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**JOINT COMMUNICATION TO THE EUROPEAN PARLIAMENT AND THE
COUNCIL**

An integrated European Union policy for the Arctic

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INTRODUCTION

A safe, stable, sustainable and prosperous Arctic is important not just for the region itself, but for the European Union (EU) and for the world. The EU has a strategic interest in playing a key role in the Arctic region.

Eight states have territories in the Arctic: Canada, the Kingdom of Denmark¹, Finland, Iceland, Norway, Russia, Sweden and the United States. Three EU Member States are therefore also Arctic states, while Iceland and Norway are members of the European Economic Area². The Arctic is home to several indigenous peoples³. The Arctic region also includes the Arctic Ocean and its adjacent seas. While the Arctic states have primary responsibility for tackling issues within their territories, many of the issues affecting the Arctic region that are discussed in this Joint Communication can be more effectively addressed through regional or multilateral cooperation. This is why EU engagement is important.

Building on previous initiatives⁴, this Joint Communication sets out the case for an EU policy that focuses on advancing **international cooperation** in responding to the impacts of **climate change** on the Arctic's fragile environment, and on promoting and contributing to **sustainable development**, particularly in the European part of the Arctic.

In recent years, the Arctic's role in **climate change** has become much more prominent⁵. The Arctic is warming at almost twice the global average rate. Whereas in the past attention focused almost solely on the effects of climate change in the Arctic, more recently there has been growing awareness that feedback loops are turning the Arctic into a contributor to climate change. Understanding these dynamics, and helping to develop specific strategies to mitigate and adapt to climate change in the Arctic, will form part of the EU's wider efforts to combat climate change⁶.

¹ The Kingdom of Denmark consists of Denmark, Greenland and the Faroe Islands.

² Iceland and Norway are also associated countries in the EU's Horizon 2020 Framework Programme for Research and Innovation.

³ The Saami and the Inuit are the only nationally recognised indigenous peoples living partly on the territory of EU Member States. Greenland has a close relationship with the EU based on its status as one of the Overseas Countries and Territories associated with the EU.

⁴ In particular, (COM/2008/0763 final), (JOIN(2012) 19 final) and (SWD(2012) 182 final) and (SWD(2012) 183 final).

⁵ The Communication from the Commission "An EU Strategy on adaptation to climate change", (COM(2013) 216 final), specifically refers to the Arctic's particular vulnerability to the impacts of climate change.

⁶ In line with the EU's climate and energy framework for 2030 adopted by heads of state and government in the European Council of 23 and 24 October 2014 (EUCO 169/14).

Adaptation strategies are needed to help Arctic inhabitants respond to the serious challenges they face because of climate change. The EU's Arctic policy will be an important element in implementing the global agreement reached at the 21st Conference of the Parties under the United Nations Framework Convention on Climate Change in December 2015, which sets out a global action plan to limit global warming to well below 2 °C. For the European Union, the Paris Agreement represents an ambitious, balanced, equitable and legally binding agreement and marks a decisive turning point towards comprehensive and collective global action against climate change. When implemented, the Paris agreement will accelerate the transition to a climate resilient, climate neutral global economy.

Given the important role of Arctic as a regulator for the climate of the planet and acting as a sink for long-range pollution, the EU has a duty to protect the **Arctic environment** and strengthen ecosystem resilience.

The EU should also promote **sustainable development** in the Arctic, taking into account both the traditional livelihoods of those living in the region and the impact of economic development on the Arctic's fragile environment. The EU should contribute to enhancing the economic, social and environmental resilience of societies in the Arctic.

A number of EU activities and decisions are having an impact on economic developments in the Arctic region.⁷ For example, the EU is a major consumer of products coming from the Arctic states, such as fish products and energy⁸. Investment by European companies can help advance sustainable development in the region, possibly aided by the European Structural and Investment Funds (ESIF) and initiatives under the Investment Plan for Europe. A recent report estimated investment opportunities in the Barents region alone to be EUR 140 billion⁹. Regional 'smart specialisation strategies', combined with EU funding, can help to develop local models of sustainable growth and job creation in the European Arctic with potential benefits across the EU. The forthcoming Finnish Presidency of the Arctic Council (2017-2019) will offer an opportunity to bring European ideas and initiatives to the work of the Arctic Council.

In recent years, the Arctic region has acquired a higher profile in **international relations** due to its increasing environmental, social, economic and strategic importance. The EU already contributes substantially to Arctic research, satellite observation and regional development as well to the work of the Arctic Council¹⁰, wherein countries beyond the Arctic such as China, India, Japan, the Republic of Korea and Singapore now have observer status.

⁷ Report on 'EU Arctic Footprint and Policy Assessment', EcoLogic, Berlin, 2010 (http://arctic-footprint.eu/sites/default/files/AFPA_Final_Report.pdf).

⁸ 24 % of the fish products imported by the EU in 2014 originated from Norway, i.e. 1.5 million tonnes to a value of EUR 4.8 billion EUR. (Source: Eurostat/EUMOFA). A third of the EU's oil imports and two thirds of gas stem from Norway and Russia (Source: Eurostat).

⁹ A Strategic Vision for the North, Paavo Lipponen, May 2015.

¹⁰ Three EU Member States (Finland, the Kingdom of Denmark and Sweden) are full members of the Arctic Council, seven EU Member States (France, Germany, Italy, the Netherlands, Poland, Spain, the United Kingdom) are observers to the Arctic Council.

While the changes affecting the Arctic present opportunities for local communities, they also have the potential to increase tensions in the region, for example through competition for resources and increasing economic activity. International legal frameworks, such as the United Nations Convention on the Law of the Sea (UNCLOS) and the United Nations Framework Convention on Climate Change, also cover the Arctic. It is now more important than ever to ensure that the Arctic remains a zone of peace, prosperity and constructive international cooperation.

The world's oceans are important resources but are coming under increasing pressure and risk further damage if increased activity is not properly managed. It is in this context that the EU is seeking to advance the agenda on ocean governance. The need for a solid framework for sound stewardship is particularly high in the Arctic: large parts of the high seas areas beyond national jurisdiction are currently not covered by specific arrangements for managing economic activities, nor is there sufficient scientific knowledge about the sea basin. Much work therefore lies ahead to protect the Arctic high seas in view of climatic changes and increasing human activity in the region.

Against this background, several Member States have issued national Arctic policy frameworks in recent years¹¹. In 2014, the Council and European Parliament asked the Commission and the High Representative for Foreign Affairs and Security Policy to develop an integrated policy on Arctic matters, and to develop a more coherent framework for EU action and funding programmes. In response, an integrated EU Arctic policy is therefore proposed in three priority areas:

1. Climate Change and Safeguarding the Arctic Environment;
2. Sustainable Development in and around the Arctic;
3. International Cooperation on Arctic Issues.

The EU should attach particular importance to research, science and innovation which will play a key role across all three priority areas. Action in the priority areas should contribute to the implementation of Agenda 2030 and be in line with the 17 Sustainable Development Goals adopted by the United Nations in September 2015.

¹¹ The Kingdom of Denmark, Finland, Germany, Italy, Poland, Sweden and the United Kingdom. The Netherlands, France and Spain are issuing Arctic or Polar policy papers in 2016. Non-EU countries that have issued an Arctic strategy or policy paper include Canada, Iceland, India, Japan, Norway, the Russian Federation and the United States of America.

1. CLIMATE CHANGE AND SAFEGUARDING THE ARCTIC ENVIRONMENT

The issues

Climate change poses a significant risk. Its effects are tangible in the Arctic, with the summer sea ice having decreased by more than 40 % since 1979¹². Delicate Arctic ecosystems are under threat and the livelihoods of indigenous peoples are being directly affected by climate change. In one of the coldest parts of the world, the thawing permafrost is causing land to subside, depleting habitats and damaging infrastructure as it does so, with potential losses estimated in hundreds of billions of euros¹³. Rising temperatures contribute to the melting of the Greenlandic ice sheet, adding to rising sea levels, and play a role in changing precipitation patterns in the northern hemisphere.

Managing these developments requires closer and more integrated cooperation on climate adaptation in the Arctic as well as reducing greenhouse gases.

According to the International Panel on Climate Change's Fifth Assessment Report, permafrost temperatures have increased in most regions since the early 1980s¹⁴. Greenhouse gases are escaping the permafrost and entering the atmosphere at an increasing rate. The thawing permafrost has the potential to release carbon dioxide and methane - equivalent to several times today's annual greenhouse gas emissions from man-made sources such as fossil fuel use. This could change the Arctic as well as the global climate.

The Arctic is home to several sensitive ecosystems which in turn are home to many endemic species. More than half of the world's wetlands, crucial for water purification, flood control and shoreline stability, are in Arctic and sub-Arctic regions. Arctic marine ecosystems are crucial for fisheries given the role of fish at the bottom of important food chains. These ecosystems are not only affected by climate change, but also by pollution and invasive alien species. The preservation of biodiversity and the viability of ecosystems in the Arctic will remain a global challenge.

Policy response

1.1 Research

Fundamental to our response is a better understanding of the developments the region is facing, and for this reason the EU is a major contributor to **Arctic research**. Over the past decades efforts have been devoted to Arctic observation and monitoring programmes as well as numerous research projects, but yet understanding of the Arctic systems, their functions and possible responses to various drivers are still largely unknown.

¹² For example: <http://climate.nasa.gov/vital-signs/arctic-sea-ice/>

¹³ For example through decreased sea ice thickness and extent, less predictable weather, severe storms, sea level rise, changing seasonal melt/freezing-up of rivers and lakes, changes in snow type and timing, increasing shrub growth, permafrost thaw, and storm-related erosion which, in turn, are causing severe loss of land in some regions so that, in some coastal areas, entire communities have to be relocated .

¹⁴ By the end of the 21st century, the area of permafrost near the surface could decrease by 37-81%.

The EU is expected to maintain its current funding levels for Arctic research (around EUR 200 million in the past decade) under the Horizon 2020 programme (2014-2020). The EU has already committed **EUR 40 million under the 2016-2017 work programme** to Arctic-related research. This programme will focus on an integrated observation system, studying the impact of Arctic changes on the weather and climate of the northern hemisphere, and the effect of climate change on the Arctic permafrost and its socio-economic impact. In addition, the European Structural and Investment Funds (ESIF) also provide funding for research and innovation activities in the fields of Climate change and environment in the Arctic.

A central plank of the EU's Arctic research efforts will be the EU-**PolarNet initiative**, which supports an EU-wide consortium of expertise and infrastructure for polar research to better assimilate Europe's scientific and operational capabilities in the Polar regions. 22 European research institutions will develop and deliver an integrated European polar research programme under EU-PolarNet. The project also involves working with research organisations from Canada, Russia and the USA.

EU research on climate change in the Arctic will also be supported by **EU space programmes**. The operational infrastructure and services of Copernicus will provide input to Arctic research activities, including weather monitoring, monitoring of climate variables and ice thickness, and improved ocean modelling. In addition, the European Commission will support the implementation of the Svalbard Integrated Arctic Earth Observing System — a multidisciplinary and multinational research infrastructure that is geographically distributed across Svalbard which will contribute to future pan-Arctic monitoring.

The EU should continue to promote and facilitate effective international scientific cooperation through supporting **transnational access to research infrastructure and open data resources** to improve political and economic links and maintain good relations with key countries in the region. Moreover, the EU should continue to support the work of the Group of Senior Officials¹⁵ on international research infrastructure.

Finally, the EU contributes through Horizon 2020 to pan-Arctic observing initiatives such as those promoted by the Arctic Council with SAON¹⁶ or the GEO Cold Region Initiative¹⁷, with the view of preparing through research the establishment of operational long-standing systems.

1.2 Climate mitigation and adaptation strategies

In responding to the challenge posed by climate change in the Arctic, the EU's objective is in line with the Paris agreement to **limit global average temperature increases** to well below 2 °C and make an effort to limit the temperature increase to 1.5 °C. The EU has already committed to reducing its total greenhouse gas emissions by 40 % by 2030 and by 80 % by

¹⁵ The Carnegie Group of G8 +5 Science Advisers established a Group of Senior Officials (GSO) on global research infrastructure to reach a common understanding on matters such as governance, funding and management of large-scale research infrastructure. The European Commission is member of the GSO group.

¹⁶ Sustaining Arctic Observing Networks: <http://www.arcticobserving.org/>

¹⁷ <https://www.earthobservations.org/index.php>

2050 compared with 1990 levels. The 2030 commitment will be achieved by implementing the EU's intended nationally determined contribution according to the Paris agreement. The EU has also committed itself to spend 20 % of the EU budget on climate-related objectives.

As climate change is a circumpolar challenge, the EU is ready to work with the Arctic states, indigenous peoples and relevant Arctic regional and multilateral fora to share experience, expertise and information on **climate change, impacts, adaptation and resilience**, with a view to developing an ambitious climate adaptation agenda for the Arctic region.

The EU should work with regions in the Arctic to draw up appropriate adaptation and mitigation measures that take account of the local circumstances and special nature of the Arctic regions. It can do this partly through the **European Structural and Investment Funds (ESIF)**¹⁸, which mainstream climate action.

Alongside its CO₂ commitments for 2030 and 2050, the EU should **contribute to international efforts to limit emissions of short-lived climate pollutants such as black carbon and methane** that further accelerate climactic changes in the Arctic. Coming from soot and up to 1500 times more powerful than CO₂, black carbon increases the melting rate of ice and snow. Methane is another greenhouse gas, 20 times more potent than CO₂, with vast reserves projected to be stored under the Arctic permafrost. The EU could limit emissions through: the Convention on Long-Range Transboundary Air Pollution (UNECE CLRTAP); the amended Gothenburg Protocol, the Commission's Air Quality Package proposal; the Climate and Clean Air Coalition; and engagement with Arctic Council initiatives such as the Task Force on Black Carbon and Methane.

1.3 Protecting the Environment

The EU aims to protect, preserve and improve the environment, including in the wider region, for present and future generations. The EU should continue its engagement in **multilateral environmental agreements** that also have particular relevance to the Arctic, and encourage their implementation¹⁹. The EU should encourage full respect for the provisions of UNCLOS, which is considered customary international law, including the obligation to protect and preserve the marine environment.

The EU should also work with partners to **promote a high level of biodiversity protection** with a view to halting the loss of biodiversity and achieving the global biodiversity 2020 targets. The EU should **promote establishing marine protected areas** in the Arctic, these areas being an important element in the effort to preserve biodiversity. The EU should also work with Arctic states and other international partners to develop an instrument under

¹⁸ ESIF (2014-20) allocates 25% of its funds to support climate change objectives.

¹⁹ These include the Convention for Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Migratory Species and Wild Animals, the African Eurasian Waterbirds Agreement, the Bern Convention, the International Convention for the Regulation of Whaling, the Stockholm Convention on Persistent Organic Pollutants and the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR).

UNCLOS for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction.

Arctic inhabitants increasingly suffer from high levels of **pollutants and heavy metals** that end up in the Arctic's food web²⁰. The EU should continue to support work at international level to prohibit or phase out the use of persistent organic pollutants in the environment between now and 2020²¹. Effective implementation of the Stockholm Convention by all Arctic states will be important in this regard. The EU should encourage swift ratification of the Minamata Convention with a view to preventing and reducing emissions of mercury. Taking into account its comprehensive waste legislation, the EU could share experience and best practices on the circular economy with Arctic states.

As regards the risk of **invasive alien species**, action should include voluntary measures, such as those proposed by the International Maritime Organisation's Guidelines for the Control and Management of Ships' Biofouling, as well as mandatory measures. Action could build on the experience gained in the EU and its Member States in managing certain pathways, including measures established through the International Convention for the Control and Management of Ships Ballast Water and Sediments adopted in 2004. Accordingly, the EU should take all appropriate steps to encourage all signatories to ratify the Convention.

The EU should be committed to working closely with Member States, the OSPAR Convention and other stakeholders on **oil and gas activities** to promote the adoption of the highest standards of major accident prevention and environmental control. The EU should be ready to share regulatory²² and technological best practice with international partners to support the safety and preservation of the environment in the region. The EU should therefore welcome the Arctic Council Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic.

2. SUSTAINABLE DEVELOPMENT IN AND AROUND THE ARCTIC

The issues

Sustainable economic development faces specific challenges in the Arctic region. Compared with other parts of Europe, the European part of the Arctic has a sparse population spread over a wide area and is characterised by a lack of transport links, such as road, rail or east-west flight connections. The wider Arctic region is rich in natural resources such as fish, minerals, oil and gas.²³ The lack of terrestrial communications means that space infrastructure

²⁰ See for example the AMAP 2009 Assessment: Human health in the Arctic,

<http://www.amap.no/documents/doc/amap-assessment-2009-human-health-in-the-arctic/98>

²¹ Particularly persistent organic pollutants, very persistent and very bioaccumulative substances as well as persistent, bioaccumulative and toxic substances.

²² Such as the Offshore Safety Directive (2013/30/EU).

²³ A 2008 assessment of the US Geological Survey estimated that the area north of the Arctic circle contains about 13% of the world's undiscovered technically recoverable oil resources and 30% of the world's undiscovered natural gas resources.

has an increasingly important role to play in connecting people and businesses, and meeting the educational, health, linguistic and cultural needs of Arctic communities.

The European part of the Arctic also has significant potential to support growth in the rest of Europe. However, as the EU does not currently have a complete north-south traffic connection, it could explore the merits of strengthening links to the Arctic through trans-European networks, for example from Finland to Norway, providing access to the Arctic Ocean.

Through its Member States and its close ties with Iceland and Norway (as members of the European Economic Area), as well as with Greenland²⁴, the EU can play an influential role in shaping the future development of the European part of the Arctic through the application of EU rules relevant for the EEA²⁵ and the deployment of financial instruments. Cooperation between countries and regions in the European Arctic has been good, for example in the context of the Barents-Euro Arctic Council and the Northern Dimension policy framework.

The EU's cohesion policy supports investments as well as capacity building in the European Arctic, with an emphasis on research and innovation, SME competitiveness and supporting the shift towards a low-carbon economy²⁶. Other important sources of project financing in the region are the EU territorial cooperation programmes such as: the Interreg North Programme; the Botnia-Atlantica Programme; the Baltic Sea Region Programme; and the Northern Periphery and Arctic Programme; as well as the Karelia and Kolarctic cross-border cooperation programmes under the European Neighbourhood Instrument. The EU should work to strengthen collaboration, synergies and complementarity between these programmes and other funding sources in the region. Infrastructure projects have so far proved difficult to develop, and national and regional authorities have made clear that they see a need for more coordinated and effective EU funding in this area²⁷.

The climate of the Arctic region also makes it an ideal innovation site for cold climate technologies and services. Harsh climatic conditions and the fragile environment require specialised technology and know-how to meet high environmental standards. Opportunities in the 'Green Economy', such as sustainable multi-source energy systems, eco-tourism and low-emission food production, could be developed further. The European Commission will help to monitor potential opportunities for sustainable economic activities, including in 'Blue Economy' sectors such as aquaculture, fisheries, offshore renewable energy, maritime tourism and marine biotechnology. With wide variations across this vast region, energy is expected to be a growth sector, and may include on- and off-shore wind power, ocean energy, geothermal energy and hydropower.

²⁴ Greenland is not a member of the European Union. The long-standing relations with Greenland were confirmed by the signing of the Joint Declaration by the European Union, on the one hand, and the Government of Greenland and the Government of Denmark, on the other, on relations between the European Union and Greenland in 2015.

²⁵ In line with Article 102(1) of the EEA Agreement.

²⁶ For the 2014-2020 period, over EUR 1 billion has been allocated to investments in northern Finland and Sweden under the Investment for Jobs and Growth objective, which will be complemented by national public and private co-financing.

²⁷ http://ec.europa.eu/dgs/maritimeaffairs_fisheries/consultations/arctic-eu-funding/doc/results_en.pdf .

2.1 Support for sustainable innovation

The EU should support the **deployment of innovative technologies** in the Arctic. These technologies could be applied to a wide range of activities such as the development of advanced materials capable of working in extreme conditions in the Arctic winter that could stimulate investments in energy efficiency and renewable energy solutions. Such technologies have the potential to bring broad social and economic benefits within and beyond the Arctic. In addition to Horizon 2020, the ESIF programmes provide funding for research and innovation activities in the European part of the Arctic.

The European Commission will explore how Horizon 2020 could speed up the translation of research outcomes into cold-climate technologies and services with commercial potential. These outcomes should embed the assessments of sustainability of processes and technologies to ensure social and environmental protection and could contribute to the development of ‘Arctic standards’. Close links between research, science and technology, while taking account of traditional knowledge, will as well ensure that development is taken forward in a sustainable way.

The InnovFin²⁸ programme under Horizon 2020, in particular its Finance for Innovators initiative by the European Investment Bank Group and the European Commission, can help Arctic-related research and innovation projects²⁹ get access to the market. Innovfin consists of a series of integrated and complementary financing tools and advisory services, covering the entire value chain of research and innovation to support investments from the smallest to the largest enterprise.

Finally, many companies — especially small and medium sized businesses — located in the northernmost part of the EU thrive on innovative business models and innovative technologies, namely information technology, data processing and services, industrial design, the collaborative economy and the circular economy. **Effective access to the Single Market** is often critical for bringing innovations from the development stage to the market stage. The Commission will therefore make a special effort to promote the conditions for Arctic innovation and business opportunities as it implements its strategies for a Digital Single Market³⁰ and in upgrading the Single Market³¹. The European Enterprise Network has been particularly successful in ‘coaching’ Arctic SMEs at their request; it is driven by strong demand in the region. The Commission will continue to support this activity.

²⁸ InnovFin consists of a series of financing tools and advisory services. It covers the entire value chain of research and innovation in order to support investments from the smallest to the largest enterprise. More information: <http://www.eib.org/products/blending/innovfin/>.

²⁹ For instance the automotive winter testing facility of the Arctic Arc project is already funded under Innovfin (<http://spga.eu/>).

³⁰ COM (2015)192 final.

³¹ COM (2015)550 final.

2.2 European Arctic stakeholder forum

Consultations by the Commission and the European External Action Service suggest that the European Arctic is suffering from underinvestment. Recognising the need to work closely with national, regional and local authorities in the European Arctic, the Commission will set up a European Arctic stakeholder forum with the aim of enhancing collaboration and coordination between different EU funding programmes.

This temporary forum should bring together EU institutions, Member States, and regional and local authorities to contribute to identifying **key investment and research priorities** for EU funds in the region. The process will also be open to Norway and Iceland under the European Economic Area Agreement, as well as to Greenland under the EU-Greenland Joint Declaration. This work, chaired by the European Commission, is to be completed before the end of 2017.

Complementary to the forum, the Interreg Northern Periphery and Arctic Programme will lead a pilot activity aiming at bringing together **a network of managing authorities and stakeholders** from various regional development programmes in the European part of the Arctic. It is to facilitate the exchange of information, plan and coordinate calls for proposals and monitor the impact of programmes on the region. The new collaborative network will also be open to participation by relevant national and international financing instruments. Based on the extensive work and experience of the programmes, the network feeds into the work of the stakeholder forum in identifying the research and investment priorities.

To bring the results of the forum and network together after 2017, the Commission will fund and facilitate an **annual Arctic stakeholder conference** in the European Arctic region to strengthen collaboration and networking between stakeholders to improve capacity building, international project development and awareness of financing sources.

2.3 Investment

The Investment Plan for Europe is operational, and could potentially be used to support infrastructure projects in the European part of the Arctic, including Greenland. Through this instrument and its existing lending operations, the European Investment Bank (EIB) could not only help to finance projects to improve transport connections over land, sea and air, but also telecommunications, energy efficiency projects and low-carbon technology. In line with its mandates, the EIB could invest in cross-border projects between Sweden, Finland, the Kingdom of Denmark, Norway and Iceland, which have significant development potential.

The preparation of these projects could also be facilitated by involving the European Investment Advisory Hub and Project Portal. This could help to attract new financing sources by maximising the involvement of the private sector and by complementing the European Structural and Investment Funds. Dedicated platforms could be developed to bring together different investors in the Arctic region. The European Bank for Reconstruction and Development has also been an important investor in the Arctic region.

The EU's integrated Arctic policy is therefore consistent with the Investment Plan for Europe, which offers a range of ways to encourage investment in the Arctic region to benefit citizens and businesses both above and below the Arctic Circle.

In view of **transport links**, the northern part of Finland, Sweden and Norway belongs to the trans-European Network for Transport (TEN-T). This network facilitates investments in order to optimise network benefits. It focuses on cross-border sections and the removal of bottlenecks, and pushes forward sustainable transport modes. Lulea, Kemi, Oulu, Narvik and Hammerfest have been defined as TEN-T ports. They form important interlinks between maritime and land transport.

In order to enhance both the modal shift and the capacity for rail transport between Narvik, the Bothnian Corridor and southern Scandinavia, works and studies have been co-financed by the EU.

Creating an optimal, sustainable mix between the different transport modes - for both long and short distance, passenger and freight traffic - should be done in cooperation between the EU institutions, Member States, third countries and industry. In order to obtain the optimal use of the network, a coordinated financing strategy should also be considered.

2.4 Space technology

Given its vast size and sparse population, the Arctic region can benefit greatly from space-based services. The Arctic region however needs dedicated solutions as it is not covered by geostationary satellites.

The Copernicus programme already provides for surveillance and monitoring services with satellites in polar orbits, thereby contributing to key environmental, safety and security needs. Once deployed, the European Global Navigation System (Galileo) will offer coverage of the Arctic region providing safe and reliable navigation capabilities for air, maritime and ground applications. Telecommunication needs however cannot be adequately met with the present mainly equatorial orbit satellites. The Commission will explore whether a suitable solution for the Arctic could be considered as part of a possible proposal to support the next generation of Government satellite communications in the context of the upcoming Space Strategy or European Defence Action Plan. The EU will also promote an integrated pan-Arctic observing system through the GEO Cold Region Initiative as an essential tool to study, forecast and assess changes that support the region's sustainable development.

2.5 Safe and secure maritime activities

In view of increasing vessel traffic in the Arctic, including some carrying flags from EU Member States, the EU should contribute to **enhance the safety of navigation in the Arctic** through innovative technologies and the development of tools for the monitoring of spatial and temporal developments of the increasing maritime activities in the Arctic; such knowledge is essential to assess the consequent risks and make better decisions on possible mitigating measures. As a first response, the European Commission is to launch a call in 2016 under Horizon 2020 that is to prepare a network for the Arctic and the Atlantic that is to cope

with maritime security threats resulting from the opening of the North East passage³². The EU should also support international efforts to implement the International Polar Code covering shipping-related matters relevant to navigation in Arctic waters, including enhanced Search and Rescue. The Polar Code is expected to enter into force on 1 January 2017.

While Satellite AIS (Automatic Identification System) provides coverage for the Arctic, there are challenges in ensuring and directing Search and Rescue units in case of a ship in need of assistance, due to the remoteness, difficult navigation due to ice and the less dense maritime traffic in the area. The European Coast Guard Functions Forum (ECGFF) should collaborate closely with the newly established **Arctic Coast Guard Forum** (ACGF), which could play an important role in fostering safe, secure and environmentally responsible maritime activity in the Arctic.

3. INTERNATIONAL COOPERATION ON ARCTIC ISSUES

The issues

The challenges affecting the Arctic, and the solutions required to address them, require a joined-up response at regional and international level. Wider geopolitical dynamics may add further complexity to the changes affecting the region. The EU has a strong interest in seeing that the Arctic remains a zone of constructive international cooperation where complex issues are addressed through negotiated solutions, and where common platforms can be established in response to emerging risks. Science, in particular, can be used as a catalyst to support a common understanding, enabling jointly agreed solutions to be reached and foster peaceful cooperation. As a global leader in science, the European Union should be ready to engage more in large scale global scientific collaboration. The EU's Horizon 2020 research and innovation programme is open to the world and enables partnerships between regions and countries to tackle global societal challenges.

The EU is engaged in issues of direct relevance to the Arctic at international level via the UN and its specialised agencies (the United Nations Framework Convention on Climate Change, the International Maritime Organisation and the International Civil Aviation Organisation) and subsidiary bodies (the United Nations Environmental Programme). A number of Arctic cooperation fora have been set up in recent decades, the most important of which is the Arctic Council. The Arctic states have worked to foster peace and stability through cooperation and the application of the rule of law. Given the importance of the Arctic region and the significant changes underway there, it is important that the EU continues to cooperate with Arctic and non-Arctic partners to identify common positions and solutions on issues such as climate change, environmental protection and scientific research.

³² Under SEC-21-GM-2016-2017 of Horizon 2020: Pan European Networks of practitioners and other actors in the field of security.

It is also important to ensure that appropriate measures are in place for effective stewardship of the Arctic Ocean to ensure environmental protection, peaceful cooperation and dispute settlement, respect for international law and the sustainable use of marine resources. Maritime security is also of increasing importance. In June 2014, the European Council adopted a Maritime Security Strategy for the global maritime domain.³³ The strategy and associated action plan set out a number of challenges that impact on the maritime domain, and proposed responses at EU level.

Policy response

3.1 International organisations and fora

The EU should take an active negotiating position in relevant UN fora to encourage all countries and regions to assume their responsibilities, notably with regard to climate change and environmental protection, but also in relation to emerging challenges such as safety at sea and the sustainable management of land- and sea-based resources.

The EU recognises and supports existing legal instruments for managing the world's seas. In particular, the **UN Convention on the Law of the Sea (UNCLOS)** provides a framework for managing the Arctic Ocean, including the peaceful settlement of disputes. The EU will support these efforts by engaging in a strategic dialogue with Arctic stakeholders and third countries on security matters and by promoting continued rules-based governance at sea.

The EU will continue its **active participation in the Arctic Council** — the primary forum for international cooperation in the region by, for example, participating in and contributing to the work of relevant working groups, task forces and expert groups. The EU looks forward to working with the current and future Chairmanships of the Arctic Council and to the early implementation of its observer status in line with the Kiruna Declaration of May 2013³⁴. The EU should also engage with the Arctic Council on issues relating to stewardship of the seas including by participating in the Arctic Council Task Force on Arctic Marine Cooperation.

The EU will continue to **support regional and sub-regional cooperation**, including through its membership of the Barents Euro-Arctic Council, and the Northern Dimension policy. The EU is also engaged in regional cooperation within the UN Economic Commission for Europe and in particular the UNECE Convention on Long-Range Transboundary Air Pollution (CLRTAP). The Nordic Council and the Nordic Council of Ministers are also relevant partners for the European Union, not least given their longstanding engagement with EU and their Arctic cooperation programme.

These cooperation frameworks address many important issues at regional level, and can have a substantial impact on the lives of indigenous peoples and local communities.

³³ Council of the European Union (11205/14)

³⁴ 'The Arctic Council receives the application of the EU for observer status affirmatively, but defers a final decision on implementation until the concerns of Council members, addressed by the President of the European Commission in his letter of 8 May are resolved, with the understanding that the EU may observe Council proceedings until such time as the Council acts on the letter's proposal.'

3.2 Bilateral cooperation

The EU should cooperate with all **Arctic partners**, including Canada, Russia and the United States with a view to identifying further areas for cooperation, such as science and investment. The EU will also engage with all states that take an increasing interest in the Arctic such as China, India, Japan, the Republic of Korea and Singapore on issues of common interest and concern.

The EU cooperates with Greenland under the EU-Greenland Partnership³⁵. The partnership aims to support Greenland in addressing its major challenges, in particular the sustainable diversification of its economy and strengthening its administrative capacity. The EU provides budget support to Greenland with the aim of strengthening the education sector as a driver for sustainable development. The EU will further engage in policy dialogue at the appropriate political and technical levels on issues of common concern, such as global issues (energy, climate change and the environment, and natural resources) and Arctic issues.

Arctic policy and Arctic issues will continue to remain an important element of the EU's close relations with Iceland and Norway.

3.3 Dialogue with Arctic indigenous peoples

The EU will continue to **engage with Arctic indigenous peoples and local communities** to ensure that their views and rights are respected and promoted in the ongoing development of EU policies affecting the Arctic. The European Commission hosts an annual dialogue meeting with representatives of Arctic indigenous peoples to exchange views and agree on areas for further cooperation, particularly in relation to business and human rights. The EU should continue to work on advancing consistency between the EU's internal and external policy towards indigenous peoples.

The EU provides support to local communities through several of its funding programmes, including the national ESIF programmes, the Territorial Cooperation programmes and the programmes under the European Neighbourhood Instrument.³⁶ The Northern Periphery and Arctic Programme focuses on using innovation to maintain and develop robust and competitive communities, promote entrepreneurship, foster energy-secure communities, and promote and develop cultural and natural heritage. The programme is open to participation by partners in Canada and Russia, in addition to the nine programme partner countries in the European Arctic.

³⁵ Council Decision 2014/137/EU of 14 March 2014 on relations between the EU on the one hand, and Greenland and the Kingdom of Denmark on the other.

³⁶ Interreg IV A North, the Northern Periphery and Arctic programme and the Kolarctic Cross Border Cooperation programme for example.

3.4 Fisheries management

The EU should welcome the recent declaration signed by five Arctic coastal states on **Arctic fisheries**³⁷ and the need to obtain more information on ecosystems in the Arctic Ocean before opening up this region to commercial fishing. However, as the area concerned is beyond national jurisdiction, it will be necessary for all interested countries, not only the coastal states, to work together to establish the appropriate international measures. This framework should in due course include a new Regional Fisheries Management Organisation or Arrangement, combined with a new Regional Sea Convention, to ensure the long-term conservation and sustainable use of resources in the Arctic high seas. The European Commission believes that such a framework can only be established in an open and inclusive manner, and welcomes the broadening of the negotiations to involve major fishing nations.

3.5 Scientific cooperation

The EU should promote and facilitate effective international scientific cooperation through supporting transnational access to research infrastructure and open data resources to improve political and economic links and maintain good relations with key countries in the region. It already positions itself as a partner for global cooperation, complementary to its Member States in the Arctic Council. The EU should take forward scientific cooperation at international level under the **Transatlantic Ocean (and Arctic) Research Alliance**³⁸, launched by the Galway declaration in May 2013, which involves Canada, the EU and the United States.

In order to fill gaps in the available marine data about the seabed in the seas and oceans around Europe and the life they support, the European Commission has set out a target to develop a **multi-resolution map of the entire seabed** and overlying water column by 2020. This project will include the Barents Sea from 2018. Over 100 organisations, including from Iceland, Norway and Russia, are working together under the European Marine Observation and Data Network (EMODnet) to make their marine data more accessible, interoperable and useful to end-users. Data will be available through a single web portal.

This initiative is important for driving sustainable growth in the Blue Economy. It is estimated that making the high-quality marine data held by public bodies in the EU widely available will improve productivity by over EUR 1 billion a year³⁹: Private and public bodies, as well as

³⁷ <https://www.regjeringen.no/globalassets/departementene/ud/vedlegg/folkerett/declaration-on-arctic-fisheries-16-july-2015.pdf> .

³⁸ The EU, Canada and the US try to foster their cooperation concerning marine and Arctic research infrastructures. However, beyond these two partners, Horizon 2020 promotes the broadest transnational access to research infrastructures and supports an open data policy in order to improve political and economic links and maintain good relations with all countries in the region and those interested in Arctic research. More information on the **Transatlantic Ocean (and Arctic) Research Alliance** <http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=transatlantic-alliance> .

³⁹ Commission Staff Working Document Marine Knowledge 2020: Roadmap accompanying the Document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Innovation in the Blue Economy realising the potential of our seas and oceans for jobs and growth (SWD/2014/0149 Final).

hydrographic offices, research institutions and civil society organisations, would not need to re-survey areas that had already been surveyed, but for which the data have up to now been inaccessible. It would cost them less to process existing data. Research in security matters covering Arctic dual-use resources and exchanges of best practices in this field should be strengthened.

4. CONCLUSIONS AND NEXT STEPS

1. This policy document should guide the EU's actions for the coming years, and the European Commission and the High Representative for Foreign Affairs and Security Policy invite the views of the European Parliament and Council of the EU. The EU will keep this policy under review in light of developments.

2. As part of its strategic commitment to the Arctic, the EU should engage with the region on these three priority areas:

- climate change and safeguarding the Arctic environment;
- promoting sustainable development in the region;
- supporting international cooperation on Arctic issues.

3. The EU needs to ensure that the necessary coordination structures are in place at EU level to meet the challenges ahead. The Council could consider establishing a Working Party on Arctic Matters and Northern Cooperation and the European Parliament could similarly consider establishing a delegation on Arctic Matters and Northern Cooperation.