Sustainable Development in the Arctic

The EU is committed to contributing to sustainable development in a balanced and integrated manner.

A safe, stable, sustainable and prosperous Arctic is important not just for the region itself, but for the EU and the rest of the world. While the Arctic region is rich in resources both on land and in the seas, the Arctic faces several challenges due among other things to its sparse population, limited logistical networks, and fragile environmental conditions.

The inhabitants of the Arctic are familiar with these conditions – however harsh they may seem to people living in lower latitudes – and have socio-economic aspirations for sustainable development under Arctic conditions. The indigenous peoples who have lived in various parts of this vast region for millennia have specific traditional knowledge and across the Arctic region, several forms of traditional livelihoods have developed over the centuries, not least reindeer herding, fishing, and hunting. As modern life has increasingly taken hold in Arctic regions, other forms of economic activity and technologies have been added. These include public administration and education, more intensive fishing, maritime and shipping operations, resource extraction, research activities, tourism, telecommunications etc.

The Arctic region attracts increasing interest from economic and civil society within each Arctic state as well as from many other parts of the world.

The EU is committed to implementing the United Nations (UN) 2030 Agenda for Sustainable Development to achieve sustainable development in its three dimensions – economic, social and environmental – in a balanced and integrated manner. Several EU activities taking place in and relating to the Arctic region should contribute to the achievement of the UN Sustainable Development Goals (SDGs).

Infrastructure and logistics

In order to support socio-economic activities taking place in the Arctic regions, Arctic infrastructure and logistics play an important role as enabling factors. These sectors also have strong growth potential, as well as environmental impacts and social implications in their own right.

The Commission Directorate-General for Regional and Urban Policy (DG Regio) and Directorate-
General for Mobility and Transport (DG Move) are leading EU work to increase infrastructure capacity and improve transport connectivity in the Arctic. Depending on the context, the EU can support activities in these sectors, thereby contributing to increasing productivity and improving trade between the Arctic and the EU. It remains important to pay due attention to increased environmental impacts as well as positive and/or potentially adverse implications for social cohesion and mobility.

**Infrastructure**

The EU Cohesion Policy 2014-2020 supports Arctic investments and capacity building.

- Sweden and Finland have both been allocated funding for regional projects through the Structural Funds programme 2014-2020, and further investments are being co-financed in transport. These investments build on national and/or regional growth and smart specialisation strategies.
- the Trans-European Network for Transport (TEN-T) finances work and studies to enhance rail capacity in northern Finland, Sweden and Norway, focussing on cross-border networks and links between maritime and land transport.

The Investment Plan for Europe supports various infrastructure projects in the European Arctic, including Greenland.

Increasing infrastructure capacity and transport connectivity contributes to 'building resilient infrastructure, promoting sustainable industrialization and fostering innovation' (UN Sustainable Development Goal 9).

**Green economy**

The EU’s environment policies promote the transformation towards an inclusive green economy that balances environmental considerations with growth, creates jobs and helps reduce poverty through sustainable management of natural capital. Resource efficiency, ecosystem resilience and human well-being are three crucial factors needed to find the balance between development and sustainability.

The Commission Directorate-General for Environment (DG Env) together with the European Environment Agency (EEA) leads EU work on environmental matters, including the promotion of the green economy.

Further information on EU work to safeguard the Arctic environment can be found on the Climate Change and the Arctic Environment subpage.

**Using innovation**

To protect the environment and make EU industry more competitive, we need technologies, processes and business models that use resources more efficiently. We call these solutions 'eco-innovation'. The EU supports green technology and green products through a range of funding schemes and policies (non-exhaustive list):

- the Eco-innovation Action Plan (EcoAP) targets drivers of eco-innovation and barriers to its uptake, funding research and innovation projects and eco-innovative companies
- the Competitiveness and Innovation Programme (CIP) provides access to financing for small firms, facilitating research and innovation
• the EU Environmental Technology Verification (ETV) scheme, with a network of centres, should build credibility and increase market confidence by validating the performance of eco-innovations
• the LIFE Programme provides support for development of the green economy

Resource efficiency

Europe 2020, the EU's growth strategy, aims to make the EU a smart, sustainable and inclusive economy. This includes encouraging the use of resources, such as water, minerals and timber, in a more sustainable way. One of the building blocks of this initiative is the Roadmap to a Resource-Efficient Europe.

Sustainable consumption and production

Sustainable consumption and production maximises business' potential to transform environmental challenges into economic opportunities and provide a better deal for consumers. A range of EU and national policies foster resource efficient and eco-friendly products and raise consumer awareness. Notably, the Sustainable Consumption and Production Action Plan aims to improve the environmental performance of products and increase the demand for more sustainable goods and production technologies.

Preventing and managing waste

In order to promote the sustainable use of resources in the Arctic, the EU will share experiences and best practices on the circular economy with Arctic states.

Managing water resources

Access to good quality water and having a healthy marine environment are essential for people, nature and economic activities. The EU's Water Framework Directive aims to ensure good quality water around the EU by managing river basin systems in a coordinated way at regional and national levels.

Encouraging a move towards the green economy in the ways described above contributes to 'ensuring sustainable consumption and production patterns' (UN Sustainable Development Goal 12).

Blue economy

The Commission Directorate-General for Maritime Affairs and Fisheries (DG Mare), Directorate-General for Mobility and Transport (DG Move) and the European Maritime Safety Agency (EMSA), as well as the Directorate-General for Joint Research Centre (DG JRC), are leading EU work to facilitate the development of safe and secure maritime activities in the Arctic, notably through the Blue Growth strategy. Sectors of the blue economy include aquaculture, coastal tourism, marine biotechnology, ocean energy, and seabed extraction.

As the Arctic sea ice melts, the Northeast and Northwest passages become more accessible and maritime traffic in the Arctic may increase in the medium to long term. Furthermore, some fish stocks are now moving further north and fishing fleets are interested in following them; this raises interest in fishing regimes and the preservation of marine biodiversity etc. These maritime activities also require more attention to Arctic shipping safety.
Sustainable ocean governance

The EU aims to ensure that our oceans are safe, secure, clean and sustainably managed, as outlined in the Joint Communication on an International ocean governance agenda for the future of our oceans. The Joint Communication proposes work to be undertaken in three priority areas: improving the institutional framework; sustainable management to reduce human impact; and investing in knowledge and data for the oceans. The EU conducts various activities in line with this aim (non-exhaustive list):

- **CleanSeaNet** is a near real-time European satellite-based oil spill monitoring and vessel detection service covering all European sea areas, as well as waters around Greenland
- the EU supports the implementation of the International Maritime Organisation's International Code for Ships Operating in Polar Waters (Polar Code), including enhanced Search and Rescue
- the **European Coast Guard Functions Forum** should collaborate closely with the newly established Arctic Coast Guard Forum

Supporting the safe and sustainable blue economy contributes to 'conserving and sustainably using the oceans, seas and marine resources' ([UN Sustainable Development Goal 14](http://unsdg.un.org/sdgs Goal 14)).

### Education

The Commission Directorate-General for International Cooperation and Development (DG DEVCO) leads EU work to help enhance education in the Arctic Overseas Countries and Territories (OCTs) (Greenland). The Directorate-General for Research & Innovation (DG RTD) also contributes to this work.

#### Technology for learning

Access to broadband internet can facilitate distance learning, on-line courses, file sharing, video uploads and other on-line educational support tools. EU satellite technologies and programmes are being used to support the educational needs of Arctic communities.

#### Arctic research and science education

**EDU-ARCTIC** is an innovative educational programme which aims to encourage students to pursue further education in science, technology, engineering and mathematics (STEM) and polar research. EDU-ARCTIC focuses on using Arctic research as a vehicle to strengthen science education curricula all across Europe. The EDU-ARCTIC project uses a mix of different tools to bring a fresh approach to teaching STEM subjects.

### Greenland

Greenland is an autonomous territory within the Kingdom of Denmark, but withdrew from the EU in 1985. Greenland is now associated with the EU as one of the Overseas Countries and Territories (OCTs). DG DEVCO leads on all work relating to the OCTs. Relations between Greenland, the Kingdom of Denmark and the EU were reconfirmed by the signing of the 2015 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. Cooperation activities between Greenland and the EU fall under the [Fisheries partnership agreement](http://ec.europa.eu/fisheries) and/or the [EU-Greenland Partnership](http://ec.europa.eu/greenland).
Through the EU-Greenland Partnership, Greenland is eligible for EU funding, which is delivered through the Instrument for Greenland (IFG). **Education, vocational training and the post-elementary school system** are the main focus under the EU-Greenland Partnership.

Contributing to the development of education as described above works towards 'ensuring inclusive and quality education for all and promoting lifelong learning' (UN Sustainable Development Goal 4).

**Traditional knowledge and livelihoods**

The Commission Directorate-General for Maritime Affairs and Fisheries (DG Mare) leads on the EU's work with Arctic indigenous peoples. Sustainable development in the Arctic is important to indigenous peoples, and should take into account their traditional livelihoods. In order to preserve and share traditional knowledge, dialogue with and between those living in the Arctic region is essential.

**Indigenous Peoples Dialogue**

The EU, led by DG Mare, organises the Arctic Indigenous Peoples Dialogue on a regular basis. This dialogue is a forum where Arctic indigenous peoples can exchange views and agree on areas for further cooperation with the EU, particularly in relation to sustainable development.

**Tourism**

Tourism in the Arctic regions is developing rapidly, although in different forms across the Arctic region. While tourism brings important benefits to many Northern communities through economic growth, job creation, improved connections to lower latitudes (flights, telecommunications, social networks etc.) and increasing interest in local and indigenous goods, the potential risks to the fragile Arctic environment and to traditional ways of life cannot be ignored.

The Commission Directorate-General for Growth (DG Grow), Directorate-General for Environment (DG Env) and the Directorate-General for Regional and Urban Policy (DG Regio) lead EU work to support the development of sustainable Arctic tourism.

**EU Tourism policy**

A significant proportion of tourists to the Arctic are EU citizens. One priority of the EU Tourism Policy is to promote the development of sustainable, responsible, and high-quality tourism. Several Member States have created initiatives to promote sustainable tourism which incorporate the recommendations of the EU Tourism Policy.

**Cruise ship tourism**

With the thaw of sea ice, the cruise ship industry in the Arctic is growing. This brings significant economic benefits, but also risks, including the potential for grounding or sinking, oil spills, waste water discharge and water pollution.

In order to **mitigate the potential for risk**, the Arctic cruise ship industry is subject to EU standards for waste management, as well as related regulations under the International Maritime Organization (IMO).
Investment

In addition to funding available through the EU Tourism policy, the EU funds various projects to promote sustainable tourism in the Arctic (non-exhaustive list):

- The Interreg Nord project operates in Finland, Sweden, and Norway, aiming to promote sustainable tourism in the European Arctic. This project reinforces cross-border cooperation, improves accessibility, promotes regional products, and has increased the number of visitors to the region.
- Through the European Regional Development Fund (ERDF), the Northern Periphery Programme (NPP) and Northern Periphery and Arctic Programme (NPA) fund projects that support sustainable tourism development in the Arctic.

Connectivity and space technology

The Commission Directorate-General for Regional and Urban Policy (DG Regio) leads EU work to increase communications connectivity, and the Directorate-General for Growth (DG Grow) is leading EU work on space technology.

Some obstacles to sustainable development in the Arctic stem from its vast size, extreme climatic conditions, sparse population and relative inaccessibility. These challenges can be countered through EU space-based services which are able to provide cost-effective solutions to meet the needs of those living and working in the region.

Improved access to the internet and other means of communication in Arctic regions is an important factor that could increase economic productivity and facilitate access to wider markets for businesses operating in the Arctic. Increased connectivity could also bring strong social benefits, increasing the possibility for communication and creating/strengthening active links between indigenous communities, as well as facilitating remote education and public administration activities.

Earth observations

EU space programmes provide powerful observation coverage and operational services in the Arctic, which could increase efficiency in agriculture and fisheries, optimise transport, and improve crisis response.

- Copernicus, part of the EU Earth Observation Programme, collects data from multiple sources to provide polar surveillance and monitoring services across six thematic areas: land, marine, atmosphere, climate change, emergency management and security
- the European Global Navigation Satellite System Galileo will provide an open and free service available across the European Arctic region that could be useful for aviation, maritime, search and rescue and agricultural sectors

Data sharing

As a member of the Group on Earth Observations (GEO), the EU will promote an integrated pan-Arctic observing system through the GEO Cold Region Initiative (GEOCRI), which aims to promote Earth observations data sharing and cooperation, enabling improved information services for stakeholders. This action has been funded by Horizon 2020, the EU Research and Innovation Framework Programme which is contributing to the ongoing development of pan-Arctic observing initiatives.
**Investment**

Through the [Structural Funds programme 2014-2020](https://ec.europa.eu/regional_policy/en/policies/structural-funds/), Sweden and Finland have both been allocated funding for regional projects, including investment in broadband. These investments build on national and/or regional growth and smart specialisation strategies.

**Supporting innovation and local businesses**

The Commission Directorate-General for Research & Innovation (DG RTD), the Joint Research Centre (DG JRC), and the Directorate-General for Growth (DG Grow), along with the Directorate-General for Regional and Urban Policy (DG Regio) are leading EU work in supporting sustainable innovation and local businesses. The use of innovative technologies in the Arctic has the potential to bring broad social and economic benefits both within and beyond the Arctic region. The EU is supporting innovation in the Arctic through a variety of activities.

**Funding programmes**

The EU Research and Innovation Framework Programme [Horizon 2020](https://ec.europa.eu/programmes/horizon2020) supports actions that could speed up the translation of research outcomes into cold-climate technologies and services with commercial potential. [InnovFin - EU Finance for innovators](https://ec.europa.eu/research/finance_en) is one such Horizon 2020 instrument; a joint initiative with the European Investment Bank Group, to help Arctic-related research and innovation projects get access to the market.


**Collaboration between EU-funded programmes**

Cross-programme collaboration is encouraged and mandated by the European Commission and the EU High Representative in the Joint Communication *A new integrated EU policy for the Arctic*. Ultimately, the collaboration should provide input for establishing research and investment priorities in the European Arctic.

Cross-programme collaboration is coordinated by the Northern Periphery and Arctic Programme. Participating programmes are Interreg Botnia-Atlantica, Interreg Nord, Kolarctic CBC, and Karelia CBC. The collaboration will consider including other programmes. With a view to enabling high complementarity with other policy initiatives and stakeholder organisations operating in the Arctic, these organisations will be consulted or involved where appropriate.

The programmes are working on:

- more informed/coordinated project selection and thereby a better allocation and better use of the programme funding;
- clearer and more integrated information for potential applicants about funding opportunities, and a wider network of potential collaboration partners;
- more concrete and relevant project outputs meeting the needs of Arctic stakeholders, and better involvement of these stakeholders;
- better promotion of results; more targeted, on a more aggregated level, and to a wider audience;
• more efficient programme management, by pooling resources and achieving a wider impact;
• a more strategic approach to impact policy development, positioning the programmes for the post-2020 period, and potentially having a common priority based on Arctic values.

You can find more information on the Northern Periphery and Arctic Programme website.

The EU is also funding research and innovation projects in the Arctic through the European Structural and Investment Funds (ESIF) programmes.

**Supporting local businesses**

The EU offers free support to small and medium-sized enterprises (SMEs) through the Enterprise Europe Network which helps make the most of business opportunities in the EU and beyond. The Network will continue to ‘coach’ Arctic SMEs at their request. Furthermore, the EU invests in businesses operating in the Arctic through the European Bank for Reconstruction and Development (EBRD).

The EU contributes European Structural and Investment ESI funds to kick-start growth, job creation and investment across Europe, notably in the least developed areas and sectors with growth potential.

European Investment Advisory Hub and Project Portal is a 'one-stop-shop' for investors or project promoters and public managing authorities to provide advice at EU and local levels on project identification, development and preparation.

Supporting innovation and local businesses in the Arctic in this way contributes to 'promoting inclusive and sustainable economic growth, employment and decent work for all' (UN Sustainable Development Goal 8).

**Arctic Stakeholder Forum**

The EU, led by the Commission Directorate-General for Maritime Affairs and Fisheries (DG Mare), has set up an Arctic Stakeholder Forum (ASF). This forum brings together EU institutions, European Arctic Member States, regional and local authorities, and indigenous peoples to identify key investment and research priorities for the coming years and enhance collaboration and coordination between different EU funding programmes.

From 2018, the ASF will be replaced by an Arctic Stakeholder Conference.

**Related resources**

- Speech on EU-PolarNet; connecting science with society – Dr. Karin Lochte (Alfred Wegener Institute) - 3rd Trilateral EU-US-Canada Arctic Meeting of the Transatlantic Ocean Research Alliance (2015)
- [Galway statement on Atlantic Ocean Cooperation](https://www.eunews.com/2013/03/galway-statement-on-atlantic-ocean-cooperation) – launching an EU-Canada-USA research alliance (2013)