



Arctic Connections

Scotland's Arctic Policy Framework



Scottish Government
Riaghaltas na h-Alba
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Gulf of Alaska

Sea of Okhotsk

Chukchi Sea

East Siberian Sea

Beaufort Sea

Laptev Sea

ARCTIC OCEAN

Hudson Bay

Baffin Bay

Kara Sea

Disko Bay

Greenland Sea

Barents Sea

NORTH ATLANTIC OCEAN

Norwegian Sea

North Sea

Legend

- AMAP-Arctic Boundary
- Arctic-Circle
- 55° Parallel
- High-Arctic
- Low-Arctic
- Sub-Arctic



Ministerial Foreword

For centuries, Scotland and the Arctic have enjoyed close links that have had a lasting impact on our cultural, economic and social fabric. While most visible in our northernmost areas, these bonds are evident across the country and lie at the heart of our valued relationship with Arctic states. Scotland is among the Arctic region's closest neighbours; we share many features and outlooks and have long looked to each other for inspiration, solutions and ideas.

To this day, connections forged through history continue to spur new academic partnerships, trade exchanges, artistic projects and joint cooperation improving our daily lives. Enabled by new technologies, a deep understanding of Scottish-Arctic similarities has led to rich collaborations across a range of areas, from improving connectivity and invigorating rural economies, to making sustainable use of marine resources and cultivating cultural heritage.

At a time when the Arctic is the focus of mounting geopolitical attention, this framework puts people back at the heart of Scottish-Arctic dialogue. It reflects on common challenges, sets out Scottish expertise that is relevant to Arctic issues and encourages greater mutual learning with a view to improving the resilience and wellbeing of our communities. Focusing on the many areas in which the Scottish Government has devolved responsibilities, this framework aims to serve as a prospectus for even closer Scottish-Arctic cooperation.

“By building a new platform for policy and knowledge exchange, the Scottish Government intends to strengthen the foundations of a long-standing two-way discussion with its Arctic partners.”

By building a new platform for policy and knowledge exchange, the Scottish Government intends to strengthen the foundations of a long-standing two-way discussion with its Arctic partners. We want to share Scottish expertise while underlining our desire to learn from others. This document is intended for both our international partners and Scotland-based organisations, who we encourage to look north for new collaborations and opportunities.

With climate change posing a devastating threat to the wellbeing of the Arctic region and of our planet, the need for closer ties has never been greater. These challenges cannot be tackled in isolation but can only be addressed if countries come together to confront them. For this reason, while promoting neighbourly engagement with the Arctic, we also appeal to the wider international community to increase collective action, accelerate decarbonisation and jointly build a sustainable future for all.

The United Kingdom's exit from the European Union puts our international partnerships, including with Arctic countries, at risk. We are determined to protect Scotland's reputation as an open and outward looking nation and we are re-doubling our efforts at promoting Scotland as a good global citizen.

The development of this policy framework is the result of a journey during which we have consulted widely and reached out to Scotland's civic society. The publication of this document does not mean that we have reached our destination. It is an important milestone in the journey towards consolidating Scotland's position as a European gateway to the Arctic and establishing it as the international partner of choice for both our Arctic neighbours and other like-minded countries that are interested in working with us on addressing common challenges.



Fiona Hyslop MSP
Cabinet Secretary
for Culture, Tourism
and External Affairs



Scotland Looks North

Scotland Looks North

Scotland's northernmost islands are closer to the Arctic Circle than they are to London. Connections between Scotland and the Arctic, however, go much further than geographical proximity. Our communities share deep cultural and social links as well as similar challenges and outlooks. Arctic countries represent important trading partners for Scotland and we have long worked together through European Union (EU) programmes.

As a good global citizen and a trusted neighbour, Scotland is ready to build bridges that can reinforce our role as a European gateway to the Arctic while encouraging a peaceful and well-governed future for the region.

Scottish-Arctic journeys: A people's history

Cooperation between Scotland and Arctic nations dates back centuries. Our northernmost archipelagos were part of the Norwegian-Danish Kingdom until the end of the fifteenth century. Shetlandic and Orcadian dialects are still replete with Norse words and Norn – a Germanic language bearing a strong resemblance to Faroese, Icelandic and Norwegian – was widely used in the north of our country before being slowly replaced by Scots.

The origin of many town names in the Highlands and Islands can still be tracked back to Nordic roots. Similarly, Arctic toponymy has many locations named after Scots who voyaged through the region. Scotland has a proud tradition of Arctic explorers. In 1854, by tracing the final link of the Northwest Passage, John Rae changed the history of the North American Arctic, charting a commercial sea route that many before him had failed to uncover. A few years earlier, Aberdeenshire-born Thomas Abernethy had distinguished himself as a valiant polar explorer, earning a total of five Arctic medals.

“Scotland's northernmost islands are closer to the Arctic Circle than they are to London.”

Defining the Arctic

While widely considered as a distinct region, there is no universally agreed definition of the Arctic. The most frequently adopted definition places the Arctic Circle line at 66° 33' 44" North latitude, which marks the point at which the sun does not set on the summer solstice or rise on the winter solstice. Another widespread definition identifies the Arctic as the area within the 10 degree July isotherm, where the temperature does not rise above 10 degrees in the summer. Others point to the area within the Arctic tree line, the northern limit for tree growth. The Arctic Council consists of eight countries with land areas north of the Arctic Circle: Norway, Sweden, Denmark (with the Faroe Islands and Greenland), Iceland, Finland, Russia, the United States of America and Canada. These will be collectively addressed as “Arctic countries.”

John Rae was an Orcadian and, like many of his fellow islanders, was employed by the Hudson's Bay company. He was well known for the care he took to take account of the views of indigenous communities, which was not always the case amongst his European contemporaries. At the turn of the Nineteenth century, three-quarters of the company's workforce originated from Orkney. The North West Company, headquartered in Montreal, was also formed and largely run by Scots.

Together with Loch Ewe and the Clyde, Orkney also served as the departure point for Arctic convoys that, braving heavy bombardments, transported food and other crucial supplies to the North of Russia during the Second World War. Likewise, the Shetland Bus – a clandestine special operations fleet of fishing boats and submarine chasers – ferried agents, refugees, ammunition and radios between Shetland and German-occupied Norway.

Scotland Looks North

Substantial west-bound Scottish emigration has created lasting connections with Canada and the United States. In the 2016 census, 4.7 million Canadians reported themselves to be of Scottish origin. People of Scottish descent made up 14.8% of respondents in the Northwest Territories, 23.3% in Yukon and 9.2% in Nunavut. The Scottish diaspora remains active in the celebration of their heritage as Highland Games, Burns Suppers and St Andrew's Day celebrations occur widely across both Canada and the United States.

Scotland has also been the end point of countless journeys made in the opposite direction. As an open nation that appreciates the importance of multiculturalism and diversity, Scotland has welcomed thousands of people from Arctic countries who have chosen to work, study, live and do business here.

Scottish expeditions to the Arctic region are far from being a thing of the past. The Polar Academy charity works closely with Scotland's secondary schools to train "invisible" students with low self-esteem for a life-changing expedition in Eastern Greenland that helps young people boost their confidence. Scotland-based scientists and artists pay frequent visits to the Arctic, strengthening our reputation for academic and cultural excellence. The Scottish Arctic Club has been active for more than 40 years and its members have travelled extensively across the region. The Club provides support to young people who wish to explore the Arctic for educational, scientific or artistic purposes. In April 2019, the Arctic Return expedition trekked across Boothia Peninsula in Nunavut to celebrate John Rae and the importance of indigenous knowledge to his endeavours.

Scotland's census 2011 – Country of birth

Country of birth	Number
United States of America	15,919
Canada	9,435
Russia	2,180
Denmark (inc. Faroe Islands and Greenland)	1,808
Norway	1,797
Sweden	1,748
Finland	1,099
Iceland	264

Source: National Records of Scotland

Scottish-Arctic cooperation and the European Union

Membership of the EU has greatly benefited Scotland's cooperation with Arctic countries. Long-standing Scottish-Nordic participation in European Territorial Cooperation programmes, in particular, has made a strongly positive difference to our communities and has provided vital funding for local development. Looking at the last five years alone, Scottish organisations have secured a total of €6.8 million through the Northern Periphery and Arctic (NPA) programme, with a positive impact on community resilience and business growth.¹ This programme has created opportunities for engagement with not only EU countries but also Norway, Iceland, the Faroe Islands, Greenland, North East Canada and North West Russia. To date, over half the projects funded through the NPA programme have involved a Scottish dimension. Since 2014, Scotland has also been granted €12.1 million through the North Sea Region programme, in which Norway, Denmark and Sweden are also active participants.

By working with their Nordic counterparts, our entrepreneurs and institutions have secured financial support for a wide variety of projects, ranging from innovative recycling solutions to the delivery of psychiatry services in remote areas.

Thanks to Horizon 2020, the European funding programme for research and innovation, EU membership has helped Scotland enhance its research and higher education ties with Arctic countries. Furthermore, the Erasmus+ programme has encouraged the exchange of students and staff, helping us strengthen our bilateral relationships with Arctic academic institutions.

Since the early 1990s, the LEADER programme has provided vital financial support for community-led development in Scottish rural areas, building social and economic capital while opening new avenues for Scottish-Arctic partnerships.

These are just a few examples of the many collaborations which have taken place through EU funding. The UK's exit from the EU poses a serious risk to Scotland's domestic and international interests, including around Scottish-Arctic relations. If continued access to these vital programmes cannot be negotiated, Scotland risks being deprived of a fundamental platform for collaboration with the Arctic at a time when the EU is developing its own Arctic policy and increasing its engagement with the region.

“Membership of the EU has greatly benefited Scotland's cooperation with Arctic countries.”

Case study

Funded through the NPA programme, W-Power is a €1.3 million project that aims to support female entrepreneurship in sparsely populated communities and develop gender-aware business support. As well as Scotland, project partners include Finland, Sweden, Ireland, Iceland and Canada (New Brunswick). Highlands and Islands Enterprise and Shetland-based Pure Energy Centre lead on Scotland's participation in the project, which is coordinated by Finland's Karelia University of Applied Sciences. All participating countries experience challenges as a result of rurality, youth out-migration and a lower rate of entrepreneurship by women compared to men. W-Power looks to encourage learning across the Nordic and Arctic region to support new women-led start-ups and help underexploited business potential in rural communities flourish. Argyll has been chosen as the pilot area for Scotland, with a view to developing ideas which can be transferred to other parts of the Highlands and Islands. In June 2019, Argyll hosted a W-Power international conference that gathered delegates from all partner countries.



Empower
Network
Grow

Scotland Looks North



“Scotland is strategically positioned – and has the capability – to serve as a link between the Arctic region and the wider world.”

A European gateway to the Arctic

In “*All Points North: The Scottish Government’s Nordic Baltic Policy Statement*”² we set out our commitment to working closely with Arctic, Nordic and Baltic states in areas of mutual interest. Since then, Scotland has hosted the Arctic Circle Forum and has become internationally recognised as a significant contributor to Arctic dialogue. Ministerial participation in Arctic conferences such as the Arctic Circle Assembly in Reykjavík and Arctic Frontiers in Tromsø, has contributed to promoting Scottish expertise and emphasising Scotland’s appetite for international exchanges, in line with the principles of *Scotland’s International Framework*.³

By increasing its proactive involvement in these conversations, Scotland is reshaping the map. Rather than geographically peripheral at the north-west corner of Europe, Scotland is strategically positioned – and has the capability – to serve as a link between the Arctic region and the wider world.

The Scottish Government’s external network of offices, including Scotland House London and Scotland House Brussels, has been actively involved in fostering Scottish-Arctic cooperation by expanding our international outreach and providing a base for engagement outside Scotland. Two of our international offices – in Ottawa and Washington – are located in Arctic countries and are forging new relationships with Canadian and American Arctic groups respectively. Our Beijing office’s participation in the Shanghai Arctic Circle Forum in May 2019 demonstrates how Scotland is making wider international engagements and showcasing its expertise through Arctic forums.

Our Arctic work provides further momentum to the Scotland is Now campaign,⁴ which seeks to project Scotland as a progressive and dynamic nation that does not hesitate to take the lead on key global challenges. By shining light on our strengths and joining forces with international partners to address common problems, we want to encourage people from across the world to look at Scotland as a great place to work, live, study, visit and do business with.

Going forward, we will:

- ▶ Ensure that Scotland continues to be represented at appropriate Arctic conferences to promote our expertise, listen to others’ experiences and identify new opportunities for collaboration. This includes attracting Arctic forums to Scotland, with a view to ensuring that our civic society is as closely involved in Scottish-Arctic dialogue as possible. In 2020, we will host a spin-off event of the Arctic Frontiers conference.
- ▶ Advocate for sustainable and peaceful governance of the Arctic, showing support for initiatives that have inclusivity, equality and dialogue at their core and reflect the views of those who live in the region.
- ▶ Engage bilaterally and multilaterally with Arctic countries and institutions on matters that fall within the remit of the Scottish Government to maximise coordination and ensure that our Arctic policy reflects and influences the priorities pursued by cooperation forums operating in the region.
- ▶ Continue to lobby the UK Government to maintain participation in European Territorial Cooperation programmes, including NPA and North Sea Region, as well as Erasmus+ and Horizon 2020 regardless of what scenario we will find ourselves in post-Brexit.



Education, Research and Innovation

Education, Research and Innovation

Scottish universities and research centres have a long tradition of producing world-class science on the Arctic. However, there is scope for Scotland to be even more closely involved in multi-disciplinary research that addresses Arctic issues.

International collaboration and knowledge exchange are integral to the success of Scotland's universities and colleges. We have four universities in the World Top 200⁵ and rank seventh among the OECD countries for Higher Education expenditure on research and development (HERD) as a percentage of GDP.⁶ With Brexit posing major disruption to the academic sector, we are committed to ensuring Scotland can maintain its well-developed networks with Arctic research institutions and other international organisations.

Arctic research and international collaborations

Scottish institutions' world-leading Arctic science has elevated our profile on the international scientific stage and contributed to a deeper understanding of the rapid, profound and accelerating changes that, while at their most visible in the Arctic region, have a direct impact on the Scottish environment.

Since 2000, institutions in Scotland have contributed to more than one thousand academic publications about the Arctic region. A growing publication rate in this area since 2011 indicates a steady increase in Scotland's Arctic research expertise.

A number of Scottish universities host Arctic research programmes covering subjects as diverse as renewable energy, oceanography, climate justice, anthropology, archaeology and engineering. Through the Scottish Alliance for Geoscience Environment and Society (SAGES), Scotland is home to Europe's largest glaciology group SURGE (Scottish University Research in Glacial Environments)⁷, attracting world-renowned researchers who carry out regular studies on the Greenland ice sheet and the glaciers of Svalbard. In addition, organisations such as Scottish Natural Heritage, Marine Scotland Science, the Scottish Association for Marine Science (SAMS) and the Environmental Research Institute have long collated evidence that is being used to monitor the

environmental changes occurring in the Arctic. One particular area of expertise is the development of autonomous and robotic instruments that can measure oceanographic and sea ice alterations even in extreme conditions.

Marine Scotland Science staff make a significant contribution to the work of the International Council for the Exploration of the Sea (ICES), which coordinates oceanic and coastal monitoring, advising international commissions and governments on marine policy and management issues.

Scotland-based institutions are major players in the £16 million Changing Arctic Ocean programme funded by the Natural Environment Research Council (NERC) for the period 2017-2022. Oban-based SAMS, in particular, secured £5 million to conduct two science programmes, Arctic PRIZE and DIAPOD, that aim to develop a better understanding of the large-scale changes that climate change is producing in the region's ecosystem and food webs.

The Environmental Change Network Cairngorm site in Scotland is part of the International Network for Terrestrial Research and Monitoring in the Arctic (INTERACT). This EU-funded infrastructure project is actively building capacity for Arctic research and is offering hundreds of researchers access to almost 60 terrestrial research stations in northern Europe, Russia, United States, Canada, Greenland, Iceland, the Faroe Islands and Scotland.

Scottish universities are also at the forefront of research into blue carbon, that is the carbon stored and sequestered in coastal and marine ecosystems. Scotland will be the first country in the world to undertake a region-wide blue carbon audit.

“International collaboration and knowledge exchange are integral to the success of Scotland's universities and colleges.”

Education, Research and Innovation

Social sciences are also becoming increasingly important in Arctic research. The University of Aberdeen's Arctic Domus provides an excellent example of how social and natural sciences can be combined to better understand and support remote communities and economies in the Arctic. The six year (2012-2018) project funded by the European Research Council involved over 30 scholars from Scotland, Canada, Russia and Norway. It focused on how people and animals have historically built sustainable communities around the circumpolar Arctic by using field sites in the Russian Federation, Fennoscandia and Canada.

Collaborative publications between Scotland and Arctic countries (2007-2016)

Collaborator	Co-publications
United States	16,983
Canada	5,754
Sweden	3,729
Denmark	2,873
Norway	2,586
Russia	2,404
Finland	1,747
Iceland	466

Source: Scopus



International collaboration has been a key driver of Scotland's Arctic academic success and research impact. We have built a strong reputation as a reliable and trusted partner in global academic networks. International researchers are an integral part of our research base.

Case study

▶ The Ellett line linking Scotland and Iceland is one of the few long-term measurements of the world's oceans. Measurements of salinity and temperature have been made for 65 years and help us understand the "Atlantic Meridional Overturning Circulation" (AMOC), a key part of the global climate system. This long time series gives oceanographers and climatologists a good idea of the variability of the flow of heat towards the Arctic. Monitoring of the Ellett line started in 1948 using simple water samplers attached to weather ships steaming from the River Clyde to weather stations in the Atlantic ocean. These weather ships operated into the 1990s. The line was extended in 1996 and included in major worldwide research as part of the World Ocean Circulation Experiment. Since 2014, remotely controlled robotic vehicles have been used to increase the frequency of observations.



Student and staff mobility

Scotland has a large international student body and proportionally more international students come to Scotland than to any other country in the UK. Arctic countries have large student numbers in Scotland with a total of 8,995 people from Arctic nations studying at Scottish universities in the 2017/18 academic year. Finnish students studying in Scotland during this period accounted for almost 10% of Finns studying abroad.

Scotland and the Arctic nations, especially those in Europe, share similar priorities on the role of universities in encouraging their students to become good global citizens. Recognition of academic qualifications, facilitated through the European Higher Education Area of which both Scotland and the European Arctic nations are members, increases the ease by which students can study between countries.

For staff in Scotland, the Arctic countries are key destinations for career development learning. For example, five out of the top ten destinations for staff undertaking placements through Erasmus+ during the 2016/17 academic year were Arctic nations.

While proportionally more Scottish students undertake periods of international study than from any other country in the UK, we would like to see this figure increase. The Norwegian Government's emphasis on the importance of student mobility is of great interest. We will work with the sector in Scotland to explore how we can learn from the Norwegian approach.

“For staff in Scotland, the Arctic countries are key destinations for career development learning.”

Education, Research and Innovation



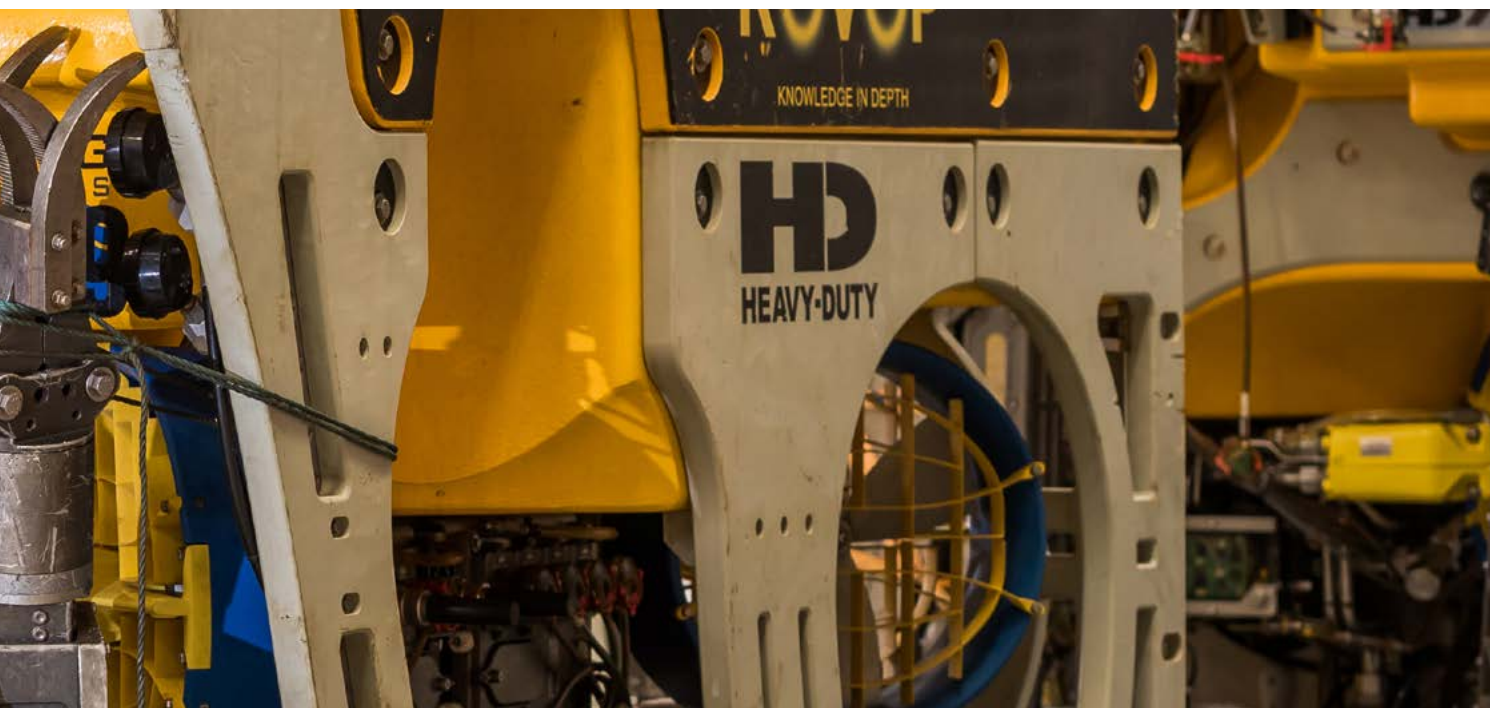
Case study

▶ The University of the Arctic (UArctic) is a network of research institutions that aims to further education and research about the North. Aberdeen University and the University of the Highlands and Islands (UHI) are members of the network. UArctic's North2North mobility programme enables students and staff to study, teach and carry out research in different parts of the network for up to one year. North2North embraces exchanges that can benefit northern populations and create a sense of northern citizenship. In 2019, UHI welcomed their first North2North students, further cementing their close collaboration with Arctic partners.

Innovation

Scotland and the Arctic area are gaining international recognition as innovators. Arctic countries secured four of the first ten positions and seven of the first twenty places in the Global Innovation Index 2019.⁸ Scotland was strongly represented in the European Regional Innovation Scoreboard 2019⁹ rankings, confirming its long tradition of innovation. We know that having a thriving and dynamic innovation ecosystem is essential for improved productivity, competitiveness and sustainable economic growth. Our commitment to doubling Business Enterprise Research and Development (BERD) funding by 2025 will make Scotland an even more attractive partner for global innovation collaboration.

Scotland's Innovation Centres enhance partnerships between university and industry to provide an environment that supports the development of the next generation of business innovators, academics and entrepreneurs. Scotland has eight Innovation Centres in the areas of data, sensors and imaging, digital health and care, stratified medicine and industrial biotechnology.



Education in sparsely populated areas

There are around 850 schools in Scotland that are classified as being rural. Given common challenges stemming from rurality and remoteness, Scotland and the Arctic can learn a lot from each other in relation to education provision in sparsely populated areas, including by means of distance learning.

Particularly in rural and remote areas, digital technology can have a positive impact on raising attainment, tackling inequalities and promoting inclusion. Scotland can share the experience it has developed thanks to Glow, our national learning environment through which all learners and teachers have free access to digital tools to enrich education.

The University of the Highlands and Islands (UHI) is the UK's most northern university. It comprises 13 colleges and research institutions with more than 70 local learning centres covering a geographic area that approximates the size of Belgium. State-of-the-art online learning technologies enable UHI to deliver degree courses that are rooted in communities but have international reach. Universities based in Arctic countries, for instance the University of Northern British Columbia, are structured in a similar way, opening opportunities for mutual learning and exchange of best practices.

Going forward, we will:

- ▶ Explore opportunities to support Scottish higher education institutions to foster involvement in UArctic's North2North mobility programme.
- ▶ Engage with any Arctic partners who want to work with Scotland in relation to education provision in rural areas, drawing for example on the lessons learnt from the development of the University of the Highlands and Islands.
- ▶ Encourage Scottish universities and research centres to collaborate on Arctic research by means of greater inter-institutional cooperation, including by promoting discussions between UArctic and interested Scottish institutions.
- ▶ Encourage greater collaboration between Scottish and Arctic academic institutions across the many branches of Arctic research.
- ▶ Continue, and further develop, marine science collaborations in the Arctic through Marine Science Scotland to support our national and international policy obligations.



Cultural Ties

Cultural Ties



By building on the strong cultural links between Scotland and the Arctic region, we can strengthen connections between people, empower communities through creativity and be leaders in encouraging international dialogue. Culture is a powerful vehicle for promoting diversity and mutual understanding domestically and internationally. Through creativity and culture, we can raise awareness of the big challenges of our time, from climate change to inequality, which impact on the lives of many on a daily basis.

By reaching across borders, we can make culture a driver of sustainable economic growth. Creative industries carry strong potential for job creation both directly and by unlocking growth in other sectors. Working collaboratively, there is a real opportunity to share best practice and take the lead in developing practical and sustainable tourism solutions that safeguard the interests of the environment, communities and visitors alike.

“By reaching across borders, we can make culture a driver of sustainable economic growth.”

A Scottish-Arctic laboratory for cultural policies

While culture must preserve its independence, it is important that institutions put long-term planning, infrastructure and policies in place to help the sector flourish. The Scottish Government’s Culture Strategy aims to strengthen, transform and empower communities. The extensive engagement with the public which informed the strategy produced many lessons we can share with our Arctic neighbours and we would value learning from their own successes in this area.

Scotland and Arctic countries can work together to promote equality through culture and creativity. We can devise solutions to remove barriers to taking part in cultural life, enabling all citizens to participate and be creative, irrespective of their background and personal circumstances.

The biannual Edinburgh International Culture Summit offers an ideal platform for these discussions to take place. The summit brings together Government Ministers and policy-makers from across the globe with artists and cultural leaders to find new ways to inspire positive and creative change.

Cultural Ties

Promoting and protecting indigenous languages

Scotland and the Arctic have a proud multilingual tradition, which enriches the vibrancy of our culture and our international profile. The Arctic is home to a wealth of indigenous languages and dialects, while Gaelic and Scots are cherished parts of Scotland's heritage and continue to drive social, economic and educational benefits for our country. However, indigenous languages are under pressure and require our support.

The Scottish Government is promoting several initiatives to increase the use of Gaelic and Scots, raising their status in everyday life. The National Gaelic Language plan 2018-2023¹⁰ identified several avenues through which the awareness and profile of Gaelic can be strengthened, ranging from greater use in the leisure industry to family learning. We are also working to increase the provision of Gaelic learning through nursery to secondary schools across Scotland. The 2015 Scots language policy¹¹ is currently being revised to include commitments to support all Scots dialects, including those spoken in Shetland and Orkney.

In promoting languages whose roots go back centuries, it is crucial that we seize the opportunities afforded by modern digital tools. The e-Sgoil initiative allows teachers based in the Western Isles to deliver real-time, interactive lessons in Gaelic to students across Scotland. In addition to providing a creative way to engage speakers, e-Sgoil helps address the problems of recruiting language experts in remote areas.

While we have seen a growing demand for Gaelic education over recent years, we continue to look at initiatives to grow the number of speakers. There is a great deal we can learn from Arctic countries as to how they are supporting their own indigenous languages and dialects. The recent visit to Scotland by the Sámi Parliament of Sweden to find out more about our Gaelic and Scots policies demonstrates that transnational learning is already underway.

The richness and cultural significance of Inuit and Sami languages were celebrated by the *Throwing Voices* events held during the 2019 Edinburgh International Book Festival with the support of the Scottish Government's Festivals Expo Fund.

Case study

► Founded in 1973, Sabhal Mòr Ostaig (SMO) is an international centre of excellence for the development of the Gaelic language, culture and arts. Located on the Isle of Skye, SMO offers courses solely through the medium of Scottish Gaelic.

Since its inception, the College has adopted an international outlook and has established a range of links with the wider Gaelic diaspora. It currently has five joint agreements with academic institutions in Canada and Ireland and continues to develop partnerships with a range of universities overseas, including the Gaelic College of Cape Breton (Nova Scotia). SMO offers visual arts residency opportunities to international artists who wish to engage with the Gaelic language and culture. The College's Alumni Association *Caidreamh an t-Sabhail* aims to increase engagement with former students all over the world.



Creative industries: Connecting tradition with innovation

Combining technical and artistic skills, creative industries are leading the way in building new business models while playing an important role in emphasising local culture, history and skills. Creative businesses contribute to building resilient communities and make an important contribution to diversifying the job market both in Scotland and in the Arctic.

The creative industries is one of Scotland's fastest growing sectors, with a turnover of £8.6 billion in 2017 and total exports worth £3.7 billion in the same year. The gaming and screen sectors, in particular, have been growing steadily and have brought investments in other economic fields while showcasing Scotland internationally. The Icelandic film industry has experienced a similar rise, opening opportunities for policy and practice exchange.

Scotland and the Arctic region are also famous for more traditional forms of art and craftsmanship, from textiles to sculpture. We can learn from how Arctic communities have embraced their vast potential and work together on market development and peer-to-peer support. With this in mind, we welcome Scottish involvement in the Circumpolar Crafters Network, a multi-dimensional collaboration promoted by the Government of Nunavut and involving crafters from Scotland, Canada, Estonia, Finland, Sweden and Norway. XpoNorth, Scotland's leading creative industries conference, can encourage more of these Scottish-Arctic collaborations. Bringing people from the international creative sector together, this annual event has established itself as an entry point into wider European markets.

“ We have an important obligation to work together and protect our heritage and cultural sites.”

Historic and natural environment

While currently underrepresented on the World Heritage List, the Arctic region boasts striking marine features, globally unique habitats and a rich history of outstanding cultural and environmental value. Scotland is host to several UNESCO accreditations, including six World Heritage Sites, two Biosphere Reserves and two Geoparks.

If we want our heritage to benefit future generations, it is crucial that promotion goes hand in hand with preservation. The combination of climate change, coastal erosion and ocean acidification represents an existential threat to the historic environment, the danger being most pronounced in the Arctic. We have an important obligation to work together and protect our heritage and cultural sites.

Scotland is already collaborating with Arctic partners on mitigation and conservation work. The Northern Periphery and Arctic project 'Adapt Northern Heritage' aims to support communities and local authorities to adapt northern cultural heritage to climate change. As well as Historic Environment Scotland, it includes agencies from Iceland, Ireland, Norway, Russia and Sweden. Edinburgh has also been chosen to host the launch of the Climate Heritage Network, a group of national and local preservation offices that want to accelerate the ambition of culture and heritage actors in delivering on the Paris agreement. The Network can serve as a vehicle for greater cooperation between Scotland and the Arctic on the preservation of historic and natural heritage.

The Heart of Neolithic Orkney is the first cultural World Heritage site to apply a Climate Vulnerability Index assessment, producing lessons that can be shared internationally.

Like Scotland, the Arctic is also internationally renowned for the richness and diversity of its intangible heritage. *Our Place in Time*,¹² Scotland's strategy for the historic environment, acknowledges the importance of oral traditions, performing arts, social practices, rituals, festive events and traditional craft knowledge.

Cultural Ties

Case study

▶ The University of the Highlands and Islands' Centre for Mountain Studies at Perth College chairs the NPA-funded Sustainable Heritage Areas, Partnerships for Ecotourism (SHAPE) project. SHAPE involves 33 associated partners from Scotland, Canada, Faroe Islands, Finland, Greenland, Iceland, Ireland, Northern Ireland, Norway, and Sweden. It brings together public and private sector stakeholders to develop innovative approaches to ecotourism and heritage management in sparsely populated areas. SHAPE will lead to the creation of an open-access web-based service to support organisations and communities with delivering effective ecotourism initiatives.



“The Scottish Government and our national tourism agency, VisitScotland, are engaging with organisations across Arctic countries to exchange best practices on sustainable high-quality tourism and we are keen to do more.”

Sustainable tourism

Tourism is a major source of revenue and job opportunities for Scotland, especially for our rural communities. The Arctic region – with its precious landscapes, unique wildlife and rich indigenous cultures – has also experienced substantial tourism growth over recent years. As a result, we face common issues around balancing increases in visitor numbers – often in environmentally fragile communities – against ambitions for sustainable economic growth.

With travellers increasingly seeking nature-based opportunities, Adventure Tourism is fast developing both in Scotland and in the Arctic, calling for an early exchange of ideas as to how sustainability can be embedded into this growth area.

Marine and cruise tourism account for a growing share of the tourism market in Scotland and the Arctic. In 2018, a fleet of 825 cruise ships brought almost 800,000 passengers to Scotland. Small communities can sometimes struggle to bear the impact of these numbers and we are keen to engage with Arctic destinations in this global market to exchange learning and develop best practices. The cruise market is also rapidly evolving with the commissioning of a larger number of Expedition craft, bringing smaller numbers but often seeking a deeper experience. This trend will affect Scotland and the Arctic region, creating both opportunities and challenges.

We are developing an Islands Passport that will encourage people to visit more of Scotland's 96 inhabited islands, helping to alleviate tourism pressure points and spreading tourism to wider regions. The passport aims to increase visitor spend in less well-known or less accessible islands, sustaining often fragile lifeline services. We are keen to share the learning from this initiative with our friends in Arctic areas.

The Scottish Government and our national tourism agency, VisitScotland, are engaging with organisations across Arctic countries to exchange best practices on sustainable high-quality tourism and we are keen to do more. The Visit Arctic Europe project – which brings together tour operators, government agencies and hospitality stakeholders from the North of Norway, Sweden and Finland – is an example of cross-border cooperation we are looking with great interest at. The project aims to tackle seasonality and develop the potential for all-year-round activities.



Case study

For more than a decade, the Scottish Government's programme of Themed Years has provided a focus for activity that helps to spotlight Scotland's greatest tourism opportunities. Each year focuses on the promotion of domestic and international tourism and the development of the events industry. The theme also provides an opportunity to profile non-tourism related activities.

In 2020, Scotland celebrates its Year of Coasts and Waters. The Themed Year will encompass all aspects of Scotland's tourism offering, with a focus on raising awareness and increasing responsibility for our natural environment. In 2022, the Year of Scotland's Stories will showcase our rich literature and celebrate the global reach of our creative industries.

These Themed Years focus on areas in which the similarities and connections between Scotland and the Arctic region are evident. We will work to ensure they serve as platforms for even greater Scottish-Arctic dialogue, celebrations and knowledge exchange.

Going forward, we will:

- ▶ Work with the Edinburgh International Culture Summit Foundation to invite representatives of Arctic organisations and institutions in order to promote new Scottish-Arctic cultural policy exchanges.
- ▶ Work with VisitScotland to draw up specific proposals for discussion with the Nordic Council on policies and practices that promote sustainable tourism, especially in the emerging adventure and marine tourism sectors.
- ▶ Take opportunities such as those offered by XpoNorth to encourage collaboration between Scotland and Arctic countries on the creative industries. This can lead, for instance, to joint productions between Scotland and Arctic countries.
- ▶ Engage with Arctic partners who want to work with Scotland to share lessons on the promotion and protection of indigenous and minority languages, respecting the fact that all languages have their own specific needs. This will include lessons we have learnt from e-Sgoil on addressing recruitment issues.





Rural Connections

Rural Connections

Remoteness is a common feature of the Arctic region and many parts of Scotland, which is more than 90% rural and boasts 96 inhabited islands. Our remote areas share many challenges with the Arctic, from transport to digital connectivity and the provision of medical services. These areas also face problems retaining young people.

The Highlands and Islands is one of the most sparsely populated parts of Europe, with only nine people per square kilometre, similar to some parts of the Arctic. However, the highest percentage of social enterprises in Scotland are found in the same region, illustrating the resilience and entrepreneurial spirit of these communities.

The common challenges presented by rurality create opportunities for joint working between Scotland and Arctic states. By taking a community-led and human rights-based approach that recognises the distinct needs of rural areas, we can challenge traditional perceptions and develop innovative solutions to build resilience, empowerment and representation. Indeed, cooperation between the north of Scotland and Arctic regions has been ongoing for decades, delivering tangible benefits to people and communities on both sides.

▶ The Scottish Rural Parliament gathers rural communities from across Scotland, giving them a stronger voice to initiate change at a local and national level. Drawing inspiration from similar organisations across Europe, including in Finland and Sweden, the Scottish Rural Parliament offers a free platform for communities to connect with policy-makers and share ideas that can contribute to the empowerment of rural areas. The 2018 Rural Parliament saw 400 people of all ages and backgrounds gather in Stranraer, making it the largest participative democratic gathering of rural communities that year.

Rural development and entrepreneurship

A vibrant rural economy is crucial for our national prosperity. Harnessing the full potential of businesses and people in rural areas is fundamental for our vision to become a world-leading entrepreneurial and innovative society. We would benefit from exchanging best practice with Arctic partners in relation to rural entrepreneurship.

Women are key contributors to the rural economy and their empowerment is crucial to unlocking talent that can drive economic growth. Too often, however, their skills are underutilised. Whilst 33% of farm operators in Scotland are women, they are significantly underrepresented on boards and in senior roles. We have launched campaigns and training programmes aimed at empowering women in rural areas by supporting them to develop their talents and take up leadership roles. The Scottish Government's Women in Agriculture Taskforce aims to give women in farming greater access to development opportunities to ensure the long-term sustainability and resilience of Scotland's rural economy. Likewise, the Women in Scottish Aquaculture campaign seeks to encourage more women to consider a career in this sector.

Community regeneration

Poverty and inequality are often deep-seated and multi-generational in rural areas, requiring targeted actions focused on their root causes. Over many years, Scotland has developed community-led investment tools that tailor regeneration measures to local needs and aspirations. These programmes create jobs, support social enterprise, build community cohesion and address health inequalities.

For example, the People and Communities Fund has supported the introduction of a new rural transport and handyman service on the Isle of Lewis, with disadvantaged people being supported to attend amenities, education, training and healthcare services. Outcomes have included reduced isolation and improved physical and mental health.

“The common challenges presented by rurality create opportunities for joint working between Scotland and Arctic states.”

Rural Connections

Transparency about who owns and makes decisions about land is also crucial to encouraging community regeneration. At present, only 3% of Scotland's land is in community ownership. In order to increase this figure, we have created a number of community right-to-buy schemes that assist with purchasing land and assets. Thanks to these tools, the amount of land owned by communities has more than doubled from 93,000 hectares in 2003 (when the Land Reform Act came into force) to over 222,000 hectares today. The community buy-out of the Isle of Ulva in 2018 represents the most successful example to date. Bringing the island back into the local community's hands will attract more people to live and work year-round on the island, fighting depopulation and encouraging sustainable development.

Place-making, design and housing

Decision-making and delivery informed by people who live and work locally is key to the social, economic and physical success of places. Scotland has a long tradition of community engagement that allows development plans to be informed by local views. The Place Standard tool supports the regeneration of disadvantaged communities across Scotland through the active participation of local people in the shaping of their places. Because of its emphasis on reducing health inequality, the Place Standard has led to a collaboration between the Scottish Government and the World Health Organization (WHO), with significant uptake of this tool across Europe. More than 13 countries are currently using the Place Standard Tool and the WHO European Healthy Cities Network have recommended it be published as an WHO accredited toolkit for organisations to apply in their development of healthy places.

“When it comes to building resilient and prosperous rural areas, listening to how young people see their future and what they need to drive the empowerment of their communities is essential.”

Case study

▶ The Ulva Ferry community on the Isle of Mull suffered from long-term population decline and geographical isolation, with few affordable housing options for local people, especially young families. As a result, the local school was threatened with closure. Thanks to a community-led project that involved local residents in the decision-making, from choosing the architect to approving the final design, Ulva Ferry saw the construction of new affordable and net-zero housing. An innovative system makes these homes highly energy efficient, tackling fuel poverty. New young families have moved to Ulva Ferry, increasing community resilience and allowing local people to continue to live, work and go to school in the area.

The Prospect North project promoted by Glasgow-based Lateral North architects draws on Scotland's relationship to the North to show how architecture, design and technology can transform community engagement. By means of innovative mapping strategies and videos, Prospect North explores the relationship between culture, places, industries and economies to show how rural communities from Shetland to the Isle of Bute are re-energising through grassroots actions and local endeavours.

In partnership with Arctic countries, we can identify new innovative approaches to sustainable design. We have already built strong connections with Denmark, whose use of digital planning tools can strengthen our understanding of ways in which place-making can raise the standard of affordable housing and contribute to improving local wellbeing.

The context for the provision of new housing is changing considerably due to issues such as climate change, demographic trends, ways of living and shifting expectations. The last 20 years have seen a renaissance in rural housing design that responds with sensitivity to the climate, topography and building traditions of Scotland and which also addresses issues of affordability. Building on this work and existing links, there is potential to collaborate with Arctic partners to develop new models of living and innovative design responses to the global and national challenges we face.

Young and rural: A Scottish-Arctic dialogue

Both the Arctic region and Scottish rural areas face substantial challenges retaining young people, with significant consequences for the local economy, culture and society. Evidence¹³ suggests that factors influencing youth emigration include education and employment opportunities as well as housing and public transport availability. When it comes to building resilient and prosperous rural areas, listening to how young people see their future and what they need to drive the empowerment of their communities is essential.

Young people in the Highlands and Islands region show a strong sense of belonging and a desire to work in their communities. However, most people leaving their rural communities are between the ages of 15 and 19,¹⁴ a trend that mirrors changes in population observed in the Arctic region.¹⁵ The provision of improved facilities, affordable housing and employment opportunities must go hand in hand with a dialogue that places new generations at the core of planning and delivery considerations. Scotland can share and build on the legacy of the 2018 Year of Young People, which gave young people a stronger voice in policy-making, valuing their contribution to communities and creating new platforms for them to shine locally, nationally and globally.

The Highland Youth Parliament (HYP) played a key role in the delivery of the Themed Year. HYP enables young people in the Highlands to discuss their rights in relation to a wide variety of issues, from transport and connectivity to LGBTI rights and education. The participation of both HYP and Troms County Youth Council representatives at Scotland's Arctic Day in March 2019 created a new opportunity for transnational dialogue between young people who are experiencing similar challenges. There is potential for exploring opportunities for collaborations with other youth organisations in the Arctic, for instance the Barents Regional Youth Council.

Health and wellbeing in rural communities

Rural communities face distinct challenges in delivering primary care services, particularly in recruiting and retaining clinicians. The Scottish Government has established a Remote and Rural General Practice Working Group to provide recommendations on ways to ensure that the views of rural clinicians and communities are better recognised in primary care policy development. The Group supports a range of initiatives including Rediscover the Joy in General Practice, a programme to attract doctors to work in rural areas by tailoring posts to suit the candidate and providing opportunities for professional development. The Group is considering opportunities to develop a national centre for excellence in rural health and social care that will build networks and share knowledge with and from other countries.

Scotland and Arctic partners can work together to address issues such as challenging geography, professional isolationism and limited workforce, and ensure that person centred and sustainable care for patients is provided across rural communities.

Technology-enabled care is a key component of ensuring high quality healthcare services are available to as many people as possible regardless of rurality. Digital solutions can help Scotland and the Arctic region ensure that all communities are provided with adequate health and social care services irrespective of where they live.

Scotland has already developed considerable expertise in this area, giving people more freedom over how they manage their care and reducing unnecessary travel to appointments. There are currently estimated to be around 170,000 telecare users across Scotland. Attend Anywhere video consultations allow for a secure clinician-to-patient environment that can be accessed anywhere by a member of the public through a web browser or app on their laptop, tablet or smart phone.

Rural Connections



▶ To date, over 7,000 Video Consultations have taken place in Scotland. Based on 954 answers to the Attend Anywhere Progress Report published in July 2019, video consultations have resulted in travel savings as follows: 94 bus/train journeys, 49 taxi rides, 562 car journeys, 56 flights, 71 ferry crossings and 34 patient transports (figures account for one way only). Service users indicated that on average they saved a 93-mile trip.

Although Scotland has strong know-how in the area of digital health, we remain committed to learning from others. Finland, for instance, has been a pioneer in telehealth and all Finns have online access to their health records and their e-prescription history.

In order to further cooperation and knowledge exchange on digital solutions to healthcare, Scottish institutions have already signed a number of Memoranda of Understanding (MoUs) with Arctic countries. In 2017, the University of Strathclyde signed an MoU with Odense University Hospital and in 2018 the University of Strathclyde and the Digital Health & Care Institute signed an MoU with the University of Adger and Norway's Centre for E-Health research.

A Connected Scotland,¹⁶ our national strategy for tackling social isolation and loneliness, recognises the unique challenges faced by rural communities. Mental health is a concern for both Scotland and the Arctic region. Tragically, suicide rates in the Arctic are now among the highest in the world,¹⁷ and young people are particularly at risk. There is increasing recognition of the urgent need for suicide prevention strategies and early intervention approaches.

*Scotland's Suicide Prevention Action Plan*¹⁸ outlines how we plan to make suicide preventable and ensure support is available to anyone contemplating suicide as well as to those who have lost a loved one. It has a target to reduce the suicide rate by 20% by 2022. As part of our Mental Health Strategy, we have established a National Rural Mental Health Forum that seeks to bring positive change through a network of rural organisations.

Scotland and Arctic countries can work together to tackle both the visible and invisible barriers to accessing and seeking mental health support, developing solutions that allow people to get the right help at the right time, free from discrimination and stigma.

Connectivity

High quality digital connectivity is essential for delivering inclusive economic growth and innovation, particularly in rural, remote and island areas. The accessibility and quality of digital infrastructure is particularly crucial to support flourishing businesses, public services and the retention of young people in our communities.

We are working with industry and regulators to improve mobile coverage across Scotland, extending access to 4G services while positioning Scotland as a 5G leader. The Reaching 100% (R100) programme will provide superfast broadband access to every home and business in Scotland. Since 2014, access to this technology has increased from 61% to 92%, with major improvements in Orkney, Shetland and the Western Isles.¹⁹

The challenges of broadband deployment in the Arctic are akin to those encountered by Scottish remote communities.²⁰ Like Scotland, Arctic states have established broadband speed and coverage goals to increase interconnectivity in sparsely populated areas. Often working together, as in the case of the Arctic Mobile Communications Architectures programme, Arctic

countries are rolling out extensive connectivity projects, exploring a variety of infrastructural and financing models. Scotland could learn from these experiences and exchange best practices with Arctic stakeholders, especially in relation to public-private partnerships.

Fuel poverty

With the introduction of the Fuel Poverty Act, we have taken a world-leading approach to one of the biggest issues facing rural communities. The Act set an ambitious target that by 2040, as far as reasonably possible, no household in Scotland is in fuel poverty and, in any event, no more than 5% of households suffer from this problem. By the end of 2021, we will have allocated over £1 billion since 2009 through energy efficiency programmes to make homes warmer and cheaper to heat.

Rural and island communities face distinct challenges, such as differences in weather and housing stock, as well as higher installation and labour costs. Since 2013/14, our rural areas have received almost £64 million in investment through the Scottish Government's Home Energy Efficiency Programmes. Through Warmer Homes Scotland, our national fuel poverty scheme, we have made available additional measures to rural and island communities not served by the gas grid. These include ground source heat pumps, micro wind, micro hydro and micro combined heat and power systems.

Despite their colder climates, Arctic countries such as Sweden and Denmark experience less fuel poverty,²¹ opening up opportunities for mutual learning on areas such as energy efficiency and off-grid power solutions.

An island-proofed future

In 2011, a total of 103,700 people lived on our 96 inhabited islands, representing 2% of Scotland's total population.

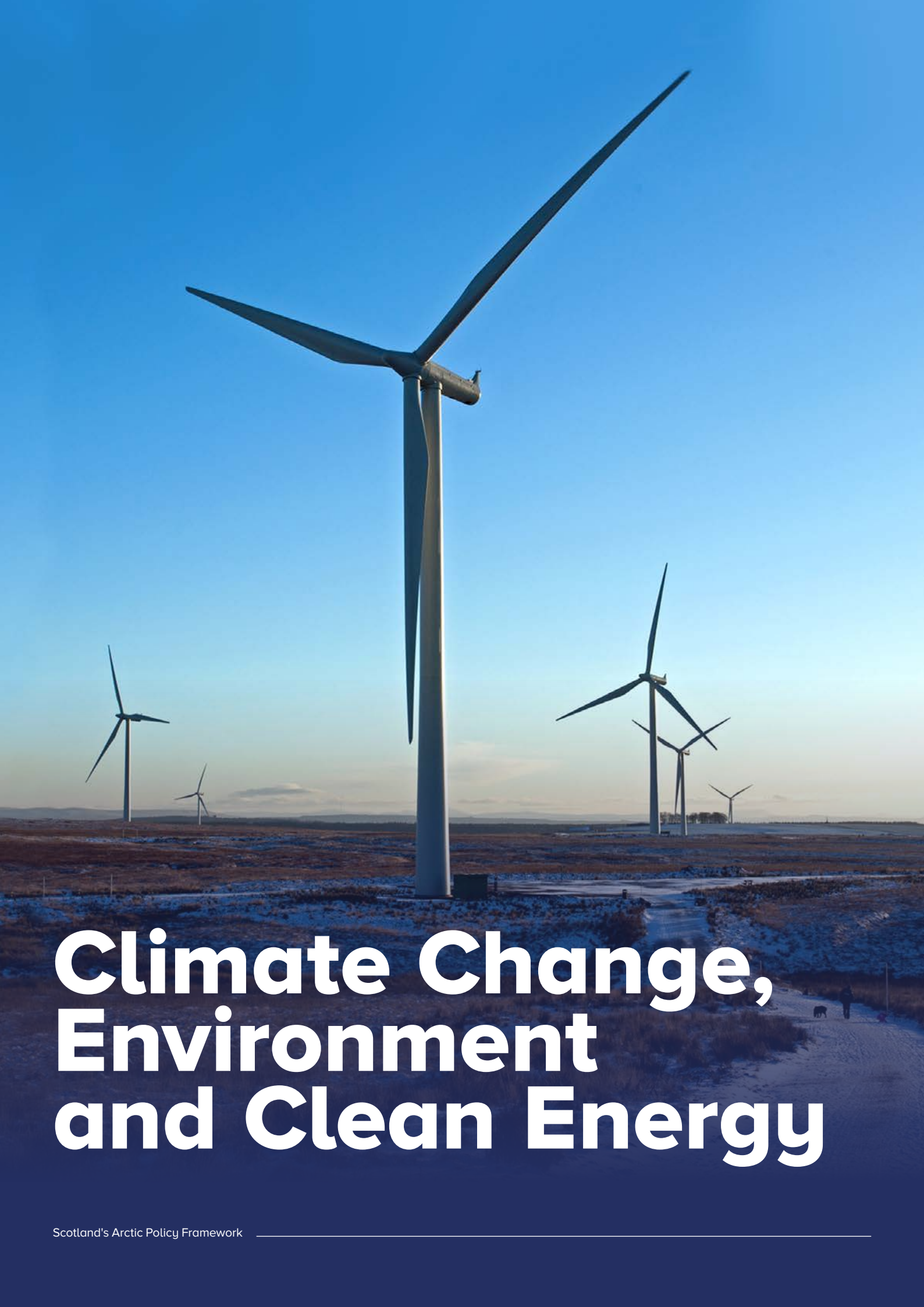
The Islands (Scotland) Act 2018 is one of the few pieces of legislation around the world to focus entirely on islands and island communities. It requires policies, strategies and services to be "island-proofed" where their implementation is considered likely to have a different effect on an island community compared to mainland Scotland. The Act also required the Scottish Government to develop a National Islands Plan by means of an islands-wide consultation.

The National Islands Plan sets a direction of travel for the Scottish Government and provides a framework for action in order to meaningfully improve outcomes for island communities. This open and participative consultation approach has afforded an opportunity to better understand the realities of island communities across the entire breadth of Scotland and to put in place policies and strategies that respond directly to their needs.

This inclusive exercise has produced much evidence and know-how that we could share with our Arctic partners, some of which – especially Norway and Canada – feature a large number of islands in their northernmost territories. Scottish islands would also benefit from greater exchange of knowledge and practices with the Faroe Islands and Åland Islands, with a view to identifying new avenues for islands communities to thrive and increase their resilience.

Going forward, we will:

- ▶ **Engage with counterparts in Arctic countries to identify best practice in relation to promoting community regeneration in rural areas and islands, with a particular focus on female empowerment and participative place-making.**
- ▶ **Explore – with active participation by young people – opportunities to learn lessons around youth retention in remote areas, including by sharing the experience Scotland has developed thanks to the 2018 Year of Young People.**
- ▶ **Work with civic Scotland to promote new young people exchanges between Scotland and the Arctic.**
- ▶ **Foster knowledge exchanges on the delivery of connectivity as well as public services such as healthcare, including mental health, and education in rural areas.**
- ▶ **Engage with any Arctic partners who want to work with Scotland to share the lessons we have learnt from the development of our National Islands Plan.**



Climate Change, Environment and Clean Energy

Climate Change, Environment and Clean Energy

The Arctic region and its melting glaciers are illustrative of the devastating impact of global warming on our planet. Combined with other environmental threats – such as pollution, sea level rise and erosion – climate change poses a serious threat to ecosystems and biodiversity on a global scale. Recent assessments have shown that the average warming is twice as high in the Arctic as it is in other parts of the world and that the volume of late-summer Arctic sea ice has declined by 75% since 1979.²²

Scotland stands with the Arctic region in its determination to tackle this global challenge. The Scottish Government has declared a global climate emergency. We are committed to ensuring that Scotland's contribution to climate change will end within a generation. To this end, we are legislating to introduce a net-zero target for all greenhouse gases by 2045. We want to continue on the path that has led Scotland to almost halve its emissions since 1990.

Like Scotland, many Arctic states have set ambitious climate change targets. We are determined to work with them to share experience, values and expertise in areas such as adaptation, transport decarbonisation, renewable energy and environmental protection. While Scotland has already developed a wealth of expertise in relation to climate action, we want to learn from our Arctic partners to ensure Scotland has the best possible evidence to steer a sustainable path towards a net-zero economy.

“The Scottish Government has declared a global climate emergency. We are committed to ensuring that Scotland's contribution to climate change will end within a generation.”

Just transition and climate justice

By taking a human-rights based approach, Scotland and Arctic governments can reduce vulnerability and increase resilience to the effects of climate change, leaving no one behind.

The Scottish Government is encouraging community-level discussions on how we can reduce emissions and has established an independent Just Transition Commission to provide practical advice on ending our contribution to climate change in a socially and economically sustainable way.

At both a national and international level, we are determined to act on climate change through the lens of climate justice, recognising that those most vulnerable to climate change are often those who have contributed least to the problem. In 2010, we became the first government anywhere in the world to establish a Climate Justice Fund. We have committed £21 million between 2012-2021 to support projects that aim to build climate resilience in our sub-Saharan African partner countries of Malawi, Rwanda and Zambia. Arctic countries run similar programmes in other climate-vulnerable developing nations. By supporting and empowering communities in their own countries, we can jointly promote international resilience and further climate change action.

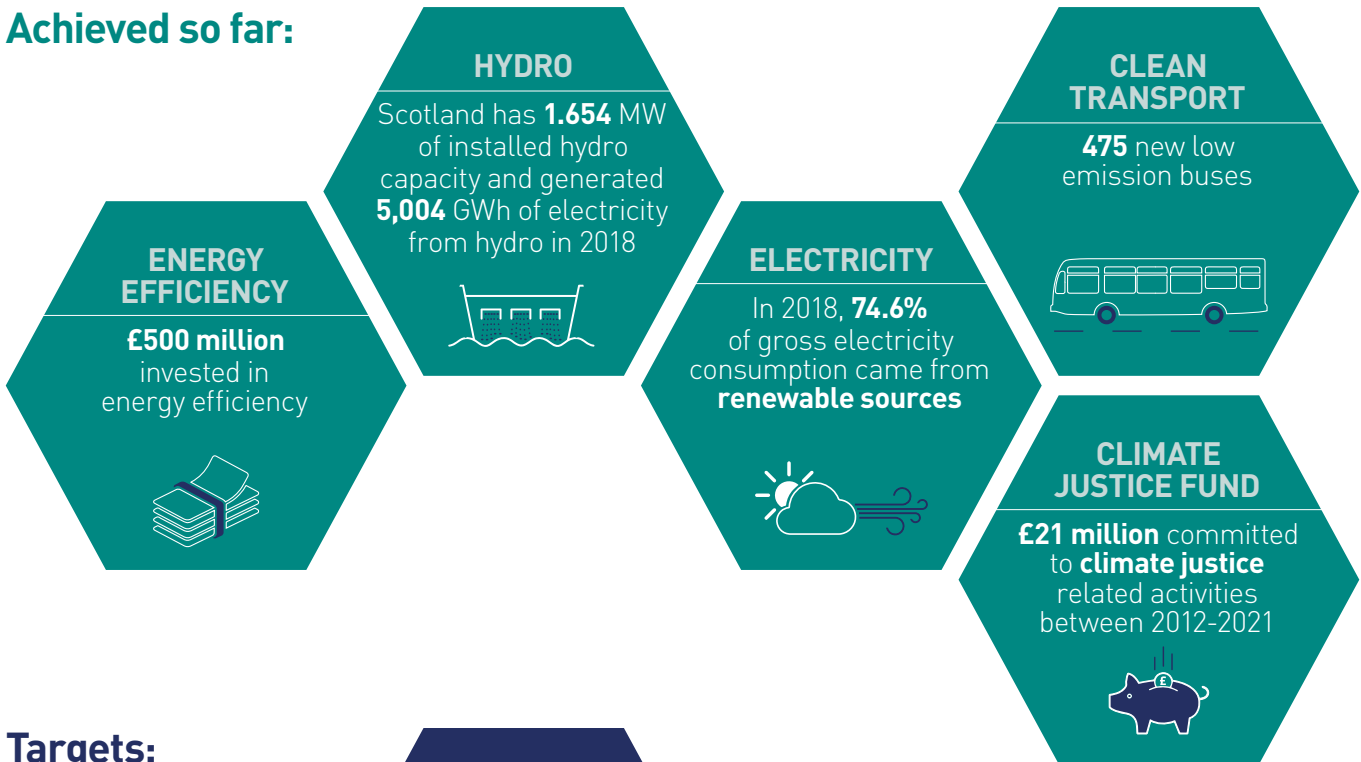
Marine pollution and biodiversity

Marine pollution is a global environmental issue posing an increasing threat to Arctic ecosystems, including its wildlife. Scientists have already detected a stark increase in the concentration of microplastics frozen in Arctic sea ice, with contamination risks affecting the entire food chain. It is imperative that the international community halts the flow of plastics to our oceans. Scotland and its Arctic neighbours can lead from the front in reducing waste, increasing recycling and moving towards a circular economy.

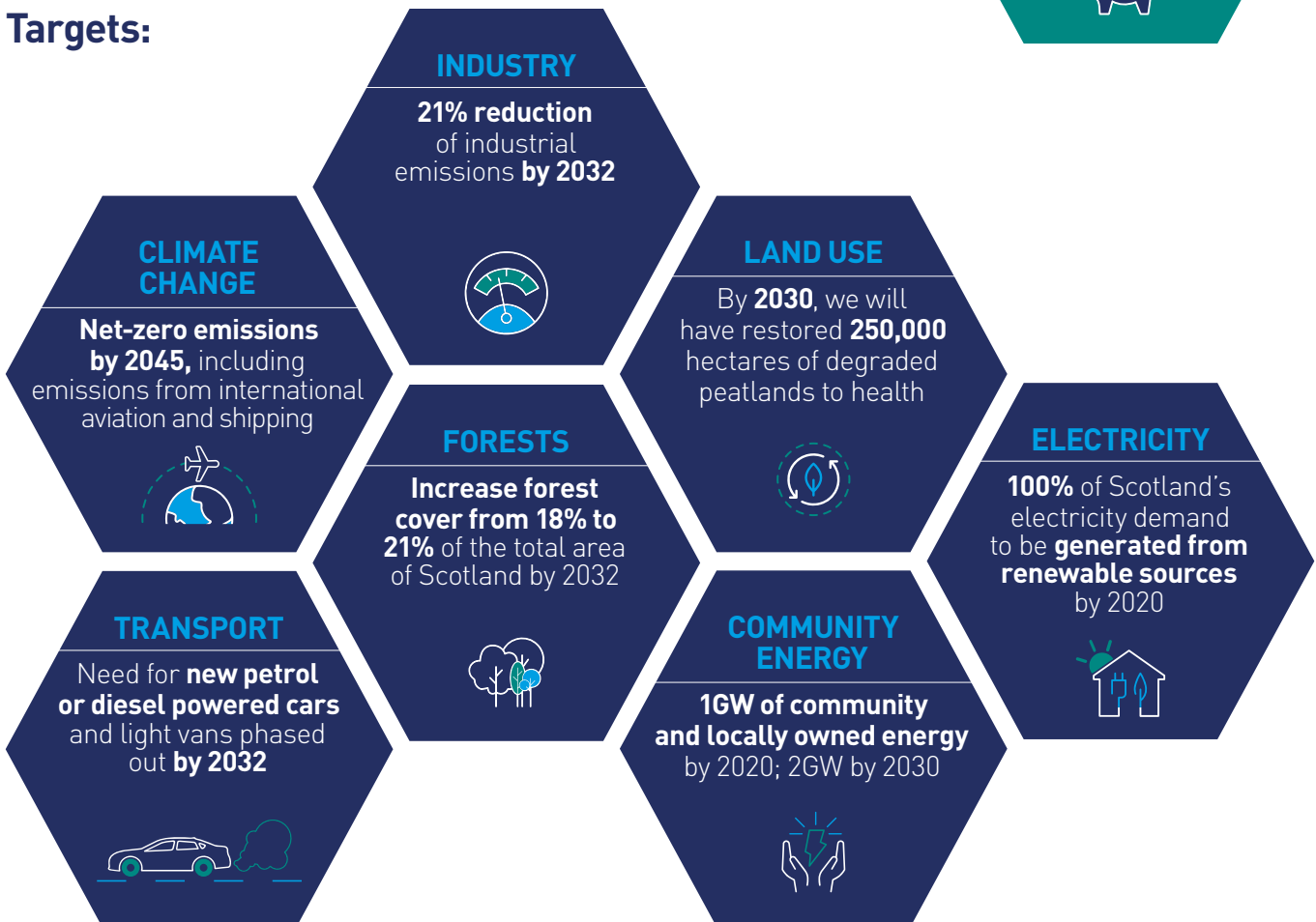
Learning from Sweden's and Norway's experiences, the Scottish Government has proposed the introduction of a deposit return scheme, with a target return rate of 90% of obligated drinks containers. We are committed to doing more to tackling the environmental impact of single-use plastic items and we stand ready to work with others to develop new best practices and take urgent action.

Climate Change, Environment and Clean Energy

Achieved so far:



Targets:



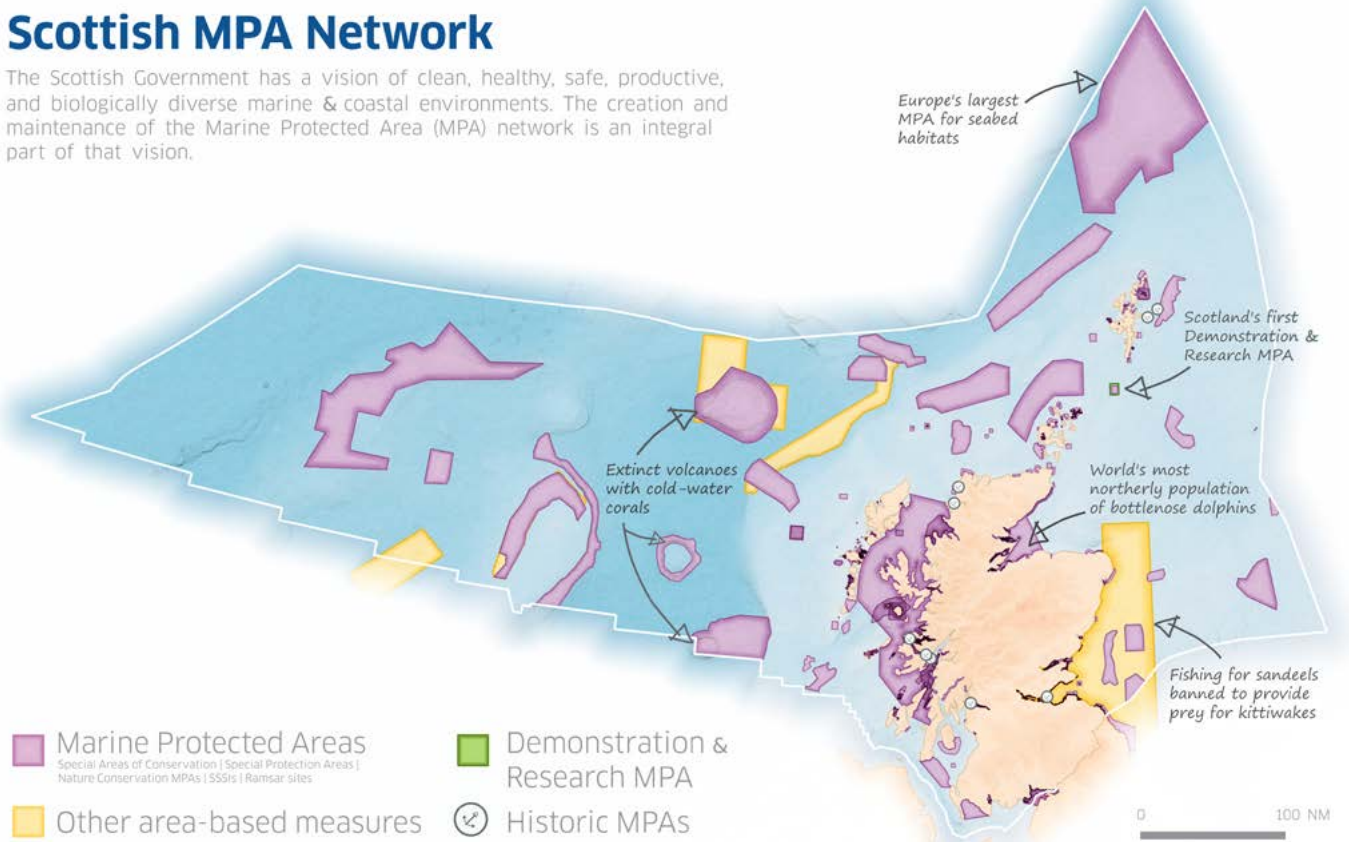
The Scottish Government's vision is for a marine environment that is clean, healthy, safe, productive and diverse, with seas managed to meet the long-term needs of nature and people. As part of the UK delegation to the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR), we are already actively collaborating with a number of Arctic countries on issues such as marine litter, persistent organic pollutants and biodiversity monitoring. We have a long history of contributing to the development of environmental assessment criteria through organisations such as Marine Scotland Science. Scotland also contributes to the development of biodiversity policy at the global scale through the Convention on Biological Diversity (CBD).

In Scotland, Marine Protected Areas (MPA) are used to ensure protection of some of the most vulnerable species and habitats. We have already designated 21% of our waters as MPAs and are committed to achieving a 30% coverage by 2030.

Oceans absorb a significant proportion of the carbon dioxide emitted by human activities. This has resulted in a detectable change in the acidity of our oceans. In addition, oceans produce in excess of 50% of the oxygen we breath. Disruption of this ecosystem will have significant consequences, with changes being more apparent at northerly latitudes. Scotland will work with Arctic countries, both directly and through the OSPAR Commission and the International Council for the Exploration of the Sea, to assess the impact of these changes.

Scottish MPA Network

The Scottish Government has a vision of clean, healthy, safe, productive, and biologically diverse marine & coastal environments. The creation and maintenance of the Marine Protected Area (MPA) network is an integral part of that vision.



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Climate Change, Environment and Clean Energy

Forest management

Forests play a crucial role in determining the concentration of greenhouse gases in the atmosphere by sequestering carbon emissions. With 73% of Finland covered by woodlands²³ while Russia and Canada host some of the world's largest forest areas, Arctic states make a crucial contribution to the fight against climate change through their woodlands.

Globally, deforestation is a leading contributor to climate change, releasing more carbon dioxide into the atmosphere than the world's entire transport sector. Sustainable forest management can help to reduce emissions from deforestation, as well as enhance biodiversity and support sustainable economic growth. Scotland has ambitious woodland creation targets, aiming to increase forest cover from less than 19% to 21% by 2032 by planting 10,000 hectares of trees per year until 2021, increasing incrementally to 15,000 hectares by 2025.

Bilateral work with Sweden has contributed to increasing our understanding and expertise of forest management issues. We will also continue to cooperate with Arctic countries through the European Forest Genetic Resources Programme, which aims to improve science-based strategies, tools and methods to advance the management of forest genetic resources.

“Among several successful renewable energy projects, Scotland hosts the world's largest floating offshore wind array off Peterhead.”

Renewable energy and decarbonisation: Economic benefits

The Scottish Government is working with established industries across the energy sector to ensure that the benefits of our transition to a net-zero economy are maximised. The Scottish renewable energy sector has seen considerable investment by companies based in Arctic states. Among several successful renewable energy projects, Scotland hosts the world's largest floating offshore wind array off Peterhead. The construction of NorthConnect, a transnational interconnector cable between Scotland and Norway, will create new trading opportunities for our renewable energy industries while improving our energy security. Going forward, more interconnection with our Arctic neighbours can assist the growth of our respective renewable energy industries.

Carbon Capture Utilisation Storage systems are opening up new opportunities for economic collaboration with Arctic states. The depleted gas fields and aquifers identified as suitable for the injection of carbon dioxide in the central North Sea are far larger than the totality of Scotland's carbon emissions. This over-supply of storage assets represent a unique asset and has the potential of making Scotland a European hub for the importation and safe geological storage of carbon dioxide. The Acorn project near Peterhead, for instance, possesses the location, infrastructure and access to storage necessary to become a key site for the whole North Sea region. We therefore support the UK Government's efforts at advancing discussions on the transboundary transport of carbon dioxide through the North Sea Basin Taskforce. Scotland has a strong academic reputation to inform these discussions and is host to the Scottish Carbon Capture Storage, Europe's largest research body on this subject.

The First Minister has instructed the Scottish National Investment bank to support the transition to a net-zero society once operational in 2020. By exploring market opportunities and making commercial investments, the Bank will contribute to expanding and diversifying low-carbon technologies in Scotland.

Marine energy

With vast natural resources and strong expertise in energy innovation, Scotland and Arctic countries can establish themselves as leaders in marine energy development. Significantly, the economic benefits from the marine energy sector are expected to be mainly created in coastal areas where the need for economic regeneration is greater.

International collaboration is crucial to ensure that all ongoing improvements feed into cost-reduction efforts. Scotland is strongly represented in international collaborations on marine energy, including the Ocean Energy Systems Technology Collaboration programme, organised under the auspices of the International Energy Agency.

Scotland is home to a number of world-leading tidal energy solutions. Simec Atlantis Energy's MeyGen in the Pentland Firth, for instance, is the world's largest tidal stream project. In addition, Shetland Tidal Array has recently been connected to battery storage developed by Tesla. The European Marine Energy Centre (EMEC) in Orkney is at the forefront in the development of international standards for marine energy, exporting its knowledge around the world to stimulate the development of a global marine renewables industry. Many of the projects being led by EMEC showcase the role wave and tidal energy could play in remote and island communities.

The Scottish Government's Wave Energy Scotland (WES) programme is the largest of its kind globally and has maintained Scotland's position as the leading nation in this emerging sector. In addition, our £10 million Saltire Tidal Energy Challenge Fund, launched in February 2019, drives innovation and incentivises investment in the Scottish tidal energy sector, supporting a pathway to long-term cost reduction.

“Scotland is home to a number of world-leading tidal energy solutions.”

Hydrogen

The Scottish Government recognises the huge potential hydrogen has as a zero carbon substitute fuel for heat and transport as well as a form of long-term energy storage.

We have supported the successive phases of the HySeas project, which has secured EU Horizon 2020 funding to develop the world's first sea-going passenger ferry powered by hydrogen. The Scottish Government also helped the Aberdeen Hydrogen Bus Project, which in 2015 saw the establishment of what at that point was Europe's largest fleet of hydrogen-fuelled buses.

For islands, the cost of energy to consumers is, on average, higher than that of the mainland. However, these areas often have huge renewable energy sources. The challenge both Scotland and Arctic countries are facing is how we harness that local energy to benefit local populations. Hydrogen may be part of the answer, calling for closer transnational cooperation around these technologies.

Case Study

▶ The Surf 'n' Turf initiative (funded by the Scottish Government) and the "BIG HIT" project (funded by the EU) are seeing production of hydrogen from wind and tidal energy.

In Orkney, more electricity is generated from renewable sources than the population use and zero-carbon power is routinely exported to the UK National Grid. At times, so much renewable energy is available that the power cables reach full capacity. The production of electricity has hence to be capped and clean energy goes unharnessed.

Hydrogen provides a solution to this issue. By means of electrolyzers, renewable electricity is used to produce hydrogen, which can act as an energy-storage medium. Hydrogen is later converted back into heat and power for buildings as well as fuel for the operation of a small fleet of zero-emission hydrogen vehicles. Orkney's experience of using hydrogen to store renewable energy can support wider replication and further deployments of hydrogen technologies in isolated territories.

Climate Change, Environment and Clean Energy



Community and local energy

Scotland and many Arctic nations face similar challenges in terms of developing economically viable energy projects in remote communities. As we begin the transition away from traditional models of centralised energy and passive consumption, it will be increasingly important to put communities at the heart of decisions about their local energy system and empower them to take an economic stake in new developments.

Scotland already has a legacy of strong community engagement in local renewable generation, often led by our most remote rural and island communities. Our Community and Renewable Energy Scheme (CARES) has supported almost 600 renewable energy projects across Scotland.

“Scotland and many Arctic nations face similar challenges in terms of developing economically viable energy projects in remote communities.”

Case Study

In 1997, residents of the Hebridean Isle of Eigg secured the community buyout of the island. After decades of diesel generators due to the island not being connected to the mainland electricity supply, in 2008 Eigg became the world's first community to launch an independent power grid. The £1.6 million hybrid renewable energy system provides 95% of the island's electricity 24 hours a day and at 25-40% cost saving compared to what the community was previously paying in diesel generators. The system combines wind, solar and hydroelectric generation to provide the island with a continuous reliable electricity supply with minimal use of fossil fuel generators. Power is distributed from the renewables via 11km of underground cable that was laid to form an electricity grid for Eigg. Repair and servicing is the responsibility of a trained maintenance team of island residents.



Decarbonisation of transport

Reducing emissions from transport is a key component of the world's efforts at meeting future climate targets and reducing local air pollution. Arctic countries are carrying out important work in this field, with Norway, Iceland and Sweden topping the electric car market in 2018.²⁴ Scotland continues to develop a comprehensive charge point network, with over 1,000 publicly available points. Registrations of ultra-low emission cars is growing rapidly, increasing by 39% in 2018. We are working on a further expansion of our electric charging network, including the provision of infrastructure in rural areas.

While the transition to ultra-low emission vehicles plays an important role in reducing emissions from the transport sector, it is essential to encourage other forms of sustainable transport. We are keen to work with our Arctic partners to develop best practices that can promote greater use of public transport, reduce the movement of freight by road and curtail emissions from maritime and aviation sectors. For instance, we are looking with interest at the city of Malmö's successes in promoting active travel and Norway's intention to make all domestic flights electric by 2040.

Many Arctic states share Scotland's aspiration to increase the decarbonisation of transport and encourage modal shifts, opening important opportunities for partnerships. We are already engaging with several Arctic states in relation to the decarbonisation of various modes of transport and are keen to cooperate with others across the region that have similar issues to Scotland, such as the need to ensure strong transport connections to remote and island communities.

▶ The Electric A9

The electrification of the A9 highway, Scotland's longest road at 440 kilometres, will go a long way towards expanding and reinforcing Scotland's existing charge point infrastructure. By developing multiple charge place hubs, the Electric A9 will reduce "range anxiety" and provide charging for both long distance journeys and local businesses and residents. The project is due to be completed by 2022.

Going forward, we will:

- ▶ Continue to work internationally to further climate justice, looking for opportunities to partner with Arctic organisations to build on the work of our Just Transition Commission on socially and economically sustainable emission reductions.
- ▶ Share scientific knowledge and expertise on marine pollution and biodiversity monitoring through organisations such as Marine Scotland Science.
- ▶ Explore new opportunities for bilateral and multilateral learning in the fields of transport decarbonisation, active travel and ultra-low emission vehicles.
- ▶ Engage with Arctic partners who are interested in working with us to develop best practices in relation to community engagement in local renewable generation.

“We are keen to work with our Arctic partners to develop best practices that can promote greater use of public transport, reduce the movement of freight by road and curtail emissions from maritime and aviation sectors.”



Sustainable Economic Development

Sustainable Economic Development

Responsible, transparent and inclusive economic development is fundamental to securing a sustainable future for the Arctic region. Scotland was one of the first countries to sign up to the United Nations Sustainable Development Goals. Together with Iceland, the Scottish Government is also a founding member of the Wellbeing Economy Governments (WEGo) group, which seeks to apply the principles of economic wellbeing to practical and scalable policy approaches. By working with Arctic countries, peoples and organisations, we can devise solutions that are ecologically accountable and combine increased prosperity with greater equality.

The rapid changes affecting the Arctic have not only environmental but also economic consequences that reverberate globally. The region spans eight of the world's largest economies with which Scotland has strong trade and investment links. The Arctic is a new frontier of global commerce and holds a substantial share of the world's food, natural resources and energy. Estimates indicate that pan-Arctic economic activity already exceeds US \$500 billion annually²⁵ and is set to increase. Supported by the Scottish Government and its enterprise agencies, Scottish businesses have the potential to deliver significant increases in their commercial relationships with the Arctic, strengthening Scotland's overall economic partnership with the region.

Trade and investment links

Arctic countries are major trade partners for Scotland, accounting for around 27.5% of our total exports and five of our top 20 export destinations²⁶ in 2017. They are also the origin of about half of all foreign direct investments in Scotland,²⁷ strengthening our status as the leading UK location for global investment outside of London.

We are committed to building on these results and making our trade and investment partnerships with Arctic countries even more successful. In our export growth plan "*A Trading Nation*";²⁸ we set an ambitious target of increasing international exports from 20% to 25% of GDP over the next 10 years. The United States, Norway, Denmark, Sweden and Canada are among the top export markets showing the strongest near-term growth potential for Scotland.

To support the delivery of this target, we are investing £20 million over three years in addition to our annual £300 million business support budget. In partnership with Scottish Development International (SDI), we will also increase the number of Trade Envoy positions and expand our GlobalScot network, a worldwide group of business leaders dedicated to supporting Scotland's exports, from 600 to 2,000 people.

Foreign-owned enterprises by country of ownership with total Scottish employment and turnover (2018)

Country	Number of enterprises	Number of local units	Total Scottish employment	Turnover
United States	590	2,320	107,750	31,403
Norway	110	220	5,870	2,233
Sweden	80	180	6,360	1,033
Denmark	70	370	7,540	1,788
Canada	50	110	5,860	2,053
Finland	15	25	730	212
Iceland	5	60	N/A	N/A
Russia	0	0	N/A	N/A

Sustainable Economic Development

Food and drink products, often originating from rural areas, are one of our largest exports, reaching a record high of £6.3 billion in 2018. The United States, Norway, Denmark, Finland, Sweden and Canada were identified as Top Prospect markets in the *Scotland Food & Drink Export Plan*²⁹ launched in June 2019. However, the variety of Scottish exports to Arctic countries is much wider, including engineering and advanced manufacturing, financial and business services as well as technology, digital and media.

Shipping and ports

Shipping operations in the Arctic are on the rise, with transport volumes expected to reach 100 million tonnes by 2025³⁰ and growing international attention to the opening up of new water routes. In line with our declaration of a global climate emergency, we support efforts at ensuring Arctic shipping traffic grows in the full respect of the principles of safety and sustainability.

Sitting at the crossroads between the Arctic ocean and central Europe and being ideally located on the Europe-North America axis, Scotland has strong credentials to serve as a near-Arctic marine transport and logistics hub. Orkney's Scapa Flow is one of the largest natural harbours in the world, a tidal stream free area of just under 325 square kilometres that has established itself as northern Europe's preferred location for ship-to-ship transfer operations.

The Scottish Government is committed to supporting the establishment of an ultra-deep water port that can accommodate the largest heavy lift vessels currently in operation in the North Sea. Work to date has included commissioning a feasibility study that has highlighted Dales Voe in Shetland as the most cost-effective location to have an ultra-deep water port in the UK.

Ports are key parts of the Arctic and near-Arctic regions' ecosystems. Collaboration between Scottish harbours and their Arctic counterparts is already underway. The High North Atlantic Business Alliance (HiNABA) network, for instance, consists of ports and economic development organisations in the North Atlantic, including the north of Norway, Iceland, Greenland, the Faroe Islands, Maine, Atlantic Canada and Scotland. The group seeks to increase sustainable trade and investment and explore opportunities for wider business to business cooperation.

Oil and gas

Oil and gas is estimated to have been worth £16.2 billion in Gross Value Added to the Scottish economy in 2018, representing 9.1% of Scottish GDP. The industry supports a total of 110,000 jobs in Scotland when including direct, indirect and induced employment. A strong domestic oil and gas industry can play a positive role in supporting the low carbon transition, in terms of transferable skills and infrastructure. The centre of excellence for deep-water technologies in Montrose is among the most advanced in the world. Boasting state-of-the-art manufacturing processes, the centre produces equipment that improves productivity while lowering the carbon footprint of oil and gas operations in demanding environments.

Safe and environmentally-balanced decommissioning is an integral part of the design and lifecycle of offshore facilities. We want to ensure that decommissioning is undertaken in line with the principles of the circular economy, promoting the reutilisation of material over recycling and disposal whenever possible. The University of Aberdeen's National Decommissioning Centre has world-leading expertise in this sector, with particular focus on innovative solutions that can reduce costs and extend field life.

Scottish ports are also active in the decommissioning sector, winning a significant number of contracts internationally. Thanks to the ongoing establishment of an ultra-deep water port and continuous investment in infrastructure, Scotland can develop exportable expertise in a market that is forecast to reach £15 billion to 2025.



Sea fisheries

Both Scotland and Arctic countries have major fishing interests, with many commercial and policy links between us. Scotland engages with a number of Arctic nations in various fisheries negotiations that set catch levels and management measures for stocks that cross international boundaries. Indeed, Scotland's sea area is larger than the entire land mass of Germany and our waters extend 320 kilometres into the Norwegian Sea and similarly into the north-east Atlantic.

Scottish waters provide rich fishing: on average, around four tonnes of fish are taken annually from each square nautical mile compared to the EU's average of one tonne. Provisional statistics³¹ show that in 2018 the 2,087 active Scottish-registered fishing vessels landed 445,000 tonnes of sea fish and shellfish with a value of £572 million. Our waters are therefore very attractive to a number of other countries that already fish here, including several Arctic nations.

The nature, format and dynamic of Scotland's future international engagement on fisheries is inextricably linked to the UK's departure from the EU, which will lead to adjustments to the fisheries governance framework in the north-east Atlantic. However, we remain committed to a sustainable approach to fisheries management, not only in the way we will participate in international negotiations but also in how we will engage with the formal and informal networks that are vital to conducting successful business. Other fishing nations with whom we have long-standing relationships, including Arctic countries, will see us remain a responsible, fair and open negotiating partner.

Aquaculture

Aquaculture affords one of the most matured economic links between the Arctic region and Scotland, contributing around £220 million in gross value to our economy and employing directly more than 2,000 people. While Scotland's offer is varied – ranging from trout to mussels and oysters – our aquaculture sector is mainly renowned for farmed salmon, of which we are the world's third largest producer behind Norway and Chile.

Norwegian-owned companies have made significant investments in the Scottish salmon industry, introducing important technological developments that have helped our product attain a global reputation for quality and provenance.

With the world's demand for food increasing, it is crucial that we work together to ensure that the aquaculture sector can help meet this demand while remaining sustainable. Scotland is already working with Arctic countries to develop best practices and exchange regulatory expertise. The Scottish Aquaculture Innovation Centre (SAIC) at the University of Stirling produces ground-breaking research that is shared internationally. Thanks to a Memorandum of Understanding signed in 2015, the Scottish Government is working with Norway, Canada and Chile to enhance sustainable aquaculture growth.

“Scotland has strong credentials to serve as a near-Arctic marine transport and logistics hub.”

Sustainable Economic Development

International connectivity and datacentres

Fast, stable broadband and mobile connectivity is vital for realising the full economic benefits of the digital economy. While Scotland possesses many world-class developers of digital technologies, it is still building world-class infrastructure to support them. Concurrently, we do not have adequate and commercially viable international fibre cable links, particularly in terms of robust direct connections to North America and Western Europe. International fibre connectivity, datacentres and internet exchanges are all vital to stimulate innovation and promote the digital technology industry.

The Scottish Government, through the Scottish Futures Trust, is currently exploring opportunities to link Scotland to existing or new transatlantic fibre crossing. The scale, complexity and costs of laying fibre-optic cabling calls for joint cooperation with our Arctic neighbours, which are often grappling with similar issues.³²

Space industry

Currently, the Arctic region experiences inadequate satellite coverage, with negative effects on both private communications and commercial opportunities. Satellite technologies can contribute to closing the Arctic broadband communications gap while facilitating rescue operations and improving the provision of digital healthcare. Space Norway's recent investments in this infrastructure confirms the viability of satellite-based solutions to poor connectivity in remote areas of the Arctic.

“Scotland is establishing itself as a leading space nation, with Glasgow building more small satellites than any other place in Europe.”

Scotland is establishing itself as a leading space nation, with Glasgow building more small satellites than any other place in Europe and companies based in the city being recognised as world-class innovators. In July 2018, the UK Space Agency and Highlands and Islands Enterprise announced their financial support for a Space Hub in Sutherland, which will see the launch of a new generation of small rockets and earth-observation satellites. Work is also continuing at pace to develop horizontal launch capabilities at Glasgow Prestwick Airport, backed by an £80million package of investments via the Ayrshire Growth Deal. Other vertical launch projects are Comhairle Eilean Siar's (the Western Isles Council) plans for Spaceport 1 and Shetland Space Centre's (SSC) plans for a launch site and ground station on Unst, Scotland's most northerly island whose latitude facilitates datalinks to existing satellites. SSC has entered a partnership with the Faroe Islands, offering specialist advice for the establishment of a Faroese ground station while Føroya Tele will provide technical and commercial support for data download and storage in Unst.

Land and marine planning

The reduction in sea ice is contributing to the increased accessibility of the Arctic for industrial activity. As a result, the Arctic has witnessed a progressive acceleration in infrastructure development. Roads, airports, railways and harbours are being built alongside exploration facilities while hundreds of other projects are being considered by both public and private actors. This exponential growth in infrastructure requires careful planning in order to ensure it remains environmentally sustainable and socially inclusive.

Scotland has a long tradition of spatial and marine planning that enables good quality development. The Scottish Government is internationally respected for its progressive approach to implementing strategic environmental assessments with our experience shared internationally through engagement with the European Commission and participation in professional networks.

Case study

- ▶ The North Sea is one of the busiest areas for maritime industries in the world. Offshore energy, in particular, plays a major part in generating economic value and employment in the North Sea, but faces a number of international challenges connected, for instance, to the offshore grid infrastructure.

Marine Scotland (MS) is a leading partner in the EU-funded NorthSEE project consortium, which aims at facilitating greater transnational marine planning coherence in the North Sea Region in relation to environmental protection, shipping routes and energy infrastructure. Among other countries, NorthSEE includes partners from Denmark, Norway and Sweden. MS has taken a leading role in the project and acts as the Work Package Leader for offshore energy activities. In this capacity, MS is carrying out deep analysis on the spatial implications of offshore wind farms, devising solutions that support the sustainable development of the offshore wind sector. These studies are producing important recommendations for marine planners.

The National Planning Framework (NPF) is our long-term spatial plan for development and infrastructure for Scotland over the next 20 to 30 years. Engagement leading to the publication of our NPFs is open and collaborative, involving members of the public as well as the planning profession, local authorities and development interests. Our National Marine Plan provides a comprehensive framework for all marine activity in our waters. It enables sustainable development and a use of our marine area that protects biodiversity and enhances the marine environment, whilst promoting both existing and emerging industries. Thanks to the ongoing development of a Regional Marine Plan for each of our 11 designated marine regions, we are also allowing for more local ownership and decision-making within each area.

While we have already benefited from sharing professional expertise with Arctic countries, there is much more we can learn from each other in relation to spatial, marine and digital planning. In particular, the preparation of our new NPF will benefit from collaboration and learning on long-term planning for climate change mitigation and adaptation, infrastructure investment and international connectivity.

Going forward, we will:

- ▶ **Promote Scotland's credentials as a key near-Arctic marine transport and logistics partner, scoping opportunities to build a world-class hub.**
- ▶ **Under 'A Trading Nation', look for opportunities to increase our trade and investment links with Arctic countries through greater deployment of trade envoys and Global Scots.**
- ▶ **Strengthen Scotland's connections with the Arctic region as world leaders in environmentally safe decommissioning.**
- ▶ **Support bilateral and multilateral information sharing on marine planning not least so as to improve the protection of species and habitats and facilitate the sustainable development of a burgeoning marine energy sector.**
- ▶ **Share the lessons stemming from our participation in the Wellbeing Economy Governments group.**

“While we have already benefited from sharing professional expertise with Arctic countries, there is much more we can learn from each other in relation to spatial, marine and digital planning.”

Scotland's Offer to the Arctic

Scottish-Arctic cooperation is ultimately about human connections. To strengthen existing ties and build new links, we will:

- ▶ Establish an Arctic unit within the Scottish Government's Directorate for External Affairs to coordinate work across the organisation, continue to build our Arctic policy and offer a dedicated port of call for both domestic and international stakeholders.
- ▶ Create a fund to support projects and activities promoted by third sector and community-based organisations that raise awareness of Scottish-Arctic links and create new opportunities for international collaboration with the Arctic.

Our plans: actions at Scotland's own hand

There will be many areas where the Scottish Government will take action under this policy framework. These will include the following:

Scotland Looks North

- ▶ Ensure that Scotland continues to be represented at appropriate Arctic conferences to promote our expertise, listen to others' experiences and identify new opportunities for collaboration. This includes attracting Arctic forums to Scotland, with a view to ensuring that our civic society is as closely involved in Scottish-Arctic dialogue as possible. In 2020, we will host a spin-off event of the Arctic Frontiers conference.
- ▶ Advocate for sustainable and peaceful governance of the Arctic, showing support for initiatives that have inclusivity, equality and dialogue at their core and reflect the views of those who live in the region.
- ▶ Engage bilaterally and multilaterally with Arctic countries and institutions on matters that fall within the remit of the Scottish Government to maximise coordination and ensure that our Arctic policy reflects and influences the priorities pursued by cooperation forums operating in the region.
- ▶ Continue to lobby the UK Government to maintain participation in European Territorial Cooperation programmes, including NPA and North Sea Region, as well as Erasmus+ and Horizon 2020 regardless of what scenario we will find ourselves in post-Brexit.

Education, Research and Innovation

- ▶ Explore opportunities to support Scottish higher education institutions to foster involvement in UArctic's North2North mobility programme.
- ▶ Encourage Scottish universities and research centres to collaborate on Arctic research by means of greater inter-institutional cooperation, including by promoting discussions between UArctic and interested Scottish institutions.
- ▶ Encourage greater collaboration between Scottish and Arctic academic institutions across the many branches of Arctic research.
- ▶ Continue, and further develop, marine science collaborations in the Arctic through Marine Science Scotland to support our national and international policy obligations.

Cultural Ties

- ▶ Work with the Edinburgh International Culture Summit Foundation to invite representatives of Arctic organisations and institutions in order to promote new Scottish-Arctic cultural policy exchanges.
- ▶ Work with VisitScotland to draw up specific proposals for discussion with the Nordic Council on policies and practices that promote sustainable tourism, especially in the emerging adventure and marine tourism sectors.
- ▶ Take opportunities such as those offered by XpoNorth to encourage collaboration between Scotland and Arctic countries on the creative industries. This may lead, for instance, to joint productions between Scotland and Arctic countries.

Rural Connections

- ▶ Work with civic Scotland to promote new young people exchanges between Scotland and the Arctic.
- ▶ Foster knowledge exchanges on the delivery of connectivity as well as public services such as healthcare, including mental health, and education in rural areas.

Climate change, Environment and Clean Energy

- ▶ Continue to work internationally to further climate justice, looking for opportunities to partner with Arctic organisations to build on the work of our Just Transition Commission on socially and economically sustainable emission reductions.
- ▶ Share scientific knowledge and expertise on marine pollution and biodiversity monitoring through organisations such as Marine Scotland Science.

Sustainable Economic Development

- ▶ Promote Scotland's credentials as a key near-Arctic marine transport and logistics partner, scoping opportunities to build a world-class hub.
- ▶ Under 'A Trading Nation', look for opportunities to increase our trade and investment links with Arctic countries through greater deployment of trade envoys and Global Scots.
- ▶ Strengthen Scotland's connections with the Arctic region as world leaders in environmentally safe decommissioning.

Our prospectus: collaborating with others

We stand ready to engage with Arctic partners who want to collaborate with Scotland on any of the issues raised here, and in particular:

- ▶ The promotion and protection of indigenous and minority languages, respecting the fact that all languages have their own specific needs.
- ▶ Youth retention in remote areas, including by sharing the experience Scotland has developed thanks to the 2018 Year of Young People.
- ▶ Education provision in rural areas, drawing for example on the lessons learnt from the development of the University of the Highlands and Islands.
- ▶ Community regeneration in rural areas and islands, with a particular focus on female empowerment and participative place-making.
- ▶ The empowerment of island communities, including what we have learnt from the development of our National Islands Plan.
- ▶ Transport decarbonisation, active travel and ultra-low emission vehicles.
- ▶ Community engagement in local renewable generation including means of creating economic benefits for local communities.
- ▶ Wellbeing economy and sustainable economic development.
- ▶ Marine planning so as to promote the protection of species and habitats and the sustainable development of a burgeoning marine energy sector.

Acknowledgments

We would like to thank the members of our Arctic Steering Group for their advice and support throughout the development of this framework. This document has also been informed by a mapping report on Scottish-Arctic links commissioned by the Scottish Government and developed by Glasgow Caledonian University's Centre for Climate Justice together with the University of the Highlands and Islands' Environmental Research Institute. The report is available here:

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

Scotland's first Arctic Day, held in Inverness on 25 March 2019, provided an opportunity to gather views on the main topics featured in this framework. We would like to thank all those who have contributed their time and supported the emerging framework by helping us explore strategic themes and formulate propositions.

Endnotes

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