

Briefing Note

Arctic connections - Mapping an Arctic policy framework for the Scottish government

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Overview

Historically, Scotland and the Arctic have been connected by social and cultural ties. More recently, mainly through trade and tourism, economic links have flourished. Some of this is underpinned by the expanding number of scientific and academic partnerships that have developed between Scotland and its Arctic neighbours. Scotland is also excelling in technological innovation to tackle climate change and in environmental protection. There is no doubt that Scotland has considerable expertise across many sectors and is well placed as a valuable partner in Arctic matters. The development of Arctic Connections - Scottish Government's Arctic Policy Framework is demonstration of the significance placed on Scottish-Arctic issues in Scotland. This briefing note provides an insight into the mapping exercise carried out for the purposes of the Scottish Government's Arctic Policy Framework, highlighting key Scottish Arctic relationships, pointing to Scottish strengths across sectors and exploring avenues for even closer cooperation.

Mapping Scotland's existing links with the Arctic region

While Scotland is not located within the Arctic Circle, it is among the region's closest neighbours and shares with Arctic countries a number of features, outlooks and challenges. In light of these similarities and opportunities for mutual cooperation, the Scottish Government has developed its own Arctic Policy Framework. This policy decision emerged from the Scottish Government's extensive involvement in Arctic fora, including the First Minister's participation in the Arctic Circle Assembly in 2016 and 2017. It also came in recognition of the mutual policy agendas in the face of climate change and social and economic challenges affecting rural and remote northern communities.

In this context, the design and development of the Scottish Arctic Policy Framework could be considered as a formalisation of, as well as, a vehicle for fostering closer ties between Scotland and its northern neighbours.

In order to help shape the future Arctic Policy Framework, the Scottish Government commissioned Glasgow Caledonian University's Centre for Climate Justice to work in partnership with the University of the Highlands and Island's Environmental Research Institute to produce a mapping report which provides a thorough overview of Scotland's existing links with the Arctic region across 5 themes: governance, society and culture, economy, environment and climate change, and academia and to explore avenues for further collaboration.

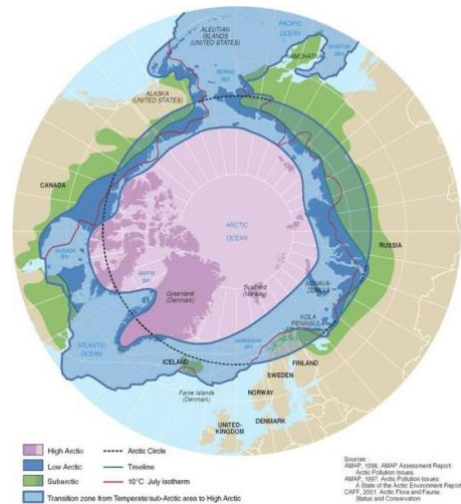


Figure 1: Arctic Definitions - Hugo Ahlenius, UNEP/GRID-Arendal. Source: Rekacewicz 2005.

A two-pronged approach was used to conduct the mapping report; a desk-based review of literature and stakeholder engagement workshops. The feedback from representatives of Scottish business, academia and civil society provided additional insight into the breadth and depth of existing links between Scotland and the Arctic and highlighted the opportunities for future collaborations and partnerships during two stakeholder engagement workshops held in Glasgow and Inverness in 2018.

The study set out to answer the following set of questions:

- What links exist between Scotland and the Arctic Region in the context of governance, socio-cultural issues, the economy, environment and climate change and academic-research and education?
- How can critical thinking, insight and feedback by key and wider stakeholders be mobilized for the development and roll out of the Arctic Policy Framework?
- What are the gaps and opportunities for furthering the development of a Scottish Arctic Policy Framework?

Governance links

The Arctic falls within the legal jurisdiction of eight nations; Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden, and the United States (Bajrektarevic, 2010). At the regional level, it is governed through a number of international institutional initiatives such as the Arctic Council, the Northern Forum, the North Atlantic Cooperation (NORA) and the West Nordic Council (WNC). However, non-Arctic states are taking a growing interest in the region due to its growing scientific, economic and strategic importance. The Arctic Council, the most significant governance structure in the region, puts strong emphasis on the human dimension of regional governance, with indigenous and social issues high on its agenda. In contrast, while the UK strategy for the Arctic aims to “protect people and the environment” (HM Government, 2018: 15), there appears to be little emphasis by the UK and other non-Arctic states on social and economic inequalities (including those rooted in environmental issues such as climate change) that are affecting the region's indigenous and northern communities.

Thus Scotland shares similar challenges to many Arctic nations in the context of supporting its rural and remote communities and protecting its geographical landscapes. Scotland's policy focus on just transition and climate justice are closely aligned to the Arctic Council's own focus on addressing human dimensions and so provides a platform and an opportunity to work in partnership to identify and develop solutions to address these issues and achieve sustainable economic development. This could be through strengthening trade and investment links in sectors such as shipping, fisheries and aqua-culture.

Scottish-Arctic social and cultural similarities

Scotland has many social and cultural links and similarities with the Arctic Region and Arctic States. There are numerous geographical, historical, cultural, and linguistic ties, in particular between the Highlands and Islands and the Arctic, which are considered to be stronger than those in the rest of the UK (Johnstone, 2012). Much of the shared historical and cultural links come through, for example, 'Viking' connections, Scottish emigrant populations in Canada, and 19th and 20th century polar explorers John Rae and Thomas Abernethy (Mikkola, 2014). Nova Scotia in Canada received large numbers of Scottish emigrants, and these links are still maintained through the celebration of the Canadian Highland Games annually (Menezes et al, 2016). Visitors from the Scottish diaspora, and in particular Canada, are a valuable part of the tourism industry in Scotland. Moreover, Scotland is reliant on the marine environment for social integrity much like the Nordic nations, with which it is closely connected through the ongoing climate, economic and social changes in the Arctic.

Linguistically, Shetlandic and Orcadian dialects are replete with Norse words, and Scottish town names like Wick and Tinwald have their origin in a language once shared with other Nordic Arctic states (Menezes et al, 2016). These linguistic similarities can again be traced back to the Viking influence. Until 1472, Shetland and Orkney belonged to Norway and Denmark until they were pawned as a wedding dowry.

Geographically, Northern Scotland faces similar issues experienced by Arctic and near-Arctic countries in terms of its sparse population, remoteness, inaccessibility, and a harsh climate (Mikkola, 2014). These issues have been explored over the past 20 years, through Scotland's cooperation within the framework of EU mechanisms and largely through the Northern Periphery and Arctic INTERREG Programme (and its predecessors). Through cooperation within the framework of the EU, the Northern Periphery and Arctic Programme 2014-2020 and Horizon 2020 have been invaluable financially to supporting the development of community-based programmes in the Scottish Highlands and Islands. The programmes have facilitated collaboration between regions to find practical solutions to common problems as well as exchange networks.

Economic ties

The economic links between Scotland and the Arctic are mainly found in the energy, fishing and tourism industries. There are notable Scottish companies operating in the Arctic region, which have achieved commercial success. However, the most significant economic links are found in investment by companies and institutions based in Arctic Council member states into Scottish commercial operations and research development. A notable example of this is investment from Norwegian companies into the Scottish salmon industry (Shepherd et al, 2017).

Arctic-based companies seek also to benefit from Scottish expertise in offshore engineering and supply chains (Scottish Government, 2017). For example, the Aberdeen-based company, Trittech, supply sensors and underwater cameras for Arctic rigs and icebreaker ships. A number of Arctic-based companies have been developing and testing wave and tidal projects at the European Marine Energy Centre (EMEC) based in Orkney; the EUR €5.5 million Project Wello Oy to build and test a prototype wave energy converter (Wello Oy, 2015).

There is significant cooperation between tourist agencies based in Scotland and the Arctic region. For example, VisitScotland and the Icelandic Tourist Board signed a Memorandum of Understanding (MOU) to cooperate on best practice and knowledge exchange in areas such as sustainable tourism (VisitScotland, 2016). VisitScotland is also developing relationships with the West Sweden Tourist Board, Innovation Norway, VisitDenmark, Visit Faroe Islands and Finnair.

Scotland's cruise and ferry industries have a well-established tourist link between Scotland and many of the Arctic nations. Currently, the world's first hydrogen-powered car and passenger ferry is being design and constructed by the European Marine Energy Centre (EMEC) based in Orkney (EMEC, 2018). This project is promoting hydrogen fuel cell technology in transportation and showcasing Scotland as both an innovator in renewable technologies and a promoter of green tourism across the Arctic region.

Environment and climate change links

Scotland is the Arctic's closest non-Arctic neighbour and a valuable partner in tackling climate change. Temperatures in the region are rising faster than the global average posing serious risks to daily life, livelihoods, food production and bio-diversity (IPCC, 2018). Yet, while climate change will bring unexpected challenges, Scotland is determined to tackle this global challenge through its expertise and developing closer collaboration with its closest neighbours to ensure sustainable development.

Scotland has well-established research connections with the Arctic region working on environmental issues and climate change through collaborative research and programs spanning over 25 years. Large projects include the EU-funded Horizon 2020 project Arctic Cluster and the UN Conventions and Scientific Associations project EU-PolarNet (2016). Scottish scientists are at the fore front of scientific and technical advances in oceanographic and ecological data collection, remote sensing and the development of small satellite systems in the Arctic region (Boehme et al, 2009; EMODnet, 2014; Changing Arctic Ocean, 2018). Scottish universities host Europe's largest glaciology research group and contribute to the Marine Climate Change Impacts Report, the Arctic Council Circumpolar Biodiversity Monitoring Program and the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR, 2018) on marine spatial planning.

The interconnected nature of the environment, wildlife, and human health in the Arctic has long been recognized, and climate change is rapidly threatening both the local communities and their environments (AMAP, 2018). In this context, a number of Scottish organisations contribute to the Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAIC) which aims to improve understanding of the Arctic in terms of its atmosphere, ocean, sea ice, and ecosystem. In addition, the Scottish Association of Marine Science (SAMS) are also involved in long term

monitoring of the environment and climate in the Arctic region as an associated institution of the University of the United Nations (UNU).

Academic partnerships

Scottish universities and research centres have a long tradition of conducting world-class research on the Arctic. Most of the Scottish Universities have links to the Arctic either through participation in research programs or as partners in transnational collaboration projects. Currently, two Scottish higher education institutions – the University of Aberdeen and the University of the Highlands and Islands – have a particular relationship with the Arctic and the region’s academic institutions as members of the University of Arctic (UArctic) with opportunities for more to join. Despite this level of engagement, there is no institutional centre for Arctic research in Scotland comparable to the UK’s Scott Polar Research Institute in Cambridge but there is considerable drive to create one.

External to academia, examples of Scottish Arctic educational partnerships include the West Lothian-based Polar Academy (The Polar Academy, 2018), an organisation that specialises in organising polar expeditions to eastern Greenland for 14-17 year-olds and the Scottish Arctic Club which is a group of enthusiasts with a common interest in the Arctic (Scottish Arctic Club, 2018).

Academic collaboration is dependent on research funding mainly from the EU. It is unclear what impact Brexit will have on the availability of EU funding for Arctic research. In the worst-case scenario, Scottish research bodies will lose access to the likely successor of Northern Periphery and Arctic Programme 2014-2020 and Horizon 2020, creating a funding gap in the Scottish research landscape. Arctic research heavily depends on strong regional networks which EU funding has facilitated. It is unclear if and to what extent UK funding for Arctic research would compensate the loss of available funds in a hard-Brexit scenario.

Reflections for furthering Scottish-Arctic collaborations

There is no doubt that Scotland has much to offer to the Arctic region in terms of knowledge, skills, expertise, technology and business opportunities and these findings have informed the development of Arctic Connections – Scottish Government’s Arctic Policy Framework which was launched in Orkney on the 23rd September 2019. With that in mind, we offer some reflections for furthering Scottish-Arctic collaboration and the development of future partnerships.

Scottish participation in Arctic governance: From indirect representation to public diplomacy

Scotland could consider greater participation in international bodies such as the Northern Forum, the North Atlantic Cooperation (NORA), and the West Nordic Council (WNC) to grow Scotland’s presence among Arctic nations. A dedicated Scottish Arctic office could be of interest to coordinate Scotland’s involvement in Arctic governance at the international level. A strong European presence in the Arctic will benefit Scotland due to the allocation of EU research funding and economic initiatives that support and promote Scottish institutions and businesses. Moreover, the establishment of a national academic forum, involving Scottish councils and municipalities, could be considered to coordinate Scottish contributions to Arctic governance at the national level.

Building on Scottish-Nordic socio-cultural connections

By promoting cultural legacy projects, Scotland could build upon its socio-cultural connections with its Arctic neighbours. A programme of cultural outreach would complement a wider strategy of Scotland positioning and identifying itself as a ‘near-Arctic state’.

Opportunities for growing the economy

The forging of partnerships between Scottish and Arctic-based businesses in renewable energy, fisheries and tourism is evidence that Scotland is an attractive global destination for foreign investment. Building on this platform technology-innovation conferences, research and development workshops, business expos, and knowledge exchange platforms are the types of events that Scotland could host in collaboration with its Nordic neighbours to encourage and foster new collaborations.

The transition from oil and gas to renewable energy, green tourism, and bringing the voices of rural and remote communities to shape a new vision for sustainable economic development is an opportunity where Scotland could show leadership in Just Transition.

Scotland's approach to environmental protection and climate change

The Arctic is undergoing rapid environmental change, but there are undoubtedly opportunities for Scotland to contribute knowledge and expertise to further understand the impacts of climate change and support vulnerable communities in mitigating and adapting to them. Multi-disciplinary research to understand the scale of climate change impacts and to assess how climate change will affect rural and remote communities could be achieved through the development of a new Arctic Research Cluster which spans all sectors of interest. The Arctic Research Cluster could build on Scotland's globally unique Climate Justice Innovation Fund, placing a strong emphasis on protecting the poorest and most vulnerable people.

Scotland could take a leadership role in the development of new educational links with the Arctic region. Expanding partnerships with the University of the Arctic (n.d.) through distance learning, joint courses and placements, could create opportunities for Scotland to help nurture future generations of engineers and scientists to respond to climate change.

Academic excellence

Given the current nature and extent of existing research, outreach, and teaching and learning partnerships, Scottish academic institutions could be positioned as an avenue to the Arctic and Europe. At the international level, the Scottish government could contribute to Arctic governance through active participation of Scottish research institutions in regional scientific bodies, such as the International Arctic Science Committee (IASC), and by facilitating partnerships with non-Arctic states research initiatives.

Concluding remarks

The mapping report provided an overview of existing links between Scotland and the Arctic. The evidence speaks for itself. The breadth and depth of collaborations, partnerships and mutual understanding is extensive. There is opportunity in Scotland to galvanise, consolidate and coordinate our strengths in Arctic expertise. There is no doubt that the development of Arctic Connections - the Scottish Government's Arctic Policy Framework is a clear indication of Scotland as a valuable partner to the Arctic Region.

Full details of the mapping report can be found at:

http://researchonline.gcu.ac.uk/portal/files/27282329/Arctic_Mapping_Report_Final_June_2019.pdf

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