample regions selected for determining result indicator baselines; |
| 4. Clear contribution to programme result indicators; |
| 5. Clear contribution to the Arctic dimension of the programme of at least 1-2 case studies; |
| 6. Balanced representation of the NPA programme countries; and |

The full case study selection process was detailed in a briefing paper submitted to the NPA Evaluation Group.\(^7\)

Figure 7: Case Study Selection

In total, twelve case studies, see Figure 8, were carried out and draw on interviews with project beneficiary(ies), representatives of immediate\(^8\) project target groups and regional stakeholders, as well as project documentation and reports.

### Table 1: Case study areas

<table>
<thead>
<tr>
<th>Specific Objective</th>
<th>Case Study Territory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Troms Landsbyggð</td>
</tr>
<tr>
<td>1.2</td>
<td>Norbotten Western Isles</td>
</tr>
<tr>
<td>2.1</td>
<td>Greenland Caithness Sutherland, Ross &amp; Cromarty</td>
</tr>
<tr>
<td>2.2</td>
<td>North of Northern Ireland Faroe Islands</td>
</tr>
<tr>
<td>3</td>
<td>North Ostrobothnia West of Ireland</td>
</tr>
<tr>
<td>4</td>
<td>Lapland Västerbotten</td>
</tr>
</tbody>
</table>

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\(^8\) It is important to distinguish between ‘immediate target groups’ (benefiting from and using the project’s outputs) and ‘indirect target groups’ (benefitting from the positive mid- and long-term impact of the project).
Figure 8: Case Study Map
Impact Evaluation of the Northern Periphery and Arctic Programme

2.2 Priority Axis 1: Specific Objective 1.1 – Increased innovation and transfer of new technology to SMEs in remote sparsely populated areas

Troms is one of three counties in the peripheral Northern Norway region. The city of Tromsø is the only municipality with population growth, associated with public sector job increases, while the remainder of the Troms county shows population decline. Fishing is a dominant industry in the county. The University of Tromsø plays an important regional role and a reasonably well developed public support system and knowledge infrastructure exists in the region. However, the issues of critical mass, insufficient experience based knowledge among firms and inadequate provision of skilled labour force, together with high travel costs and distance to core centres, continue to impact the innovative development ability of firms in this very peripheral region.

Nofima, the Food Research Institute in Troms was the lead partner of the URCHIN project. In Troms specifically, the project focus was to develop the sea urchin industry, which was significantly underutilised.

Nofima was also involved as a partner in the Smart Fish project, which aimed to develop an innovative product, an electronic label, and a service for collecting and presenting data from the label with a view of improving the export of high-quality sea food. Nofima’s role was to provide expertise particularly in temperature storage and shelf-life time.

NPA project interventions have

- Strengthened SME and R&D links especially in the URCHIN project, which has benefitted from the transnational collaborations.
- Increased awareness and knowhow to exploit business opportunities especially in the URCHIN project, which as a result of the new information available has seen new expressions of interest from companies to become involved in the sector or expand their operations.
- Increased policy influence. Following the exchange of experiences between the URCHIN project partners from different countries, know-how and capacities have increased in the research institutes and government agencies. The project has had an impact on implementing a framework for fisheries management.

The NPA project has the potential to:

- Continue transnational cooperation on the basis of an established network and explore new areas of research. The network of the URCHIN project provides the foundation for continued transnational cooperation and a pathway for further projects.
- Transfer results to other areas and uses. For instance in the URCHIN project the project outputs are available to be used anywhere where there is an interest in fishing and utilising the urchin species. In addition, new projects are being explored applying the expertise to different species (e.g. seaweed). Similarly, in the Smart Fish project, there is future scope for applying the project concept to other products, including medicine and live animals.
- Strengthen the foundation of northern businesses to become competitive in food export. In the Smart Fish project, there is scope to further develop the project concept and contribute to modernising the food sector and strengthening the competitiveness of businesses located in northern parts of Norway.
Iceland is a knowledge-intensive country with a strong public research system and high R&D intensity. 90 percent of business R&D is performed by SMEs. However, the vast majority of activity is focused on the capital region. Government policies in Iceland encourage cooperation between research organisations and business, and support cluster-based activities, but regional challenges such as depopulation, public service and transport access, declining traditional industries and single company towns add to the difficulty of supporting innovative SMEs in Landsbyggð outside the capital region.

The Marine and Freshwater Research Institute was a partner in the URCHIN project. The project focus in Landsbyggð was to develop the sea urchin industry and keep the species sustainable in an area where there was only one company fishing the species without sufficient knowledge of the management of the species.

NPA project interventions have

- **Strengthened SME and R&D links and produced new knowledge** concerning the urchin species, including fishing areas, stock levels and management of the species. This has benefited existing and new businesses interested in becoming involved in the sector.
- **Improved the sustainable management of the species.** The information provided as a result of the project has allowed existing and new companies to better exploit the opportunities of the urchins in a sustainable way and avoiding overfishing.
- **Strengthened the foundation for the sector and encouraged new business opportunities.** As a result of the research on the species, the project has helped companies to access relevant information to become involved in the sector and exploit new business opportunities. The project has strengthened the business of Thorisholmi (the first company involved in fishing urchins in Iceland) in terms of increased landings, more employees and new export opportunities. More generally, the project has strengthened the urchin sector in Iceland by increasing the number of companies involved in the sector from one to four.
- **Increased capacities and policy influence.** Following the transnational exchange of experiences, know-how and capacities have increased in the research institutes and government agencies in Iceland. The project has had an impact on policy formulation in Iceland resulting in a formal management of the species.

The NPA project has the potential to:

- **Develop project outputs further and adapt research to other species and to other areas beyond the NPA region.** Transnational network is in place with a view of supporting productive links for future cooperation.
The Specific Objective (SO) intervention logic is based on the assumption that transnational cooperation can help overcome challenges related to the lack of innovation support to SMEs. This entails collaboration with research institutes, promotion of cross-border clusters and business networks and encouragement of attitude change among different actors in the innovation system in remote areas.

**Target Groups**

**Providing innovative support systems and structures to SMEs** involved in aquaculture is a core component of the NPA projects covered in the analysis. Services developed under the Urchin project also benefit organisations such as Government agencies, and the concept developed by the Smart Fish supports project exporters, distributors and the end-customers.

**Impact**

The analysis identifies a number of impacts ranging from stronger SME and R&D links and awareness of business opportunities to wider impacts on policy influence at government agencies in particular.

- **Stronger SME and R&D links and new knowledge.** Within the regions, both projects have been important in strengthening links between research and SMEs, although this has not been without its challenges, as SMEs can be reluctant to cooperate and share information particularly concerning a biological resource. In the Urchin project, the cooperation between SMEs and R&D institutes resulted in significant new research concerning the urchin species in terms of fishing areas, stock levels and management of the species. In Iceland, the investigations carried out (based on two different stock assessment methods – dredge and bottom photographing) resulted in a wide range of new information on the species including, for instance, information on opportunities to fish at greater depths which had previously been considered unsuitable for human consumption. The SME and R&D collaborations have benefitted from the transnational links. In the Smart Fish project, for example, most collaborations were transnational and resulted in the roe enhancement trial in Troms being applied to other countries, including Ireland and Canada.

- **Sustainable management of species.** The information provided as a result of the Urchin project has allowed existing and new companies to better exploit the opportunities of the urchins in a sustainable way and avoiding overfishing.

- **Stronger foundation for the sector and new business opportunities.** As a result of the research on the species and the new information available, the Urchin project has helped companies to become involved in the sector and exploit new business opportunities. In Norway, the project provided the foundation for further development of sea urchin sector. An online platform ([http://urchinproject.com/](http://urchinproject.com/)) has been developed which gathers all the outputs of the project (e.g. reports, contacts, workshops etc.) and covers a wide range of issues from fishing techniques to legislation and market opportunities. The material available is an effective way of providing all the necessary information for expansion into the sea urchin sector and implementation of a framework for fisheries management. Besides the online platform, information from the Urchin project has also been disseminated at events and lectures. Following such dissemination, Nofima received several information requests from companies in Troms (and outside) interested in expanding into the sea urchin sector and exporting the species to other countries in Europe. The
Urchin project has also produced **durable know-how and capacity for existing businesses**, such as for Thorisholmi, the first company involved in fishing urchins in Iceland. As a result of the project, Thorisholmi has increased its landings, employed more staff members, and explored new export opportunities. More generally, the project has strengthened the urchin sector in Iceland by increasing the number of companies involved in the sector from one to four. Although this increase in companies remains small, it has happened as a direct result of the project.

- **Increased capacities and policy influence.** The exchange of experience has resulted in an increase in know-how and capacities not only in the businesses (especially those entering the sector), but also in the research institutes and government agencies. The Urchin project has had an impact on policy formulation in Iceland resulting in a formal management of the species with information available on harvesting methods, biomass measurements, management, legislation, control and utilisation of roes at different depths and time of year. As a result, for example, maximum allowable catch in the area has been provided to the Government for the first time and the Government is in a position to provide formal advice to fishermen.

**Transnational**

**The transnational dimension is key in terms of widening horizons and going beyond the ‘basic’ activities.** The transnational element has been valuable in the Urchin project. Prior to the Urchin project, research to overcome the specific challenges facing the urchin sector in the NPA region was disparate and there had been no transfer of knowledge between the countries. The Urchin project changed this. In Iceland, the transnational partners were perceived as very valuable in terms of providing advice and comments. Without the transnational input and exchange, the assessments carried out in Iceland would simply not have ‘pushed the boundaries’.

Similarly, in the Smart Fish project, the transnational element has been important. In countries such as Norway, there is much dependence on public funding to develop technology in businesses, not least because businesses tend to have very small R&D resources (in terms of both human capital and funding). Transnational collaboration can address this by **bringing all the actors together and spreading the resources**. Wider collaboration also means that businesses commit to sharing technology across the industry. The transnational element does not only enhance collaboration between countries, but also widens perspectives.

**Future**

**Conditioning/qualifying factors.** In Iceland, the impact of the Urchin project on the ground is very clearly identifiable as this was the first time the sector has come under a specific research focus and because there was only one company involved in fishing the urchins at the start of the project. Prior to the project, there was very little information available on the species and no formal management of the species existed. The successful uptake of the outputs is very much due to the interest and active involvement of the target groups. However, there have also been challenges concerning the implementation of the Urchin project, especially relating to the timescale and the aims of the project. It has been difficult to design a three-year project as timescales work differently for SMEs and R&D institutes, with three years being a very long period for SMEs. Aims are also very different between R&D institutes and SMEs. When dealing with a biological resource (sea urchins), SMEs may be
reluctant to work as a group, unwilling to share information (e.g. for instance in relation to some of the technologies used for fishing), or not keen to join a network. During the project, it was recognised that there was a need to change the way SMEs were approached (especially in Troms). At the beginning of the project, two SMEs started as full partners but to ensure continued participation, one of them changed to become an associate partner. In the case of the Smart Fish project, it was not possible to address specific cost and technical issues and therefore it did not reach the stage of commercialisation. There are always risks associated with new innovations. However, the project has proven that the concept is feasible and has paved the way for further development and next stages of cooperation.

Future impact

- A network for continued transnational cooperation is in place in the Urchin project enabling an easy route for exchanging information and providing the foundation for future cooperation.

- Stronger foundation exists for northern businesses to become competitive in food export. Although the aims of the Smart Fish project were not fully realised, a prototype was developed which proved that the concept was feasible. Therefore pending successful commercialisation, the project has the opportunity to modernise the food sector (addressing challenges linked to long storage, transport, temperature fluctuations during transport) and strengthen the competitiveness of many businesses located in the northern parts of Norway.

- Research is ongoing and further areas are being explored. Stock assessments and advice on the maximum catch continue to be carried out in Iceland as a result of the Urchin project. A Masters student is also working on a thesis and publication utilising the material from the Urchin project including results from the investigations of gametogenesis, spawning time and quality of roes at different depths. Furthermore, the project has led to new work at the Marine and Freshwater Research Institute, and there are discussions on how to apply the methods to other species. In Norway, the Urchin project has also paved the way for further projects including: a nationally-funded study led by a Norwegian partner, Urchinomics Nordic AS, a business development company, together with SMEs and Nofima, which is involved as a research partner; a Kolarctic application continuing some of the work of the Urchin project, but focussing on a different species, namely seaweed; participation in a project in Croatia; and a student at the University of Troms looking at issues of the Urchin project. A follow-up conference (an add-on to the project) has also been organised for the project.

- In the case of the Smart Fish project, future cooperation opportunities are also being explored. For instance, a funding application has been submitted to the Norwegian Seafood Council in collaboration with the University of Iceland. There is also some (early) business interest in commercialising the concept (not only in the NPA region, but in countries such as South Africa) applying the concept not only to aquaculture but also to other areas, including health care and the drinks industry.

- The results delivered can be transferred to other areas. For instance in the Urchin project the project outputs are available to be used anywhere where there is an interest in fishing and utilising the urchin species. In the Smart Fish project, there is potential to apply the concept to the transport of other areas, such as health care, live animals and the drinks industry.
2.3 Priority Axis 1: Specific Objective 1.2 – Increased innovation within public service provision in remote, sparsely populated areas

Norrbotten, the largest county in Sweden, faces challenges in the delivery of public services particularly in the smaller and more remote municipalities. These areas experience out-migration of young people and have an ageing and retiring population resulting in an elderly dependency ratio, which is much higher than the national average. Challenges are faced in the provision of education, health and social care services, which are further exacerbated by the limited staff resources. Therefore, the need for more technological solutions to service provision is recognised.

The County Council of Norrbotten was the lead partner in the NPA project Remoage. In Norrbotten, the project delivered a number of digitalised service packages using existing technology with the view of improving efficiencies of these services to vulnerable older people (including those with dementia) while ensuring patient wellbeing.

Luleå University of Technology in Norrbotten was a partner in the eCAP project and was involved in evaluating the project, with a particular focus on understanding the readiness of using eHealth services in the area (within the Child and Adolescent Psychiatry (CAP), primary care and within the school system). Hence, partners had no direct involvement in the delivery of the service outputs.

NPA project interventions have

- Increased awareness and learning concerning digital service delivery methods. Learning has spread beyond the region to the national level. Furthermore, for instance the eCAP project has addressed new issues concerning the ways of working with treatment and diagnosis.
- Changed attitudes towards the adoption of new working methods and cultures.
- Increased efficiencies in the delivery of services as a result of the wider adoption of technology in the delivery of health care services resulting in reduced travelling and leading to increased efficiencies in terms of time and finances (Remoage).
- Fostered wellbeing by allowing vulnerable patients to stay at home and receive care and allowing health care staff to dedicate more time to all patients across the county.

The NPA project has the potential to:

- Result in further spin-offs and alternative uses with the scope of transferring approaches beyond the community level. Project outputs continue to be developed and have already resulted in spin-offs. There are opportunities of the innovative approaches to be adapted to other functions and to other user groups, and to be rolled out beyond the municipal borders.
Eilean Siar (or the Western Isles) face a range of economic challenges due to peripherality, insularity and primarily sea-dependent access. Eilean Siar is sparsely-populated and experiencing population decline, particularly among the young and working-age population and a corresponding ageing of the population. The public administration, education and health sector is the largest employer, but faces significant budgetary restrictions at the same time as increasing demand for services. Digital solutions to public service provision are being developed. Ongoing challenges, however, include skills deficit and digital infrastructure provision and access to peripheral island locations.

The National Health Service (NHS) Western Isles was a partner in the Remoage project. In Eilean Siar, the project did not aim to introduce a health intervention. Instead it supported users to identify and steer discussions and the consequent decisions on whether certain technologies would be useful in the delivery of eHealth services in the area. NHS Western Isles delivered four work streams in the area:
(1) technology centre;
(2) intergenerational project;
(3) social isolation project; and a
(4) frailty project (which was not delivered due to lack of time).

NPA project interventions have

- **Increased awareness and understanding of different digitalised health care delivery options** by enabling users to identify and test different types of technologies most suitable to their specific circumstances in the area (e.g. especially through the technology centre work stream).
- **Built increased capacities, skills and confidence on digitalised service delivery options.** This was notable not just amongst the target groups, but especially amongst the staff members, which then facilitated getting patients to buy in to new ways of delivering services.

The NPA project has the potential to:

- **Increase access to services, and bring efficiency gains** particularly in terms of time and costs savings.
- **Provide a learning resource for the future.** The learning and knowhow from the project has the potential to contribute to other domains, such as to the development of local housing, which at the early planning stage can take into consideration how technology can benefit independent living.
- **Provide wider benefits for the community in terms of fostering inclusion** as services are being developed specifically to a vulnerable group (elderly and vulnerable people). The services developed have the potential to increase the quality of independent living and facilitate communication which in turn can promote social interactions, mental health and wellbeing more generally.
The SO intervention logic is based on the assumption that transnational cooperation can help overcome challenges related to access to key public services. This entails support and facilitation of new methods of cooperation, partnerships and innovative approaches to pooling resources in order to address the viability of basic goods and service provision. Collaboration with R&D institutes can also open up new technological solutions targeted at particular demographic and locational challenges of peripheral areas.

### Target Groups

Innovative support services, including digital solutions and service packages, were targeted in the Remoage project to older people, to their family carers and to the healthcare staff, but also to other actors and users such as the third sector. In the eCAP project, target groups included children and adolescents requiring psychiatric services, their families and psychiatrists and specialists providing these services.

### Impact

The analysis identifies impacts particularly in the context of increased awareness and learning, changing attitudes and approaches to new ways of service delivery, as well as service efficiencies.

- **Increased awareness and learning of digitalised health care delivery options.** The NPA projects have contributed to increased awareness of and learning in eHealth. This has been done through information campaigns and dissemination events (e.g. Remoage in Norrbotten), but also through specific service packages such as the technology centre (Remoage) in Eilean Siar. The technology centre, which was a physical demonstration space (set up as a flat) and equipped with various technologies, provided information of the types of challenges and barriers people face when accessing services in the region, and the types of technologies that could be helpful to overcome these challenges. In the eCAP project, learning has also been evident and changes have been adopted, for instance, in the ways of working with treatment and diagnosis.

- **Attitudinal change and policy influence** - Although changes to attitudes and working practices can be time-consuming, these have improved in the course of the NPA projects. One of the biggest reservations in the Remoage project is related to the potential changes to working practices (including job losses) that digitalised methods would require. In Norrbotten, a number of information campaigns and dissemination events were organised to help shape new ways of thinking and adopt new routines. The existence of project leaders at the county level (not just in the involved municipalities) also facilitated the dissemination of information across the county and encouraged new municipalities to participate. Policy influence has been important in the eCAP project that has, through its activities, contributed to increased policy discussions on the theme in Sweden. While eHealth is not a new topic, taking part in the project has put the theme back on the policy agenda and contributed to an increased interest amongst the public bodies in particular. The initially cautious reception to the project by some of the regional partners in

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9 See also https://www.youtube.com/watch?v=8vh1_q_KqmM
Norrbotten has turned into an ‘active’ interest in eHealth across the public bodies in the county. This is not all due to the project’s activities, but the project has provided a timely contribution to the wider discussion in Sweden, including a presence at a national congress.

- **Increased efficiencies in the delivery of services.** Across the different eHealth service packages introduced in the Remoage project, travelling has been reduced, and consequently led to increased efficiencies in terms of time and finances, especially in Norrbotten. As a result, health care staff are able to dedicate more time to all patients across the county. Time and cost savings were also noted in the intergenerational work stream of the Remoage project in Eilean Siar.

- **Fostered wellbeing** – Remoage in particular has improved the quality of services, especially the wellbeing of patients. The projects have enabled vulnerable patients to stay at home and receive care from the same health care professional in a safe setting.

  "The delivery of palliative care through digital means meant that the patient avoided excessive travelling, was able to stay and be treated at home, and access the same health care professionals, which made the care very personalised. The experience was very positive and gave the necessary strength and hope for the last days of her life."

  *Patient’s husband, Remoage*

**Transnational**

The transnational dimension has provided the inspiration and been key in terms of transferring learning and sharing perspectives. In the Remoage project, the transnational dimension provided the inspiration and gave the impetus to continue and improve some of the work started under the previous NPA project Remodem. The transnational element also allowed much needed exchange of experience between the countries (e.g. between Sweden and Scotland) where approaches to eHealth were different. In the eCAP project, the project would simply not have reached the same potential without the transnational learning.

*We all share similar challenges related to remote and rural areas (recruitment, retention, attracting people). Therefore there is a lot of transnational work that can be done with regards to these common challenges that we approach from different viewpoints. There is interest in things that we are doing in Scotland too, for instance, regarding the use of volunteers or our work with dementia-friendly communities.*

*Third sector representative in Scotland, Remoage*

**Future**

**Conditioning/qualifying factors.** Reservations and reluctance to change working practices amongst the health care staff were a common challenge in the projects. In the Remoage project, these included fears about changes to roles and responsibilities, including job losses, and the general scepticism towards the introduction of digital service concepts. Although the project addressed these challenges through various events and information campaigns and by involving a strong leadership, this required effort and time to ensure buy-in and acceptance. Education and awareness-raising therefore need to be prioritised and carried out at an early stage. Equally important is to allow the health care staff to familiarise themselves with digital devices in order to increase skills and understanding of the benefits..."
of technology. For instance, in Eilean Siar, building of skills and confidence in the use of technologies made it easier to convince patients to buy in. Other challenges, especially in Eilean Siar, included poor connectivity, which was at least partly overcome by the heavy involvement of IT experts in the project.

In the eCAP project, evaluation was ongoing at the time of the interviews and therefore final results were not available. However, education concerning eHealth was underlined as important, especially in Norrbotten. Furthermore, the project highlighted the need to address questions such as ethical aspects of digitalised care given the strict rules and regulations of the health care sector.

**Future impact**

**Spin-offs and/or alternative uses are emerging and there is scope for transferring approaches beyond the community level.** For instance, as a result of the Remoage project in Norrbotten, four key services developed as part of the project will be further advanced with a view to rolling them out to all the municipalities of the county. The project also resulted in a spin-off service, which concerns the provision of digitalised advisory services in the county, a role in which the doctors are expected to spend 20 percent of their time. As a result of the project, it is now possible to deliver this service to all the municipalities in Norrbotten whereas previously one advisory trip took up all the allocated time. Furthermore, the project’s digitalised service delivery concept has been adapted to other users, including young people in care, and the technologies have found other functions in the daily routines of the health care professionals. In Eilean Siar, most work streams of the Remoage project are continuing under the lead of the health boards. Spin-offs, including testing of home monitoring systems in the premises of the technology centre by an external IT company, have emerged which also benefit the original target group of the project and home monitoring systems have been consequently rolled out to a number of homes in the area. In the future, the learning and knowhow from the project has the potential to contribute to other domains, such as the development of local housing, which at the early planning stage can take into consideration how technology can benefit independent living.

The evaluation results of the eCAP project are still forthcoming in terms of evidence on the potential increase in the use and/or satisfaction with the services generated. However, the project resulted in a qualitative spin-off study that incorporated input from the young people. Discussions have also been held on how to adapt the results of the project to a larger city context where the young people could also benefit from having meetings online. Funding is also in place from the Government in Sweden to carry out an early intervention in the school context (in terms of connecting young people with Child and Adolescent Psychiatry services). Furthermore, continuation of the eCAP project is under discussion and possible future collaboration with the Remoage project has also been mentioned.
2.4 Priority Axis 2: Specific Objective 2.1 - Improved support systems tailored for start-ups and existing SMEs in remote and sparsely populated areas

SMEs in Greenland face very significant challenges linked to weak access to even local/regional markets, very small local customer base, high cost of transport, lack of critical mass, and reliance on narrow range of business sectors. Providing opportunities for young people in the area, and economic diversification and adaptation are key development concerns. At the same time, the unique characteristics of the country and its communities mean that SMEs can draw on tight networks within communities, expanding opportunities linked to new and growing sectors, in depth knowledge of the specific/specialist needs of the area, and adapt to changing conditions across the country.

NPA projects RYE Connect and Circular Ocean address clear needs, gaps and opportunities in SME support systems in the area.

In Rye Connect, Greenland Business is a partner delivering a Youth Entrepreneurship model that supports and inspires young entrepreneurs to develop new businesses and consider entrepreneurship as a viable career option. The project offered training and support services. The Arctic Innovation Centre’s involvement in the Circular Ocean project centred around exploring the use of discarded fishing nets in reinforced concrete, as part of the wider goal of seeking to inspire enterprises and entrepreneurs to realise the hidden opportunities of discarded fishing nets and ropes.

NPA project interventions have

- Led to SME business development and new start-ups, e.g. participating entrepreneurs and businesses have gone on to apply for start-up grants and taken forward business plans.
- Increased capacity and awareness of business opportunities and support for development and start-ups. In particular transnational links offered new perspectives to local project participants on markets and business opportunities and extended networks, e.g. with R&D institutions.
- Built capacity in business support providers, e.g. new services, resources, networks and connections to end users.
- Provided a resource for future SMEs and start-ups to draw on, e.g. training and education materials and courses, and open source information on pilots and tests, which can be used to bring a product to market.

In the mid run, project results may lead to

- New and growing businesses in key sectors for the regional economy. Maintaining and taking forward the project's support and resources are key to this, e.g. through links to other business support efforts and new areas of economic activity, pursuing further projects, applying lessons and models developed.
- Wider benefits for community and sustainable development. Both projects address issues linked to large-scale development concerns. For Circular Ocean, awareness raising about the economic opportunities in recycling fishing gear and nets can contribute to wider thinking on waste management and marine pollution. For Rye Connect, engaging with young people in remote and peripheral communities is an important contribution to wider efforts aimed at building opportunities for young people wishing to remain in these areas.
The region located in the far north of Scotland with associated economic development barriers for SMEs including remoteness, sparse population and outmigration, distance and infrastructure links to markets, inadequate digital connectivity and skills shortages. The region has strong marine and maritime links, with populations concentrated along the coast and Ullapool the 6th largest fishing port in Scotland. SME activity is critical to the economy of remote rural areas and also has an important social function in remote communities. The rate of new business start ups, however, is slower in the Highlands of Scotland than other parts of Scotland, including other rural areas. SMEs and new start ups are particularly vulnerable to increasing costs associated, for example, with rising oil prices affecting transportation costs to remote areas and uncertainty about Brexit.

The Environmental Research Institute (ERI), North Highland College of the University of the Highlands and Islands is the lead partner of the Circular Ocean Project. Activities involved working on transnational events, project dissemination and engagement and targeted work investigating the feasibility of remote sensing marine plastic. This complements and draws on work undertaken by other project partners covering training, piloting and testing products, webinars and workshops. The role of the project lead partner in wider project dissemination is particularly important to understanding impact. The project was presented at a wide variety of fora, ranging from local events in Ullapool linked to harbour development, at the Volvo Ocean race, Maritime Challenges Conference and Arctic Awards.

NPA project interventions have

- Increased awareness of a solutions-based approach to dealing with a specific issue faced by local communities and in the transnational area. The issue of marine plastic is a global concern, the project has demonstrated ways in which constructive steps can be taken, even in remote areas to address part of the issue which is of particular relevance to the region.
- Contributed to and reinforced change and new opportunities in recycling.
- Produced early engagement and profile in an area of work which is now gaining increased attention at regional, national and international levels.
- Produced information on the role of feasibility of remote sensing marine plastic.

The mid term impacts of the projects are:

- Based on the materials made available by the project new business opportunities may be developed at some point. Business opportunities could be developed based on the testing done in the project and the open source materials which are readily available on the project website. Resulting activity may have a tangential link to the project, but it provides an important resource in terms of business support, through online webinar, and testing information.
- Increased policy profile of marine plastic pollution and, in particular, issues connected to fishing nets and gear. Through its web-site, the project developed engaging and durable resources which could continue to be used and inform debates.
- Through project work, new links, networks and projects developed to take forward impact.
Transnational cooperation contributes to an improved entrepreneurial climate by facilitating the transfer and development of business support strategies and solutions. The SO intervention logic is based on the assumption that transnational cooperation can contribute to an improved entrepreneurial climate by facilitating the transfer and development of business support strategies and solutions to overcome challenges faced.

**Target Groups**

Tailored, adapted support to SMEs, micro enterprises and start-ups is central to the projects covered, e.g. school leavers and SMEs in specific sectors. Also benefiting from the provision of new services and capacity are schools, universities, local businesses, business support agencies, municipalities and government.

**Impact**

Project impacts are felt locally, nationally and transnationally in, for example, new business start-ups and awareness of opportunities. In addition, wider impacts are experienced in terms of services available at national level, resources and capacity within national-level service providers.

- **SME business development and new start ups.** RYE Connect\(^1\) supported and trained young entrepreneurs, particularly school leavers, through the tailored and accessible delivery of support. Participating entrepreneurs and businesses have gone on to apply for start-up grants, taken forward business plans and grown their businesses. Riding Greenland, for example, is a business providing guesthouse accommodation and horse riding tours for tourists and Paju.gl is Greenland's first online grocery store in December 2017.

- **Expanded opportunities in new markets and economic activities.** Targeting entrepreneurs and boosting opportunities in local economies, Circular Ocean in Greenland and Caithness and Sutherland highlights new opportunities by trialling, testing and demonstrations, as well as providing training and webinars. Demonstrations are a key step to supporting future SME activities, especially in new/experimental areas of economic activity such as the recycling of disused fishing nets. The project, therefore, brings an innovative product closer to market and demonstrates to SMEs the potential of working in this area. The work of RYE Connect cuts across sectors but by working with young entrepreneurs, it links to new opportunities and growth sectors in Greenland such as tourism. The SME, Craft Greenland, notes the value of having a ‘network’ and the training received in RYE’s pitching workshop in taking the business forward. The opportunities and businesses are locally rooted, but transnational engagement allows SMEs and stakeholders to experience the wider relevance and role of sectors, and engage with wider markets. The Circular Ocean project, for example, has linked to the Volvo Ocean race and its work on marine plastic pollution. Representation in this area has given the project global reach and contacts. Similarly, an international design competition in 2018 has brought about Europe-wide links and built on the transnational element of the project.

- **Increased capacity within business support providers, e.g. new services, resources, networks and connections to end users.** RYE Connect offered the chance to further develop

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\(^1\) See also https://www.youtube.com/watch?v=VwYk0mLZgGM
work and expertise already undertaken by Greenland Business, providing workshops and mentoring for young entrepreneurs. Previously outsourced work can now be provided 'in house', developing durable skills, capacity, and knowhow. The Scottish partner of Circular Ocean, ERI, notes that learning and new ideas on project engagement and promotion have been a very valuable spin off/'extra' from the project and its partners. Training materials and open source information on pilots and tests are durable resources for future SMEs to draw on. Circular Ocean, for example, provided advice on business models and marketing. RYE services available include web-portals, workshops and training resources, and transnational networking events. Crucially, training materials and support draw on relevant/relatable sectors, e.g. tourism and fisheries. For Greenland Business, the opportunity to deliver tailored/adapted resources was crucial and, for the first time, they were available in Greenlandic, making them more accessible and engaging to the target groups. Events were also held in different areas of the country Quqortpq, Nuuk Sisimiut, Ilulissat and Aasiaat.

- Enabling territorially based action and capacity in strategic development issues. In this area, capacity is delivered not just through support to individual organisations, but also through building links between stakeholders, e.g. R&D and businesses. For Circular Ocean in Caithness and Sutherland, awareness raising about the economic opportunities in recycling fishing gear and nets can contribute to wider thinking on waste management and marine pollution. The project takes a solutions-based approach to what is more commonly viewed as a large-scale/global problem. For partners in Greenland, the involvement in Circular Ocean was particularly relevant due to the dominance of the fishing industry in the country and the very substantial cost, volume and logistical challenges it faces in dealing with discarded net and fishing gear. In a similar way, RYE Connect builds capacity and engagement in relation to wider development concerns linked to youth outmigration, sustainable communities and economic diversification.

- Attitudinal change and policy influence. Changing attitudes and perspectives is a significant impact for the territories. For Rye Connect, the opportunity for young people to participate in transnational events ‘opened their eyes’ to new opportunities. Tailored place-specific/sensitive support demonstrated that ‘opportunities’ are directly applicable to them and not just ‘something that happens in other places’. For Circular Ocean, raising awareness was a key impact and an area where the project can continue to add value. The project increased knowledge about recycling and waste management through working directly with communities and municipalities. In Greenland, it also offered the opportunity to operate cross sectorally and engage with a variety of organisations involved throughout the process, e.g. waste managers at dump sites, fishermen, net manufacturers, local constructions companies, and Arctic engineering companies. This resulted in new thinking in local municipalities about managing potential commercial gain from recycling and greater openness to ideas and businesses in relation to a ‘waste’ product. Education, in the form of research and student projects, is another way in which the impact of projects can be felt in the longer term. In Greenland, as part of the Circular Ocean project, three masters student projects and a special course where students report on a project have been undertaken. In Scotland, from a wider policy influence point of view, the project has enabled partners in the region to participate and be included in ‘the conversation’ on the management of marine plastic waste and recycling internally within Scotland and also in wider fora.
Transnationality

The transnational dimensions of the projects add value in a number of respects. **Access was built to wider networks resulting in ‘getting through’ to a much wider audience.** The approach described by Rye Connect with ‘centre points’ and ‘backbone structure’ to the project illustrates the way in which project partners sought to link activities within the project and build a solid structure from which to build and extend networks, through associated partners and links e.g. between Greenland Business and the Yukon. Within the Circular Ocean project, the various partners worked on distinctive elements of the project and explored different aspects of the issues. This enabled working on a cross sectoral basis, which was invaluable and provided important contacts and insights. In doing so, the Programme contributes to building a transnational resource of more outward facing, engaged and networked businesses and business support networks.

**Actions on an area/thematic focus that would not have been possible through other means.** Transnational cooperation provided an opportunity for SMEs from particularly remote and isolated areas to meet face-to-face, resulting in identifiable drive and enthusiasm and built durable networks. The new horizons, knowledge and skills developed through transnational exchanges are not something that national sources alone can provide. Remote and peripheral communities were able to engage in ‘relatable’ ways to large-scale transnational development issues. Stakeholders were empowered to act on specific development concerns, drawing on wider networks expertise and critical mass.

**Conditioning/qualifying factors:** In some cases, **projects have benefited from being in the right time and right place,** e.g. the uptake and resonance of the Circular Ocean project was amplified by the ‘Blue Planet effect’ which allowed the already established project to ‘catch the wave’ of interest that followed from the high profile TV series. In Greenland, the project also successfully engaged with place-specific development challenges, i.e. the volume of nets, high cost of dealing with waste, and interest in developing new building materials, again linked to the cost of transport to and from Greenland. The project’s capacity to develop these connections, and the way in which it demonstrated the scope for practical action, will shape future impact.

There are also **challenges that have influence or limit impact to some extent.** For example, links to established businesses and investors were challenging to develop. In Greenland, there were not many SME mentor organisations to draw into the project and few, if any, business angel-type investors. The transnational transboundary dimension was also not practical on this issue. For Circular Ocean, there have been barriers and challenges to the building of SME links, and up take on the proposed one-to-one advice for SMEs was not good given that there are not many SMEs operating as yet in this field and time is needed to build up capacity.

Practical issues involved in working on a transnational project were also a concern. Working in a second language, for example, is challenging and can lead to misunderstandings and make dissemination more difficult because of the need for translation. A frustration more than a challenge is that the project can only take things so far in terms of the success of networking events leading to a desire for more opportunities to meet and network.

**Future impact**
There is evidence to suggest that impacts will continue in the future and could even be amplified. This can be seen in a number of ways including:

- the continued use project outputs by key stakeholders;
- the dissemination and adoption of outputs by wider stakeholder groups, e.g. in new educational materials;
- planned additional activities, e.g. Greenland Business working alongside another associated partner in areas where activities have a natural continuation. For Circular Ocean, for example, further work is planned on testing products, including concrete reinforced with discarded nets. It has also led to other work that has identified new evidence and data on marine plastics as well as data gaps.
- the submission of successful funding applications e.g. another successful project based on Rye Connect was funded through NORA and working with NPA associate partners; and
- the development of networks leading to extended and productive links, e.g. links with the Yukon have been established where there are numerous areas of shared development interest. For Circular Ocean, links have been made to the Blue Circular economy project.
2.5 Priority Axis 2: SO 2.2. Greater market reach beyond local markets for SMEs in remote and sparsely populated areas

Northern Ireland’s economy, particularly its rural economy, is highly dependent on SMEs. Northern Ireland’s small firms - those employing between one and 249 people - account for over 75 per cent of private sector turnover, 76 per cent of all private sector employment and should deliver around 89 per cent of all new private sector jobs created by 2018. Supporting SMEs to explore export markets and develop international business opportunities is one of the key commitments within the Department for the Economy’s draft Industrial Strategy. The considerable economic uncertainties associated with Brexit pose an additional set of challenges to this area. Both projects covered in the case study area cover niche/developing elements of the tourist sector. Yacht based tourism is a small sector, but on which could be developed further to expand the season and increase traffic. Slow adventure offers a way to link and grow small and micro enterprises into higher value sectors of the market.

The SAINT project focus was to work with micro-businesses to improve their promotion of slow adventure activities and extend their marketing reach to new overseas and domestic consumers, leading to positive direct impacts in terms of more bed nights, extending visitors’ stays and potentially stretching the seasons. The project partner in Northern Ireland was Derry City and Strabane County Council, which led on the development of an on line promotion and booking system for the project and training, networking/exchange events, clustering and ad hoc advice. Derry City and Strabane County Council took a similar role in the Cool Routes project. The Council was responsible for the delivery of the online booking tool, which is now operational and being used for joint promotion of businesses and services in the region. The system allows visitors from yachts to easily link to services and relevant businesses/visitor attractions, e.g. book tours, get discounts in shops and cafes, book a taxi ride etc.

NPA project interventions support
- **Business growth and sustainability** including new facilities, new markets, services and more sustainable employment.
- **Development of new areas of the travel and tourism markets** which would not have been developed independently in the area.
- **Capacity in business development** through the development of new business support resources, tools and approaches, and increased area profile and marketing through new on line promotional tools, which have been taken up locally, nationally and internationally.

The NPA project has the potential to:
- **Increase adaptive capacity in a dynamic sector**. Resources and know how have helped businesses to respond and adapt to a rapidly changing/evolving sector.
- **Contribute to community development and economic diversification** through engagement with traditional/local/craft/tourism sectors, which are key sectors sustaining local communities and with broad community representation.
- **Leverage synergies** as SMEs grow/extend markets and possible links to Atlantic Area developments through Cool Routes.
- **Achieve attitudinal change**. Changed perceptions of the economic possibilities and opportunities in the area.
- **Impact on regional and national marketing approach** through use as example of best practice.
The Faroe Islands face the double insularity of being remote islands with an economy heavily dependent on fishing (accounting for over 90 percent of total exports) and therefore vulnerable to shifting commodity prices. There have been recent attempts to diversify the economic base with new developments in industries such as ICT, telecommunications, financial services, petroleum related enterprises, renewable energies and tourism. Outmigration of young people, however, leads to an ageing resident population with a potential associated skill shortage for new development. The Faroe Islands have a well developed telecommunications infrastructure though the physical distance to non-local markets remains a key market challenge. As remote islands, there is a high level of marine traffic. However, the leisure sector is less well developed.

The Port Authority of Torshaven participated in the Cool Routes project through committing to developments in the Port geared to encouraging leisure craft and fed into the project’s on line booking system by gathering data on marine services in the area. The services are developed with visitors to the Islands in mind, and also a broad range of SME stakeholders. These are businesses which will not solely depend on the yacht tourism market – but it could boost footfall for them.

NPA project interventions have

- **Increased capacity in a new area.** Local SMEs have been able to go on to the on line booking tool, and a new pontoon has been put in place and there has been increased pro-activity in attracting marine tourists.
- **Led to an increase in yacht traffic.** Data is not in on actual yacht traffic, but the impression is that there has been an increase.
- **Increased connectivity and links between service providers.** Networking and cooperation nationally and internationally is a valued result, especially as this was a new area of development.
- **Heightened awareness along the Cool Route of the potential of sea borne tourists.**

The NPA project has the potential to:

- create possible business growth for yacht and tourism service providers.
- create continued development of a new market and increased international profile resulting in increased marine tourism based on the local attributes of these areas such as scenery, foods, peoples, cultures, history and heritage.
- result in economic diversification and entrepreneurial spirit in coastal communities.
Through transnational cooperation this SO aims to contribute to widening market access by supporting the development of marketing concepts and models.\textsuperscript{11} The SO intervention logic is that, through transnational cooperation, a contribution can be made to widening market access by supporting the development of marketing concepts and models.\textsuperscript{12}

### Target Groups

NPA projects in the regions have provided support for SMEs, particularly micro enterprises in new/growth areas of activity. Many of the target areas had high levels of part-time or seasonal employment, e.g. micro enterprises in the travel/tourism and adventure sectors. For the SAINT project, 15 potential beneficiaries were identified in the case study area covering a wide range of activities including kayaking, foraging for wild food, hill walking, and accommodation providers. In the Faroe Islands and Northern Ireland, Cool Routes targeted small businesses linked to the leisure and tourism sectors and direct beneficiaries include cafes and associated services. **Business support providers e.g. local councils and government agencies, and local communities have also benefitted from the projects.**

### Impact

Project impacts are felt locally, nationally and transnationally through, for example, new services and markets, business growth and wider impacts in terms of area marketing and resources and capacity within national-level service providers.

- **Business growth and sustainability, new facilities and services marketed and used.** Project focus was primarily to work with micro-businesses to improve their promotion of activities/services and extend their marketing reach to new overseas and domestic consumers. For example, the SAINT project worked with micro-businesses to improve their promotion of slow adventure activities. The development and success of some slow adventure packages by participating SMEs - 13 new packages created - led to increased business and economic viability of the businesses involved. In the Faroes Islands as well as new ‘virtual resources’, the Cool Routes project has led to new infrastructure in the form of a new pontoon for leisure craft which has been set up. The data on usage will not be available until the end of the season, but the impression is that it is being well used. They have seen some increase in traffic, as previously there was a very low level of leisure craft coming into the port. In Northern Ireland, sailing traffic has developed very quickly on Cape Clear Island during the first year of having a new pontoon that has generated increased revenue for all service providers.

\textbf{The new pontoons at Cape Clear Island have brought a significant level of new business to island enterprises. We have introduced new services to meet the needs of visitors & for the first time ever we have received visits from small liners carrying over 100 passengers. We are very happy at the demand for the new visitor specific services and can report a fairly dramatic increase in other services (food and drink) which leads to more cargo being brought by us.}

\textit{Cape Clear Ferry Service}

\textsuperscript{11} OP NPA, p.38 
\textsuperscript{12} OP NPA, p.38
Increased capacity and skills within SMEs. As part of the SAINT project, SMEs were able to receive bespoke support. The project provided an on-line resource, training, networking/exchange events, clustering and ad hoc advice. These services helped participating SMEs capitalise on business opportunities through greater awareness of new markets, and to share and benefit from best practice on developing consumer experiences, marketing, and customer engagement. For example, the project has built skills, with beneficiaries receiving training on topics like pricing and marketing for new tourist markets. The project also developed an on line promotion and booking system. The pace of change in tourist markets can be challenging for SMEs and the project access to research findings, resources, information on international trends helped participants respond and adapt. The project partners worked very closely with each of the participating SMEs in the area to identify gaps in their expertise and knowledge. For example, a kayaking company was helped to develop its visitor ‘experience’ by developing ‘tour-guide expertise and knowledge’ while another business used the service to help them develop an equestrian tour package, which involved linking up with the local country house hotel. The SME received support in marketing and structuring its pricing for new markets. In the Cool Routes project, an on line booking system, using GIS systems to plot promotional material, allows businesses to see, overall, what is going on in the area and be part of a bigger picture and joint marketing.

Development of new markets. Trans-national branding and clear definitions helped to improve business connections across regions. For example, as part of the SAINT project, the definition of what the ‘slow travel’ concept is helped engage with businesses and market the services they offered. For Cool Routes, the route is now a recognised tourism product and has secured wide international recognition. For the Faroe Islands and Northern Ireland, project activities developed an area that would not have been able to be prioritised by the territory working alone. In the Faroe Islands, the Port of Tórshavn is primarily a commercial port and remoteness means that leisure craft is not a highly developed sector. Nevertheless, the Cool Routes project was an opportunity to work in a new area, diversify, and develop some opportunities for SMEs in the area. Participating SMEs note the increasing number of tourists coming to the Faroe Islands and the need to adapt services to meet changing demand. Yacht based tourism is a niche sector, but through this approach it has been able to link to other sectors in the area. It has provided a new way for businesses to market themselves and engage more widely. SMEs are more aware now of the opportunities that might come from increased yacht traffic. Similar impacts were noted in Derry and Strabane, and it has also linked businesses in neighbouring towns to the coast.

Capacity in business development through new business support resources, tools and approaches. The project partners have benefitted from developing experience and expertise in new ways of working with and supporting SMEs, especially in niche sectors. For the Northern Irish project partner, the project addressed the issue of how to engage/work with/target their rural areas. The reorganisation of local authorities in Northern Ireland mean that Derry City Council merged with Strabane, which is a much more rural/remote region. The authority now had a substantial rural hinterland to develop and could not just look at tourism based on being a city destination. In the rural areas the tourism sector was under developed. Training has been provided that, working alone, the

“This new approach was devised around a collaborative approach from international research and best practice which the project leaders continuously shared through seminars or through networking opportunities with SMEs”.

Wild Strands is a Seaweed Adventure Food Co., which aims through Slow Food Adventure Tours.
District Council would not have been able to provide. New tools such as the online booking systems have also been helpful.

- **Engagement in wider strategic issues.** In both areas the scope to link into wider initiatives has been valuable, e.g. in the Faroe Islands links to other tourist sites and facilities and wider marketing of the ‘traditional’ maritime heritage of the area. For partners the Faroe Islands this fulfilled a ‘corporate social responsibility’ role; to put something back in to the community around the port and the municipality more generally. The service is targeted at leisure craft, encouraging them to visit the wider area and make use of local facilities. Crucially, the service links to local small, and especially micro businesses, in the service and tourism sectors. The SAINT project has led to uptake and influence on wider national and international networks in Northern Ireland and internationally. The national tourist agency, Tourism NI, has noticed the project, has used the cluster as an example of best practice, and is continuing support for the cluster. The Slow adventure cluster in Northern Ireland has been reported on in domestic, national and international media and online sources. Based on this, the cluster has led to much bigger marketing and profile than had been expected. Tourism Ireland (responsible for whole island marketing) has also linked to the work and has put it in their international marketing campaign. This kind of exposure is something that Derry and Strabane Council could not have independently achieved.

For the regions involved, there has been a real benefit in the transnational networking. For example, in the SAINT project, the opportunity for participating SMEs and microenterprises to **experience opportunities in wider markets and promote their business** has been very valuable. Partners note that businesses in remote regions are often ‘solitary’ and do not have the reach and connectivity that this project has been able to provide for them – they could ‘never think in terms of EU wide marketing’. As one explained, ‘the business had been very much focussed on the domestic market and competing on price alone’, with a strong local focus and lack of engagement in wider opportunities. The project allowed **stakeholders to see new products, new market opportunities and work towards realising them.** The project ‘opened eyes’ to the opportunities in the tourist market and chances to compete and operate in a different way by developing a market where people will pay more for a quality visit and something a bit different. SMEs found experience of how to coordinate and develop links and the experience of working together taught them a lot. The transnational relationships that were built were very valuable, particularly those with Ireland and Scotland, and they have been retained. Ireland and NI are continuing to work together using the approach developed, and are involved in the further evolution of the project.

Transnational engagement has also been instrumental in **unlocking bottom up development and working out what really needs to be done in specific areas, building networks that count, and activities that people want to do for the right reasons.** In Northern Ireland, for example, there is an opportunity to build on connections and proximity while in Iceland, the issue was more about how to deal with volume of tourists and get locals more involved. In the SAINT project, there was an opportunity for ten beneficiaries to be involved directly in transnational exchange, with participants travelling to Iceland and Scotland on study visits. For the participants, the opportunity to see things in practice, rather than just hear about the theory and talk to other SMEs, was vital in encouraging them to pursue
the opportunities available, and also in identifying what was distinctive about their own area and what they could offer. This gave them confidence to ‘give things a go’.

**Conditioning/qualifying factors:** Some challenging factors that could be taken into account in the future include the administrative burdens associated with transnational cooperation projects. Project activities are often an ‘extra’ additional activity to which it can be difficult to devote time. In some cases, working in a second language meant that, in order for the activities of the projects to communicated, even within the organisation, everything needed to be translated which was too time consuming. There are some concerns about how on line resources tied to the project will be updated and maintained in the future, as keeping these systems up to date requires time and a level of commitment.

There are some areas where, in hindsight, more could have been achieved and which could be a basis for further activity. The Cool Routes project, for example, could potentially have offered more training. The project offered an opportunity for joint promotion but not direct capacity building (although this is maybe something that could be taken on in the future). For end beneficiaries and potential end beneficiaries, the project could have possibly extended its links wider, enhancing the awareness and visibility of the project. In the SAINT project, there was a sense that more could have been achieved e.g. the further development of transnational marketing rather than each area doing its own marketing. There is the web page, but more could have been done to extend this and test the marketing model further. There were also new opportunities for training and learning, as tourism is such a dynamic and rapidly changing area.

**Future impact**

Marketing material will still be ‘alive’ after the projects end and partners have gained momentum to continue to develop and pursue what was for them new areas of activity. For some beneficiaries who found out about the project and its services late in the process, there is a desire to continue to be more involved in the future. **Work has been adopted and disseminated at regional, national and international levels.** The experience and expertise of cooperation/collaboration is a durable resource for SMEs in the regions and there is a view that there is now **greater capacity to cooperate in the region.** Collaboration has therefore continued within the group but also with partners that they met on the trips. **Joint events have been organised by partners, and a real commitment for further collaboration exists between them.**
2.6 Priority Axis 3: Fostering Energy-Secure Communities through Promotion of Renewable Energy and Energy Efficiency

North Ostrobothnia, like other parts of Finland, has a high share of renewable energy as a proportion of total energy consumed. Finland is also above EU average in terms of its regional energy consumption, in part reflecting the energy intensity of its economy and in part due to the cool climate and high heating demand. Strong efforts have been made to improve energy efficiency, particularly in buildings. The regional energy strategy includes actions to utilise renewable energy sources and improve energy efficiency, including in the region’s more sparsely populated and rural areas.

The Finnish RECENT partner, University of Oulu, carried out a number of energy assessments and feasibility studies in North Ostrobothnia and Lapland to advise pilot communities (e.g. Sodankylä, Enontekiö, Muhos) and others (e.g. the University of Oulu, a private entrepreneur) on tailored energy solutions for buildings and other public infrastructure.

Through a twinning and knowledge exchange approach, the University of Applied Sciences, as Lead Partner of e-Lighthouse, accelerated knowledge transfer within the partnership and within the region by picking up and disseminating best practices from each NPA region.

NPA project interventions have

- increased awareness about the feasibility and cost-effectiveness of renewable energy solutions, e.g. through targeted assessments and feasibility studies, roadshows and exhibitions at municipal construction fairs, repositories of existing successful examples and models.
- increased local capacity to act on energy saving and renewable energy generation opportunities. It provided communities and the managers of public infrastructures with the knowledge of what is possible and to whom to turn as well as creating mentoring/strategic partnerships between municipalities and research institutes.
- helped deliver tangible results in the area of renewable energy generation in public and residential buildings through concrete technical studies and advice.

In the mid run, project results may lead to

- Additional generation capacity for renewable energy being installed, which would also result in energy cost savings and a reduction in CO₂ emissions. A number of the possible solutions that have been studied, those for which cost-effectiveness could be demonstrated, are likely to be realised. One main existing obstacle is securing the financing.
- Long-term attitudinal change towards the economic viability of energy refurbishments in public infrastructure.
- Long-term cooperation between local authorities and universities on energy-related matters, leading to a better transfer of academic expertise into local communities. Municipalities now know where to get help with future feasibility studies or with taking a concrete project forward.
The West of Ireland, in contrast to North Ostrobothnia, has a low share of renewable energy in the total energy consumed and relies heavily on fossil fuels. On the other hand, the final energy use per capita is the lowest in the NPA programme area with a share of household energy consumption of the total energy consumption of around 25 percent. The geography and natural resources in the western part of Ireland provide significant opportunities for development in wind, wood and ocean energy. There exist national and regional support schemes for assisting communities in developing renewable energy, including working with local authorities to help develop district heating systems, as well as involvement in projects to support sustainable energy supplies for remote communities.

Mayo County Council, Water Services, project partner in RECENT, focused on raising awareness of group water schemes (GWS) of the opportunities of generating renewable energy for operating water pumps for the reduction of running costs. GWS are water supply schemes owned by communities and run by boards of volunteers. In County Mayo, GWS supply around 25 percent of households. Mayo County Council, the regulator for community-owned local water assets, supported five GWS in the form of feasibility studies and technical advice.

NPA project interventions have

- **raised awareness and changed mindsets in group water schemes regarding the benefit of own renewable energy production.** So far, the focus of community water schemes has been on water quality. The project managed to broaden the focus and raise awareness of the possibility to cut running costs through own energy generation. Technical studies carried out demonstrated that renewable energy generation is economical, and especially suitable for GWS with low-land sources that require significant energy to pump the water and where there is abundant land is to build e.g. ground level PV panels.

- **raised awareness among Irish decision-makers and the general public about the feasibility of installing renewable energy systems such as photovoltaic panels in cool climates with low solar irradiation.** Projects from other parts of the Northern Periphery, available through the virtual learning platform, serve as positive examples.

In the mid run, project results may lead to

- **Additional generation capacity for renewable energy being installed,** which would also result in energy cost savings and a reduction in CO₂ emissions. One or two of the GWS that received technical advice on the use of RES technology are likely to implement the proposed solution. Existing barriers are the lack of capacities in GWS, which are managed by committees of volunteers, and the high upfront costs of investments. As technology improves, pay-back times of renewable energy installation will drop, making them more attractive.

- **Increased awareness in group water schemes.** As first demonstration projects are being built, awareness is likely to increase. Mayo County Council, Water Services, works with the GWS on a day-to-day basis and will continue promoting RES solutions as well as providing concrete support, e.g. for obtaining funding.
2.7 **Priority Axis 3: Specific Objective 3 – Increased use of energy efficiency and renewable energy solutions in housing and public infrastructures in remote, sparsely populated areas**

Regions in the NPA programme area are facing similar challenges of climate and geographic dispersion. At the same time, there are significant disparities between the levels of development of renewable energies and energy-efficiency due to differences in endowment with renewable energy resources, but also regarding public awareness of existing opportunities and technologies suitable for the specific climatic conditions. Transnational cooperation can raise awareness through the transfer and development of models to help communities access and use renewable energy solutions as well as energy efficient concepts for housing and public infrastructure.

### Target Groups

NPA project interventions directly benefitted:

- local authorities and housing cooperatives through targeted feasibility studies and assessments;
- private home owners through roadshows and information events; and
- group water schemes (GWS) in the specific case of County Mayo i.e. water supply schemes owned by communities and run by boards of volunteers.

### Impact

The analysis identifies both tangible impacts (e.g. additional renewable energy generation), and intangible impacts (e.g. changed attitudes, increased awareness and enhanced capacities):

- **Increased awareness on technical and economic feasibility of renewable energy generation in cool climates.** In some parts of the NPA programme area, there is still a lot of scepticism among policy-makers and the wider public about the technical and economic feasibility of generating renewable energy, given their specific climatic conditions. Positive examples from other parts of the Northern Periphery have provided convincing arguments in favour of the expansion of renewables across the programme area. Awareness has also increased by providing tailored advice to, e.g. local authorities, housing associations and group water schemes, but also private sector representatives. Advice was mostly provided in the form of concrete feasibility studies in a number of pilots, focusing on the technical as well as the economic feasibility of tried-and-tested, but sometime also novel technologies. In the case of the group water schemes (GWS) in Mayo County, the technical studies carried out demonstrated that own renewable energy generation is economical and especially suitable for GWS with lowland sources that need a lot of energy for pumping. While, so far, the focus of GWS has been on water quality, Regina managed to broaden it and raise awareness of the topic of cutting running costs through own RES generation.

- **Increased local capacity to act on opportunities deriving from renewable energy generation.** Projects increased the knowledge in local authorities about the most suitable options for the deployment of renewable energy generation capacities, given the specific local...
context, their investment costs and payback time. Projects provided them with concrete solutions and tools to act upon. Small municipalities benefit from the fact that, contrary to large municipalities where there is more compartmentalisation, one entity works on different issues. That fosters the implementation of holistic solutions that provide multiple benefits (e.g. energy generation, job creation, environmental benefits, etc.). Capacities in municipalities were also enhanced as a result of the strategic partnerships established in the projects between municipalities and research institutions, which allow them to access technical expertise also in the future. Furthermore, twinning partnerships between local authorities supported the transfer of good practices across the NPA area.

- **Energy saving and renewable energy generation.** Projects helped bring about tangible results in the area of energy saving in public and residential buildings, which were retrofitted, following concrete technical advice provided to building supervisory authorities.

### Transnational

The main added value of transnational cooperation resides in the transfer of know-how. This was achieved through mentorship between local authorities and between local authorities and research institutions. In the scope of the RECENT Policy Influencer Programme, a meeting between Irish and Scottish decision-makers was organised, aiming at mutual learning: while Scotland is ahead of Ireland in terms of availability of energy advisory services, Ireland has developed interesting solutions regarding the management of community water supply schemes.

### Future

**Conditioning/qualifying factors and future impact** – The opportunities to realise the different energy solutions being developed by projects vary considerably: some solutions are on the verge of implementation while others are unlikely to come to fruition. This is mostly because either the assessment showed that the solution was uneconomical or unfeasible or because the financing could not (yet) be secured. In cases where advice provided has already led to the realisation of the proposed solution, these have created tangible impacts in terms of energy savings and additional renewable energy generation capacity. It is plausible to assume that more will be realised in the coming years given that investment decisions typically take quite some time. As regards the GWS, the expectation is that once the first pilots have been realised, they will serve as a demonstration projects and inspire others to follow.

However, there are also a number of possible factors curtailing the impact of NPA projects on the energy performance of residential buildings and public infrastructures, in particular:

- Limited financial resources of local authorities and difficult access to funding for investing into sustainable energy technology;
- Still low capacities in small municipalities to seize the opportunities as other topics are prioritised;
- Still high scepticism in some parts of the NPA area about the viability of RES generation due to the specific climate conditions.
2.8 Priority Axis 4: Protecting, Promoting and Developing Cultural and Natural Heritage

Mining and quarrying is one of the largest industrial sectors and employer in Lapland. However, mining and other industries also threaten the intact environment and social fabric of small communities and another important source of livelihood in the region, which is reindeer herding. Reindeer herding is strongly, but not exclusively, connected to the Sami ethnic group in Lapland. Since Lapland’s municipalities have far-reaching decision-making powers regarding the issuing of mining permits, they are also faced with the need to develop a clear stance regarding the development of mining on their territory that has the support of the local population and businesses to avoid potentially escalating conflicts.

The city of Rovaniemi and the municipalities of Kilpisjärvi and Enontekiö tested, with the help of the Natural Resources Institute Finland, lead partner of BusK, the use of participatory planning GIS tools to involve locals in the mapping of actual land uses. Results were discussed in open workshops on land use issues in relation to mining, tourism and reindeer herding. Sodankylä municipality developed, in a participatory process, and using the social impact management planning approach developed in Regina, a ‘mining programme’. This politically endorsed strategy document sets out general principles that are applied when assessing future mining developments in the municipality.

NPA project interventions have

- increased capacities in municipalities to deal with existing or potential future land use conflicts. It has provided them with techniques to involve the public in a more engaging way, tap into their knowledge, build trust between all parties (public authorities, citizens, mining companies, etc.), but also to better defend the municipalities’ interests vis-à-vis mining companies.
- created strategic partnerships and international ties. Involved municipalities have learned to use domestic research institutions as well as the international connections established in the project as a resource. Among other benefits, this has led to the joint management of a NO-FI cross-border nature area.
- raised awareness of local decision-makers of the value of involving locals and indigenous people and their knowledge in planning and decision-making.

In the mid run, project results may lead to

- more integrated land use planning and management in the participating municipalities. However, this depends strongly on how well they manage to lift up personal capacities that were built in the projects and turn them into institutional capacities. Risks are that increased capacities stay only with selected individuals and get lost once these persons move job or see their contract terminate after the end of the project.
- a greater share of the benefits of the economic activities linked to mining stays with the municipality and social impacts are better mitigated. This depends on whether the social responsibility agreement that is currently negotiated in Sodankylä can be successfully concluded. The interest and commitment that mining companies have shown so far are positive pointers. The fact that the approach, transferred from the Greenlandic partner, has stirred a lot of interest might mean that other municipalities follow the example, leading to a wider impact in Lapland.
Northern Sweden boasts an extensive and rapidly growing mining industry, with Västerbotten being in the centre of it. According to estimates, only 20 percent of the mineral assets in the area have been exploited so far. New mines open almost annually, and a significant number of new exploration permits have been granted in recent years. Alongside mineral explorations, the infrastructure is developed to keep up with the needs of the expansion of the mining industry: ports are deepened, roads are improved, and the railway network is extended. These developments fuel land use conflicts, especially with tourism and reindeer herding, a traditional livelihood of the Sami indigenous group.

With the help of the Swedish University of Agricultural Sciences, the reindeer migration route and grazing grounds of the "Grans Sameby", one of 51 reindeer grazing districts in Västerbotten, was mapped using an existing participatory planning GIS tool. Providing good data on reindeer herding had become necessary due to the planning of a new railway corridor, which crosses the route.

Storuman municipality tested a number of decision support methods: a demographic model for combining population projections with different scenarios of labour market impacts of large-scale industry development, methods for identifying economic areas with future growth potential, approaches to social impact management, etc.

NPA project interventions have
- Increased awareness in Storuman of the importance of and capacities for preparing proactively for possible future large-scale industrial developments. It evidenced the value of putting resources into forward-looking planning, previously questioned by local politicians.
- Enhanced trust and cooperation between stakeholder groups in Storuman and with the mining companies. Public participation and community-company dialogue in the municipality has improved and become more fact-based and less emotional. Talks with the mining companies on a social responsibility programme have been taken up.
- Led to greater consideration of reindeer herding in transport planning and municipal spatial planning due to the now excellent data situation. As a consequence, the Swedish transport authority agreed to building two eco-ducts for reindeers to safely cross a national road and the planned railway.
- Led to new forestry techniques that help navigate the reindeers into the paddock without the need for snowmobiles to roundup the herds.

In the mid run, project results may lead to
- Municipalities being better prepared for dealing with large-scale industrial development. Plans are in place in Storuman to develop a binding mining strategy that will be annexed to the next revision of the general land use plan and to conclude a social responsibility contract between the municipality and the mining companies to ensure that a greater share of any economic benefits linked to mining stay within the municipality and that social impacts are better mitigated. This model will set an example, which, given the interest it received so far, might be emulated by others.
- A more systematic and automatic consideration of reindeer herding in planning. Following the example of the Grans Sameby, other sameby are working on improving the geographical data of their migration routes and pastures, allowing (transport, municipal, etc.) authorities to consider reindeer herding in a more systemic way in planning.
2.9 Priority Axis 4: Specific Objective 4 – Increase capacity of remote and sparsely populated communities for sustainable environmental management

Environmental, economic and social impacts resulting from large-scale investments are often beyond the ability of individual communities to deal with. Transnational cooperation can build local capacities by facilitating good practice transfer, developing decision making tools to help identify sustainable solutions and pooling expertise through strategic partnerships.

Target Groups

The projects BusK and Regina focused on building capacities for better informed and more inclusive land use planning in public administration in remote municipalities in low density areas, in particular those affected by mining developments. Thanks to the project’s attention on improving public participation in land use planning, interventions have ultimately benefited the entire local population and businesses, in particular the indigenous population.

Impact

The analysis identifies a number of impacts, mostly of a more intangible nature, such as changes in capacities to handle land use conflicts and attitudes, e.g. towards public participation. Direct project results ultimately contribute to more sustainable and resilient communities.

- **Increased capacities in small communities.** Projects managed to increase capacities in municipalities for mitigating adverse effects of (large-scale) economic activity and infrastructure development, in particular connected to mining and tourism, but also for ensuring that economic benefits trickle down to the local population. Capacities were built through:
  - the transfer, between research institutions and local authorities, of techniques to involve the local population in an engaging way and tap into their knowledge, and of strategic decision making support and planning methods to actively prepare for different development scenarios;
  - the transfer, between local communities/ reindeer herders, of good practices on how to better defend the interests of municipalities and reindeer herders vis-à-vis the mining companies; and
  - the creation of strategic (transnational) partnerships, between research institutions and local authorities /reindeer herders, but also between local authorities.

- **Increased awareness.** Project interventions increased awareness in local authorities of the importance of active stakeholder involvement and forward-looking (scenario) planning. Previously, local politicians had questioned the value of investing resources into preparing for an uncertain future. Peer-to-peer exchange acquainted Finnish and Swedish local authorities with the social-licence-to-operation model used in Greenland to ensure an effective sharing of benefits from mining.
- **Community and trust building.** Public participation and community-company dialogue built trust between all parties, increased understanding of each other’s positions, and prepared the ground for constructive co-planning. Regina demonstrated that the evidence gathered through scenario-assessments support a more fact-based discussion regarding mining activities in municipalities. Also in two municipalities (Storuman/SE and Sodankylä/FI), talks with the mining companies on a social responsibility programme have been taken up.

- **Preservation of traditional livelihoods of indigenous population.** Capacities were built in the Sami community to warrant their interests vis-à-vis the (transport) authorities, mining companies and other sectors (e.g. forestry). One concrete result was the Swedish transport authority’s commitment to build an eco-duct over the new railway line for the reindeer.

Transnational cooperation led to the transfer of successful models between municipalities and produced several cooperation spin-offs. Peer exchange between municipalities across the Northern Periphery and Arctic territory on the different approaches to managing mining activities, reindeer herding and tourism helped to understand them in their context to assess their transferability. As a direct result:

- two municipalities entered into a dialogue with mining companies, inspired by the Greenlandic & Canadian ‘social-licence-to-operated’ model of benefit sharing between mining companies and municipality;
- two municipalities decided to jointly manage a transboundary nature area and apply for a Europarc Transboundary Park status;
- bordering Swedish and Norwegian municipalities are intensifying cross-border cooperation also outside the project activities.

Future

Conditioning/qualifying factors – The analysed projects both meet a pressing need in their regions. They successfully managed to involved small municipalities in areas rich in mineral resources that are either already exploited, or likely to be exploited in the near future and therefore particularly prone to conflicts over competing land uses for natural resource extraction, infrastructure development, tourism and recreation and traditional reindeer herding. They benefitted strongly from the partnership with research institutions.

Project partners in the case study regions confirmed that projects contributed to enhancing capacities for the management of environmental, economic and social impacts resulting from large-scale investments. The effect on local capacities can be to some extent attributed to the fact that project funding brings additional resources, which allow municipalities to hire additional personnel for a limited period. This tangibly increases resources in small municipalities that are otherwise rather poorly staffed. How well this effect is carried over into the post-funding period depends considerably on the ability of the municipality to transfer personal capacities into institutional capacities and build institutional
memory. This partly depends on external factors, such as staff turnover, but also on whether clear responsibilities for following up on the project's results are defined.

The BusK project experimented with participatory GIS tools. In the case of Lapland, the tool first had to be purchased, while in Västerbotten an existing tool was used. These different starting conditions partly explain why it was possible to deliver concrete results in Västerbotten a year before project finalisation, while in Lapland much more time was need for adapting the tool to local needs. In Västerbotten, the effect of BusK on the capacity of samebys to provide documentation of their land use for reindeer herding is likely to increase. Other samebys have already started mapping migratory routes and pastures, adopting the way of working introduced in BusK. Improved mapping ultimately means that the interests of reindeer herders can be better defended vis-à-vis other land uses.

**Future impact**

In the mid and long term, and depending on some of the qualifying factors described above, NPA projects may trigger a cascade of impacts including:

- **Long-term change of mindsets** regarding the importance of a more integrated, participatory, proactive and future-oriented approach to planning and decision-making in local authorities.

- More **integrated land use planning and decision-making and tourism management**.

- **Greater preparedness** of communities (i.e. municipalities, samebys) for possible future large-scale industrial / mining developments.

- Ultimately, more **sustainable (environmental, social, economic) development** of remote and peripheral communities.
Contributions to the horizontal themes examples:

- **Sustainable**: new models and methods for sustainable management; capacity and awareness of key issues, improved energy efficiency
- **Inclusion and diversity**: youth engagement, empowering local and indigenous communities, services for elderly
- **Equality**: issues linked to gender segregated labour markets, improved access to services and support

**Arctic**

- Programme role in Arctic collaboration results
  o Greater regional/territorial profile in EU Arctic policy
  o Projects with Arctic impact
  o Scope to enhance and disseminate project impact
  o Link to engage ‘near-Arctic’ to wider debates and developments in the Arctic

**Macro-regional and Sea Basin Strategy**

- Programme and project and engagement in relevant areas
3. HORIZONTAL THEMES: SUSTAINABILITY, INCLUSION & EQUALITY

NPA projects address the horizontal themes through:

- **Direct results**, e.g. project contributions to the horizontal themes, e.g. energy saving and environmental protection, youth engagement. The Programme’s capacity to connect regional economic development interventions to wider social and environmental objectives is an important and valued characteristic;

- **Associated results**, e.g. use of ICT to reduce the need to travel distances and address social barriers and stigmas;

- **Operation and implementation**, e.g. representation of females in entrepreneurship initiatives; use of locally sourced materials and resources; use of green business models; efforts to help underrepresented groups such as unemployed youth, indigenous groups, small language groups; and gender balance within project group.

### Table 2: NPA projects and the Horizontal Themes

<table>
<thead>
<tr>
<th>Sustainability</th>
<th>Inclusion and diversity</th>
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<tbody>
<tr>
<td>Circular Ocean</td>
<td>E Lighthouse</td>
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<tr>
<td>- Practical actions to address issue of marine waste and awareness raising</td>
<td>- working directly with third sector</td>
</tr>
<tr>
<td>- Recent - Training, pilot plans and awareness raising on climate change mitigation and adaptation through local climate projects</td>
<td></td>
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<tr>
<td>- E Lighthouse – Improved energy efficiency direct impact on reducing energy consumption and CO2 emissions</td>
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<tr>
<td>- Ascent - Environmental management plans</td>
<td></td>
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<tr>
<td>- Waterpro - Addresses issue of global climate change will increase the frequency of floods and water runoff volumes</td>
<td></td>
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<tr>
<td>- Drifting apart - develop a model of sustainable management of geological and heritage areas</td>
<td></td>
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<tr>
<td>- Regina - Knowledge and information on how to avoid or reduce the effects of large-scale investments in extraction of mineral resources, oil and gas.</td>
<td></td>
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<tr>
<td>- BusK - Collaborative land use planning in a way that helps to preserve and protect sensitive environment in the Arctic</td>
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<tr>
<td>- Secure - Green ethos embedded into project planning and activities.</td>
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<tr>
<td>- Reduce carbon footprint by grouping meetings together to ensure no double travel trips, use of teleconference facilities between partners. Printing will be kept to a minimum &amp; public transport use encouraged</td>
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<tr>
<td>- Drifting apart - Low carbon transport opportunities will be investigated. When possible travel avoided</td>
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<tr>
<td>- Waterpro - Focus on sustainable methods of communication; Green procurement procedures</td>
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<tr>
<td>- Urchin - included also work looking at environmental impacts</td>
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<tr>
<td>- Rye Connect - Youth entrepreneurship</td>
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<tr>
<td>- BusK developing and providing tools, methods and practices that enhance the use of indigenous and local knowledge; develop methods that empower local communities</td>
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</tr>
<tr>
<td>- REGINA - support communities by addressing better ways to absorb and develop immigrant and guest workers’ skills; provide knowledge and information on how</td>
<td></td>
</tr>
</tbody>
</table>
communities in peripheral areas will become and remain attractive places for especially young people; human resources of an increasing ageing population.

- Secure - Opportunities will be sought to engage with 16-25 year olds and the aged in project activities.
- Drifting apart – use of virtual tools improves accessibility amongst all groups.
- REGINA - support the development of the tradition-based economies, especially those run by indigenous peoples such as the Inuit in Greenland and the Sami in Norway, Sweden and Finland.
- Remoage - provides digitalised health care services to a vulnerable sector, in particular to older and vulnerable people.

Equality

- E light house - Considered equal opportunities and access in dissemination materials and events
- Commitment to supporting gender balance
- Secure - Equal representation will be mandatory at all project operational levels,


As well as project interventions, Programme-level actions supporting the horizontal themes are also noted. In 2017, the Programme launched micro projects, which aim to build up capacity and experience for participants from specific under-represented groups (women, young people, and indigenous peoples) to make them better equipped to participate in NPA main projects. In 2018, the Programme undertook a workshop to look at how to develop and embed its work on the horizontal themes.

The identified contributions can be continued, intensified and expanded in the future, particularly taking into account the following issues.

- Push beyond ‘stock’ answers and highlight further strengths in relation to all three of the horizontal themes. In many respects, the principles are so embedded in project thinking that stakeholders are less aware of their specific role in these fields than they could be. This is apparent in project reports, where a narrow focus on the issues involved results in ‘standard’ statements on issues such as the representation of male and females. These statements do not do justice to the wider impacts of projects on, for example, promoting and developing key sectors with high levels of female employment.
- Connections to wider strategic issues can and should be made, even though results and impact in the longer term is difficult to measure.
- More direct programme engagement with under-represented groups and support to disseminate and maximise results.
- The Programme itself can make a statement on how Programme bodies and organisations work in line with the horizontal themes, leading by example.

13 The small scale of the Programme’s resources relative to the scale and scope of the issues and the embeddedness of the horizontal themes in much of the programme area potentially limit the extent of ‘identifiable’ impact.
4. ARCTIC TERRITORIAL COOPERATION AND WIDER STRATEGIES

4.1 Arctic Territorial Cooperation

The Programme as a whole, and the projects, have contributed to the ‘Arctic dimension’. The Programme adds a ‘regional development level’ to EU Arctic Policy, and reinforces and strengthens wider NPA activities, objectives and areas. The Arctic Cooperation network, led by the NPA, has proved to be a fruitful exchange supported by INTERREG CBC programmes in the area, and is extending its influence to include ENI programmes. The cooperation facilitates exchange of information, plans and coordinates calls for cluster projects, and runs an Arctic Award scheme. Programme efforts and collaboration between programmes also resulted in project clusters (Arctic and North European Energy Cluster). One option for the future would be to extend participation to relevant national and international financing instruments.

The current programme period also provides a ‘learning platform’ paving the way for future cooperation in the post-2020 period. Based on experience from the current period, the success of the network cooperation is dependent on the active involvement of all the programmes. There is scope for ensuring that all the involved programmes are clear from the outset with regard to the Arctic focus of the new period. In the case of the Karelia CBC, for instance, the Arctic element and coordination was introduced rather late into the programming process. Furthermore, the definition of Arctic dimension needs to be clearly focussed to maximise the benefits and to avoid the risk of ‘Arctic’ encompassing almost everything. The NPA works with specific Arctic criteria for projects, but this is not necessarily the case for the other programmes. The NPA cannot force change in other programmes, but as a lead in the cooperation network it can build dialogue with, and between, programme bodies.

Arctic project criteria are used to inform and support NPA projects. In the first two calls, 16 out of the 18 projects include at least one partner from the Arctic part of the programme area, and all the 16 projects support themes which are of particular significance for the Arctic territories (see Table 3). Also worth noting is the value and impact of links to the Arctic for partners outside the Arctic region and links to Arctic ‘near neighbours’. Near neighbour links build critical mass and scope for project activities to gain profile and visibility via a ‘link to the Arctic’ due to the wider political, economic, social and environmental relevance of the region, all of which have associated benefits for Programme and project impact. An accompanying briefing paper provides more detail on the evaluation’s assessment of impact in this area.

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14 Lappland (FI), Norrbotten (SE), Finnmark (NO), Troms (NO), Nordland (NO), Iceland outside Reykjavik (IS), Greenland (GL)

## Table 3: Project impact and links to Arctic themes

<table>
<thead>
<tr>
<th>Project</th>
<th>Clean technology for Arctic sectors</th>
<th>Energy / resource efficiency</th>
<th>Environmental protection for cold climate</th>
<th>Project</th>
<th>Support for core entrepreneurial skills</th>
<th>Support for Arctic products and cultural heritage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMARTFISH</td>
<td>✓</td>
<td></td>
<td></td>
<td>SMARTFISH</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>URCHIN</td>
<td>✓</td>
<td></td>
<td></td>
<td>URCHIN</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>circular ocean</td>
<td>✓</td>
<td></td>
<td></td>
<td>RYE</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Florian</td>
<td>✓</td>
<td></td>
<td></td>
<td>ADVENTURES</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Business Alliance</td>
<td>✓</td>
<td></td>
<td></td>
<td>BUSINESS RISE</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>Distance-spanning technology</td>
<td>Clustering in Arctic sectors</td>
<td>Pooling of resources</td>
<td>Project</td>
<td>Involving underrepresented groups in the design of solutions</td>
<td>Solutions tailored for Arctic lifestyle</td>
</tr>
<tr>
<td>SMARTFISH</td>
<td></td>
<td></td>
<td></td>
<td>SMARTFISH</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>URCHIN</td>
<td></td>
<td></td>
<td></td>
<td>URCHIN</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>round trip</td>
<td>✓</td>
<td></td>
<td></td>
<td>RYE</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>TED</td>
<td>✓</td>
<td></td>
<td></td>
<td>ADVENTURES</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Aleón</td>
<td>✓</td>
<td></td>
<td></td>
<td>BUSINESS RISE</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

### 4.2 Macro-regional and Sea Basin Strategies

As well as engagement with the Arctic, the Programme is expected to report on links to macro-regional and Sea Basin Strategies. The NPA area does not directly correspond to a specific strategy, but overlaps in some areas with the European Strategy for the Baltic Sea Region and EU Action Plan for a Maritime Strategy in the Atlantic area.

The thematic range and coverage of the strategies mean the NPA is funding projects that ‘fit’ with the objectives of the MRS/Action Plan. In particular, a number of projects have very direct relevance to the strategies, e.g. Cool Routes to the Atlantic Area. At a programme level, the NPA highlighted its contribution to the EU Atlantic Strategy at the 2017 NPA Annual Conference *Blue Opportunities: The Marine Economy in the NPA*, held in Galway.\(^{16}\) It has also engaged directly by participating in two Atlantic Area conferences, in 2017 and 2018.

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\(^{16}\) NAP (2018) Annual Implementation Report (draft),
Table 4: Baltic Sea Macreoregional Strategy and Action Plan for Maritime Strategy in the Atlantic Area

<table>
<thead>
<tr>
<th>Partner Countries: DE, DK, EE, FI, EE, LT, LVT, PL, SE</th>
<th>Cooperation with: Norway, Iceland, Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 pillars:</td>
<td></td>
</tr>
<tr>
<td>save the sea</td>
<td></td>
</tr>
<tr>
<td>connect the region</td>
<td></td>
</tr>
<tr>
<td>increase prosperity</td>
<td></td>
</tr>
<tr>
<td>4 horizontal axes:</td>
<td></td>
</tr>
<tr>
<td>capacity</td>
<td></td>
</tr>
<tr>
<td>climate</td>
<td></td>
</tr>
<tr>
<td>neighbours</td>
<td></td>
</tr>
<tr>
<td>spatial planning</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project: WaterPro, Circular Ocean, ASCENT, Busk, Grebe, Recent,</th>
<th>Programme:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Collaborative working with neighbouring Interreg programmes building stronger basis for collaborative working in the region</td>
<td></td>
</tr>
<tr>
<td>- Reporting by the programme</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EU Member States, France, Portugal, Spain, the United Kingdom and Ireland</th>
<th>Aims to revitalise the marine and maritime economy in the Atlantic area.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority 1: Promote entrepreneurship and innovation</td>
<td>Priority 2: Protect, secure and develop the potential of the Atlantic marine and coastal environment</td>
</tr>
<tr>
<td>Priority 3: Improve accessibility and connectivity</td>
<td>Priority 4: Create a socially inclusive and sustainable model of regional development</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project: Cool Routes SAINT C.L.I.M.A.T.E</th>
<th>Programme:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Participation in Atlantic Stakeholder Forum;</td>
<td></td>
</tr>
<tr>
<td>- Blue Growth Theme in Annual Conference</td>
<td></td>
</tr>
</tbody>
</table>


For many projects, links and associations are generally ‘happy coincidences’ rather than planned connections. In the future, for some projects, **active connections, contributions and compatibilities could be a useful basis from which to publicise and disseminate projects** to wider policy and stakeholder audiences, especially beyond the Interreg community. However, the way that the MRS/Action plans are set up can make them challenging to engage with, and it would be important not to spread programme efforts too thinly and undermine the progress made in relation to Arctic cooperation.
CONCLUSIONS

NPA is delivering impact:

Transferable concepts, ideas, services and tools have been developed as well as locally-tailored solutions

Impact: Highly significant to localities, individuals and organisations. Cumulative impact building at the regional, national and transnational scale and impacts demonstrate an increased capacity within the area for external engagement and action on key development issues

Transnational dimension brings a distinct role/value

Impacts will grow/persist, e.g. through spin offs, new projects, dissemination and wider adoption

The Programme is producing results that target specific development needs on the ground and wider strategies

The NPA is well positioned to adapt to the demands of the proposed 2021-2027 regulations, but major uncertainties remain, most notably Brexit

Further programme actions can be taken to maximise impact and readiness for the 2021-2027 period
5. CONCLUSIONS

5.1 Impact

- At the current stage of programme implementation, what evidence is there of tangible and intangible results? Who has been impacted? What is the scale of results?

Analysis of the Programme at the current stage of implementation shows that it is delivering impact. Key areas\(^\text{17}\) are listed in Table 5. Case study evidence suggest that are delivering tangible and intangible results and have the potential to do so in the future.

Table 5: Areas of Impact

<table>
<thead>
<tr>
<th>Specific Objective</th>
<th>1.1</th>
<th>1.2</th>
<th>2.1</th>
<th>2.2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SME-R&amp;D– public sector links in new place-relevant areas of economic development</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased knowledge base, connectivity and profile in new business opportunities in specific sectors and markets resulting in business growth, competitiveness and new start-ups</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved service and capacities in business support</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New implementation frameworks and management systems</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity in digital service delivery</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity to act on energy saving and renewable energy</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased efficiencies in service delivery to remote communities</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased transnational and international profile</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changes in attitudes and perspectives</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Strategic partnerships and international ties</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Local-capacity to engage with 'macro' development issues</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Community resilience and quality of life</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Emerging and potential results, e.g.
- Improved access to services in remote communities
- Time and cost savings (travel, service provision)
- CO2 savings & reduced energy consumption
- Reduced environmental impact and risk reduction
- Business development (business growth, business sustainability & new start-ups)
- Job creation
- Community capacity, competitiveness and resilience

\(^{17}\) These categories derive from the analysis.
For example\textsuperscript{18}, SO 1.1 case study projects resulted in improved management of targeted species and new business and growth opportunities. SO 1.2 projects lead to efficiencies and new options in service delivery and policy influence. SO 2.1 delivered new start-up, business growth and new, tailored business support capacity. SO 2.2 increased SME capacities, skills and business and build local business support capacity and resource. SO 3 increased capacity and stakeholder awareness in key issues around renewable energy generation and increased energy saving in public and residential buildings. SO 4 contributed to community capacity to engage in large-scale economic development/change, supporting the livelihoods of indigenous populations.

Beneficiaries are in line with the Programme’s planned target groups, e.g. SMEs, R&D institutions, local and regional government and agencies and NGOs, but also include wider communities and stakeholder groups. The strong involvement of end users of project outputs as partners or associated partners has been a success factor. Challenges remain regarding the direct engagement of SME’s as project partners. This is largely due to difficulties of matching SME’s needs and planning cycles with the requirements on NPA projects in terms of time and administration. In addition, in some cases and at this stage in the project/programme implementation process, impacts can still be strongly centred on the project partner, and work could continue to disseminate and widen impacts.

Nevertheless, the transnational/cross-sectoral/network approach means impacts are not limited to single groups, or experienced in isolation. \textit{Support for one target group has knock-on impacts for others.}

\textbf{Figure 10: Beneficiary links}

Through the projects it funds the NPA develops \textit{transferable concepts, ideas, services and tools}, see Table 5 and Annex 1. One of the strengths of the NPA Programme is its practice orientation and

\textsuperscript{18} Impacts are also discussed in detail in Section 2 of this report.
focus on tangible outputs. At the same time, facilitated by the critical mass and networks that transnational cooperation provides, the projects supported offer:

- **tailored solutions** to specific issue, e.g.
  - a niche economic activity specific to some territories; and
- **locally-based way to address ‘macro’ development issues**
  - environmental protection;
  - impacts of climate change;
  - demographic aging; and
  - community resilience and inclusion.

Thus, the scales at which impacts are felt differ, and are interdependent, see also Annex 1, e.g.:

- local impact enabled by transnational cooperation;
- regional and national impact initiated by transnational cooperation and supported by local, regional and national dissemination; and
- transnational impacts enabled by capacity to demonstrate results on the ground - locally.

The magnitude of impact can be highly significant to individuals, organisations, and localities, e.g. improving the quality of life for patients, or growth of a particular business. Direct impact becomes more diffuse at regional levels, as many actions are based on tests, demonstrations and pilots that may/may not be taken up. In addition, the number of project interventions per region is low, even though it varies considerably across regions and priorities, and interventions are often local and selective. Nonetheless, the survey of 2007-13 NPP projects has shown that, within regions, projects can deliver wider impacts in the medium term. Focus group findings also suggested evidence of ‘project chains’, e.g. Northern Finland, where networks start working on one area and this jumps into other areas. The mechanisms that lead to wider and durable impacts at regional scale or beyond are complex and in many instances beyond the control of the Programme and project stakeholders. Case study evidence suggests that, cumulatively at the national and transnational scale, impacts demonstrate an increased capacity within the area for external engagement and collaborative action on key development issues.

- **What has been the impact of cross-border/transnational collaboration on the project/project results?**

The transnational ‘umbrella’, with its cross-sectoral and transnational links, enables local stakeholders to access know how, tools and approaches, re-evaluate their own strengths and opportunities, and build capacity to implement change, see also Annex 1. The added value of working transnationally was highlighted in both case study interviews and survey data, with the majority of respondents noting that transnational cooperation had enabled them to work in a way, scale, level and or grouping that would not be possible through national/sectoral funding sources. Key points raised were the transnational dimension brings a distinct role/added value by:

- working with areas/stakeholders facing common and related challenges, but also distinct expertise, perspectives and local experience – an opportunity to see where specific strengths and weaknesses lie as well as where there are common links;
- working in new ways on traditional topics/sectors, gaining new perspectives;
- working across sectors and across different stakeholders;
- providing an opportunity to link local/place-specific development issues with wider policy and practice networks;
• providing a chance to learn, and develop knowledge and skills, but with a very practical/practice-oriented approach;
• creating cooperation spin-offs. Transnational projects bring together actors that otherwise would not meet and provide a framework for exchange and collaboration. The rewarding experiences gained inspire and motivate many of them to take forward the cooperation to new areas and projects.

The NPA’s transnational dimension, therefore, adds value to, and complements, domestic and sectoral policy interventions for a range of stakeholders groups.

**Figure 11: Value of transnational dimension**

The Programme achieves this by:

- **Enabling** - Stakeholders are enabled to take action on place-relevant development issues and operate in wider policy and practice fora.
- **Engaging** – Cross sectoral, multi-level, and transnational engagement is a particular way in which transnational cooperation opens up new development opportunities. NPA transnational cooperation brings unique constellations of stakeholders together to work on shared development opportunities and concerns.
- **Delivering** – The action/result orientation of the NPA programme and grounding in programme area needs enables the delivery of tangible and intangible results of value/adapted to the area, and offering scope for wider dissemination and impact.
What evidence is there of likely future results?

At present, the magnitude of the direct tangible results is modest, as would be expected at this stage and for this type/scale of programme. However, based on the experience of the 2007-13 projects and Programme, it is reasonable to assume that this impact will grow/persist. This is particularly the case for the regional, national, transnational dimensions of impact, which can take time to grow from locally based, e.g. pilots and trials. Mechanisms through which future results are pursued include:

- transnational cooperation continuing post project;
- transfer of results to other areas and uses;
- further development of outputs and research;
- spin-offs and alternative uses;
- use and application of resources;
- improved access and use of services bringing associated gains;
- increased policy profile and influence; and
- new projects.

5.2 Programme area and strategies

What specific needs/challenges of the programme area are addressed successfully by the Programme? What are the links to Europe 2020, Arctic and Horizontal themes?

The Programme is producing results that target specific development needs on the ground which

- makes the contribution of the Programme clear,
- reinforces its rationale, and
- builds support amongst stakeholders.

The Programme also engages with wider strategic issues through developing practical responses that local communities can engage in, identifying and promoting areas where transnational cooperation can add value to existing EU and domestic interactions, and facilitating activity in wider cooperation fora, e.g. on the Arctic.
The emerging impacts from the NPA programme are in line with Europe 2020, feeding in directly in some cases, and more generally to the overall goals and targets of the strategy. Links can be cross sectoral with interventions in one area supporting another. Given the scale and scope of the Programme, direct contributions to Europe 2020 targets will be slight. Due to thematic concentration, contributions will be weaker in some areas, such as education, than others, such as R&D. Looking to the future. These strategic links are important for the Programme to identify its value and role in addressing strategic goals and capacity to engage with future ETC objectives.
Results and Programme actions are also consistent with the Programme’s horizontal themes and Arctic dimension. In both cases, Programme actions support and reinforce project impacts, for example:

- NPA leadership of the Arctic Cooperation network;
- engagement with Atlantic Area and conference thematic focus; and
- support and ongoing development of work on horizontal themes.
5.3 Planning for the future

- **What does this mean for the future: maximising impact, Brexit, and reforms?**

**Maximising impact:** The case studies highlight areas of impact and strength the Programme can build on. They also highlight areas where there remain potential challenges and barriers, which should be taken into account in future planning:

- The focus on deliverable results and tangible outputs can run the risk of overshadowing the transnational elements of the project.
- There are still challenges in directly engaging some key stakeholder groups in project activities, e.g. SMEs.
- How to make projects transnational from ‘root to tip’? Some projects have built in an element where end users experience the transnational dimension of the work and this is highly valued.
- How to make project outputs durable in the long-term, e.g. who ensures that improved personal capacities are transformed into institutional capacities or that responsibilities for maintaining project outputs and following up on project results are defined?
- How to maintain momentum post-project? There is a lot of enthusiasm and new ideas that result from the process of cooperation. The Programme does not want to be in a position of funding ‘serial applicants’. However, the Programme, and wider community, should not lose out on the drive, enthusiasm and new ideas that result from the cooperation process.
- The practical challenges to dissemination/wider adoption when working in a second language. Basic activities like translation take time and project activities are often already ‘additional’ to existing work.

**Brexit:** Another major uncertainty for the Programme is the implications of Brexit. HM Treasury has extended its guarantee for UK partners securing funding through EU programmes, from now until the end of 2020, even in a no deal scenario. At the time of writing, no subsequent formal statements have been made on scenarios for the 2021-2027 period. Thus, the following assessment is only the view of the evaluation team.

Despite the approaching deadline of 29 March 2019, much uncertainty persists around Brexit. Within the NPA, Scottish and Northern Irish regions:

- make up a significant part of the geography of the Programme area and connections to Ireland;
- bring a large proportion of programme budget; and
- bring active experienced project partners with long standing commitments to the Programme.

Without their involvement, the Programme will have to adapt to a changed budget and geography, and deal with new external border and regulatory relationships. However, other factors to consider are:

- the NPA programme already includes Non-EU Member States and engages with Canada and Russia;
- the added value of INTERREG is noted in a number of recent publications and statements from UK regions and nations;\(^\text{19}\)

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\(^{19}\) For example, McMaster, I et al (2017) EU Cooperation and Innovation - Delivering Value from our European Partnerships Report on the Conference organised by Scotland Europa and Scottish Enterprise in partnership with Royal Society of Edinburgh, 29 September 2017; Cardiff Declaration <https://cpmr.org/wpdm-package/cardiff-
Impact Evaluation of the Northern Periphery and Arctic Programme

- Arctic links have considerable strategic significance at a UK, as well as devolved government, levels.
  - Scotland is currently working on an Arctic Policy Framework and is actively participating in the Arctic Circle Forum;
  - the UK Government’s Arctic Strategy, Beyond the Ice, published in 2018, notes the “work through the Northern Periphery and Arctic Programme to help generate vibrant, competitive and sustainable communities, using innovation and entrepreneurship to seize the unique growth opportunities of the northern and Arctic regions. The UK Government supports these relationships and is keen to work with all the devolved administrations and organisations across the UK to develop appropriate connections in their region.\(^\text{20}\)
- The Programme and Programme partnerships have remained open and engaged to Scottish and Northern Irish partners; and
- Scottish and Northern Irish project partners have expressed a commitment to wider and further engagement in project and programme activities - ‘there is a ‘grass roots’ appetite for more.

Reforms\(^\text{21}\): In addition to reforms aimed at administrative simplification, key proposals for transnational programmes post 2020 include:

- Maritime cooperation – new approach proposed combining TNC and CBC – programmes based on Sea Basins and related Strategies;
- Themes: Smarter Europe, Greener Europe, More connected Europe, More social and a Europe closer to citizens – broadly link to the current thematic objectives + focus on integrated development (including rural and coastal regions); and
- Emphasis on synergies and coherence.\(^\text{22}\)

For the NPA post 2020, links to ongoing needs in the Programme area remain strong and well adapted to the specific opportunities and challenges identified. From a strategic and project level perspective, the rationale for transnational cooperation and its added value is clear.

Demonstrable links to Europe 2020 set the Programme in a good position to complement the emerging objectives of the post 2020 programme period. In addition, the programme’s strengths in areas linked to coastal community development and blue growth could be important. Proactive collaboration and cooperation with other ETC programmes and wider strategies/cooperation for the Arctic means the Programme is well placed to address emerging Commission goals in relation to maximising synergies and coherence with other EU programmes and strategies.

The proposals give transnational programmes a strong role, but with a much greater maritime/sea basin dimension and some level of incorporation of CBC programmes. For the NPA, what all this means is

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21 The NPA includes many non-EU Member States who have their own important views on the future development of the programme, as will individual EU Member States. However, as any future programme must work within the overall framework and regulations for Cohesion policy the European Commission proposals are taken as a starting point for discussion.
not entirely clear. The Programme area is covered by multiple strategies, includes a number of marine territories, and is only partly covered by a macro regional strategy.

- With The Baltic Sea Macro-regional Strategy, Atlantic Action Plan and activities in the North Sea Region, an Arctic area would be a logical complement. However, the nature of the arrangement and its coverage would have to work with, and around, existing arrangements and consider the very different relationships that participating regions have with both the Arctic area and the North Sea.
- The Programme’s proven strengths in pursuing ‘soft cooperation’ across/with existing cooperation arrangements, without requiring very formalised structures, and producing results will stand it in good stead when it comes to responding to change.

**Recommendations:** Based on the conclusions derived from the different evaluation work streams (desk review, case studies, survey, focus group), the following recommendations can be drawn

For the remaining programming period:

- Already, two years before the end of the programming period, the Programme has covered most of the planned activities, ensured balanced participation across the programme area, and reached out to the target groups identified in the Programme strategy. It is also likely to significantly over achieve on all output indicators. That gives **leeway for the last call to be more experimental**, and less focused on filling gaps.
- A main concern remains the durability and wider uptake of Programme results. Even though survey results suggest that NPA projects produce durable results, still too many project products and services are not in use anymore in many partner regions. Possible **actions that could be funded** to ensure the transfer of project results to other organisations/regions are **peer learning programmes**, including mentoring, staff exchange or work shadowing.
- Peer learning programmes could also seek to **explore synergies or complementarities with other (EU-funded) programmes and funding instruments**, e.g. mainstream ERDF programmes, other Interreg programmes and also to national policy initiatives, as a means to break out of the Interreg ‘bubble’, e.g. E.g. Nordic, Barents and national (and thematic) programmes and networks.
- Peer learning could also be a way to **build capacity and draw in new partners**. It may be helpful to promote learning/engagement across NPA partners working on different projects in the same region/territory as a means of addressing the isolation of stakeholders within their domestic context and retaining knowhow and knowledge that can be lost when key individuals move on from organisations.
- The opportunity to have associate partners in projects has been a good way to build wider networks, link to new types of stakeholder, and extend impact beyond the ‘circle of project partners’ and deliver knowledge, skills and tangibles to end users, for instance, SMEs.
- Surveying projects from the 2007-13 NPP provided a glimpse into medium term programme impacts, but allowed no conclusions on **what factors support or hinder the continued use of project outputs post project**. Additional research (e.g. in the form of in-depth interviews) would provide insights that could be used to increase the durability of project outputs from the current and future NPA Programmes.

For the future NPA Programme:

- Over the years, topics and areas have emerged in which the NPA Programme is particularly strong: improving public service provision (e.g. in health care); enhancing innovation (e.g. in
key regional sectors such as fishery, forestry, creative industry, mineral industry); mitigating the impact of anthropogenic land use on the natural environment among others. These are strongly connected to common territorial features including low population density, low accessibility, low economic diversity, and abundant natural resources. Continued working in and further reinforcing these niches, which are known to deliver good results, would create scope for also exploring new and more experimental topics. These topics also correspond closely to the horizontal themes and such links could be highlighted.

- The Programme has closely enmeshed objectives of strategic importance for the Arctic with Programme objectives. The Arctic dimension of the Programme should be further strengthened, but without limiting participation of partners outside the Arctic region. Links to Arctic ‘near neighbours’ build critical mass and scope for project activities to gain profile and visibility via a ‘link to the Arctic’ due to the wider political, economic, social and environmental relevance of the region, all of which have associated benefits for Programme and project impact.

- Along the same lines, Programme efforts to enhance collaboration between programmes working in the Arctic have led to inter-programme project clusters. In the future, participation in these Arctic clusters could be extended to relevant national and international financing instruments.

- Furthermore, the definition of Arctic dimension needs to be clearly focussed to maximise the benefits and to avoid the risk of ‘Arctic’ encompassing almost everything. The NPA works with specific Arctic criteria for projects, which should be continued.

- The evaluation shows that, in order to maximise impacts, Programme actions must be rooted in area needs and be responsive to change. Projects often do not deliver on all the planned results. They may even fail in key areas. However, more often than not, they produce important unplanned results. As requirements on programmes (e.g. for thematic concentration, results delivery) increase, so does the need for more top-down steering. Nonetheless, enough flexibility must be retained for the bottom-up development of projects that are based on concrete area or stakeholder needs, have a strong transnational element as well as the agility to respond to unforeseen events.

- The Joint Secretariat, but also Regional Contact Points, could play a pivotal role in advising projects on how to produce durable results. To ensure that online project resources and websites remain available in the long term, the Programme could centrally host project websites as done in other Interreg programmes. However, this will increase the workload of programme authorities, at least in the beginning.
What has NPA transnational cooperation achieved?

1. Sharing experiences & learning
   - Access to new know how, tools and approaches
   - Re-evaluation of own strengths and opportunities
   - Chance to learn, and develop knowledge and skills, but with a very practical/practice-oriented approach (opportunity to see things in practice)

Different regions develop, within their local as well as national policy frameworks, particular solutions to challenges experienced in the NPA area. Transnational cooperation allows the exchange of this experience and adaption to new contexts where contact would not otherwise have been known or possible.

RECENT Policy Influencer Programme brought Irish and Scottish decision makers together on energy efficiency, allowing exchange of specific areas of strength combating an issue of common challenge. While Scotland is ahead of Ireland in terms of availability of energy advisory services, Ireland has developed interesting solutions regarding the management of community water supply schemes.

2. Wider access & pooling of resources
   - Access to wider networks / audiences, EU wide ‘marketing’
   - Allows better sharing of resources (e.g. human capital, financial)
   - Wider collaboration means that businesses commit to sharing technology across industry

Transnational collaboration provides wider access to different audiences and the critical mass allows activities to take place which would have not happened / taken place on a more limited scale.

In the SAINT project, it was valuable for the SMEs and micro enterprises to experience opportunities in wider markets and promote their business. The project allowed stakeholders to see new products, new market opportunities and work towards realising them.
The rewarding experiences gained inspire and motivate many to intensify and take forward the cooperation to new areas and projects.

The URCHIN project has paved the way for further projects, including e.g. a nationally-funded study undertaken by the Norwegian partner, Urchinomics Nordic AS; Kolarctic application focusing on a different species (seaweed); and participation in a project in Croatia.

Transferability of results that can be adapted to different areas in and beyond the NPA (including the Arctic)

Lasting transnational relationships providing basis for future cooperation

Many of the transnational cooperation results delivered in a specific locality in the NPA area are transferable, and can be used anywhere and applied to local circumstances and needs.

In the Smart Fish project, most of the SME and R&D collaborations were transnational. For instance, results from the roe enhancement trial in Troms have been used in other countries, including in Ireland and Canada.
Levels of impact enabled by NPA transnational cooperation

NPA transnational cooperation has provided value to different levels ranging from local level to the regions, the Member States, the programme and the EU.

**Local**
- Remote and peripheral communities able to engage in 'relatable' ways to large-scale transnational issues
- Direct local business benefits (e.g. employees, market reach)
- New approaches impacting down to individual citizens (e.g. E-health initiatives)
- Cooperation between local business and research institutes with whom would not otherwise had contact
- Exposure to different approaches
- Understanding of transnational issues and their application to local operation
- Motivation to 'expand horizons' in terms of business focus, market possibilities, cooperation. At the same time, process helps focus on areas of particular specialism, place-specific opportunities in wider context.

**Regional/National**
- Policy changes brought about by knowledge from projects or initiatives modelled elsewhere e.g. in fisheries management, environmental approaches.
- Macro topics e.g. climate change, demographic ageing, out-migration, economic diversification
- Cooperation and networking opportunities for regional centres of excellence, national research centres and regional and national government departments

**Transnational**
- Programme-wide new horizons, knowledge and skills that could not have been provided by national sources
- Influence beyond the NPA area, especially on Arctic issues