Overview of EU actions in the Arctic and their impact

Summary

European Commission

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Summary

The report

The report presents an overview of EU policies, initiatives and projects that are of relevance for the Arctic. The authors consider both Arctic-specific actions as well as the broad spectrum of EU general policies that affect the way it influences the region as a major economy, market for Arctic resources, polluter and a research powerhouse. As background for such an overview, the Arctic environmental and economic footprint of the EU’s economy and population is assessed. The study includes policy options aimed at enhancing the EU’s Arctic policy impact.

The work is primarily a synthesis of existing knowledge and information, although some new data has been generated as well. All numbers presented below should be seen as simplifications allowing the reader to capture the magnitude and multifaceted character of the EU’s Arctic influence.

The definition of the Arctic in this report follows the Arctic Human Development Report boundary and the International Maritime Organization’s designation in the case of marine topics. The European Arctic (the European part of the Arctic) includes the northernmost regions of Finland, Norway and Sweden, northwest Arctic Russia as well as Faroe Islands, Greenland and Iceland, depending on the specific context, as indicated under different themes. This is the area where the EU economic influence is the strongest, where the EU programmes operate and where pollution coming from the EU makes the greatest impact. The EU Arctic refers to the northernmost regions of Finland and Sweden, which includes Finnish Lapland and Norrbotten. However, in the context of EU policies, the authors refer also to a broader group of northern sparsely populated regions, including Västerbotten and the seven regions of North-East Finland, in particular in the context of the EU structural and cross-border programmes. Europe or “European continent” refers to the whole of Europe up to the Ural Mountains, Turkey and the Caucasus.

The sections below first outline the Arctic footprint of the EU’s economy and population. An overview of the EU’s policy impact is then presented by considering the effects of EU policies on the environment footprint and on its role as a market for Arctic products. Further, the EU role in Arctic knowledge-building is discussed. Finally, the special role of the EU in the European Arctic is highlighted.

Figure 1: The definitions of the Arctic: Arctic Human Development Report boundary in red, with Arctic administrative regions marked in grey. Map produced by Nordregio, 2004. Cartographer: Johanna Roto.
Figure 2: Illustration of the EU economic and environmental footprint in the Arctic and the financial support for Arctic projects from chosen EU programmes. Graph by Gabriela Mlaskawa, EPRD 2021.
The Arctic footprint of EU economy and population

The EU’s readiness to assess its impact on the Arctic can be seen as a major asset for a responsible EU Arctic policy and distinguishes the EU among actors active in the Arctic. It is an action that is worth being repeated in the future by the EU. Moreover, major economies – both Arctic and non-Arctic - should be encouraged to conduct assessments of their Arctic footprint (policy option P3 in the full report).

As a major economy, population and polluter, the EU, notwithstanding its intentional Arctic policy and engagement, influences the Arctic in a variety of ways. Its footprint in the region is comparatively high because among the major industrialised regions it is the EU that is located closest to the Arctic Circle. The emission of greenhouse gases drives global warming, while pollutants such as persistent organic pollutants, black carbon, heavy metals like mercury, and micro- and macroplastics travel to the Arctic by air and ocean currents. The global system of wind and ocean currents results in the Arctic becoming a sink for many of the pollutants, even though the northern local pollution sources are usually limited in scale. The EU contributes to Arctic warming through an 8% share in global greenhouse gas emissions. In addition, the EU is responsible for around 36% of Arctic deposition of black carbon, which speeds up the warming of the Arctic, the melting of snow and ice surfaces, and is a harmful air pollutant. Black carbon is transported by air into the Arctic via wind patterns together with other pollutants. The European continent as a whole contributes 30-40% of persistent organic pollutants transported into the Arctic region. The EU-27 together with the UK, Turkey and Western Balkan countries make up 8% of Arctic mercury pollution. Part of these pollutants are transported by sea currents and that is also the key pathway for plastic pollution. It is currently impossible to assess how much of the macro- and microplastics released in the EU ends up in the Arctic’s waters and ecosystems. However, the EU is located next to the Gulf Stream which is the main northward pathway of this

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**Figure 3**: Share of countries and regions in global CO₂ emissions in 2018. Data excluding land use change. Based on PIK accounting. Source of data: ClimateWatchData and European Environment Agency

**Figure 4**: Anthropogenic emissions source regions for mercury deposited in the Arctic. Based on UNEP 2018.
pollution, and therefore the EU constitutes a considerable source of Arctic marine litter, including that originating from fisheries. Microplastics can also travel by air and two European sources of these particles are of particular concern: the unintentionally released microplastics from synthetic textiles and the road traffic emissions occurring by the wearing down of tyres and brakes.

As a market for Arctic products, the EU buys roughly one-fourth of Arctic hydrocarbon exports, including 87% of the liquified natural gas (LNG) produced in the Russian Arctic. Over 15% of vessels above 300 tonnes gross weight traversing Arctic waters fly EU Member States’ flags or are owned by EU-based companies, being responsible for 31% of CO₂ and 17% of black carbon emitted by Arctic shipping.

The EU has between 25% and 60% share in the imports of fish from North Atlantic countries.

![Figure 5: EU Share of Total CO₂ (left) and BC (right) emissions from maritime transport in the Arctic (2019)](image)

![Figure 6: Most relevant extra-EU-28 (incl. UK) trade flows of seafood, 2019. Source: EUMOFA 2020: 58, based on Eurostat-COMEXT.](image)
The EU imports numerous raw materials, including critical minerals: 69% of gold, 51% of nickel and 48% of titanium exported by Arctic states find buyers within the EU. In 2019, EU-27 tourists constituted between 27% and 47% of visitors to the different regions of the European Arctic.

**Figure 7:** EU imports of cobalt and nickel from Arctic states (including non-Arctic regions) and the EU’s position as an importer of resources from Arctic states. Data: OECD, compareyourcountry.org; EC 2020a, 2020b. Data for 2019 is based on the monetary value of trade in USD. A small part of the resources is re-exported. Data for imports specifically from Arctic extraction are not available (no disaggregation).

The EU contributes financially in a direct way to regional development, with the aim to make it sustainable. Arctic research is also strongly supported. Over EUR 200 million has been spent on Arctic research within the Horizon 2020 research and innovation programme. In the 2014-2020 period, Greenland received EUR 217 million for education as a part of the overseas countries and territories partnership. During the same time, the EU spent over EUR 1 billion on mainstream (i.e. Investment for Growth and Jobs) cohesion policy programmes in Arctic Finland and Sweden, as well as cross-border and transnational programmes across the European Arctic.

**Figure 8:** Northern Periphery and Arctic Programme 2014-2020. Includes the UK. Map by Arctic Portal, 2014.
**EU policies affecting its climate and environmental footprint**

The EU’s internal policy (influenced by international law and cooperation) on climate change and environmental protection has progressed over the past decades, resulting also in reductions of substances that cause environmental problems in the Arctic. The main concern here is climate change, which is the biggest driver of transformation in the Arctic. The climate mitigation policy of the EU has to a great extent achieved its objectives and has been able to increase its ambition level for the future with the overarching Green Deal. The EU has also had a targeted methane policy, which has led to emissions reductions, which are also important from the Arctic warming viewpoint.

Figure 9: EU-27 historical and projected emissions and EU policy targets. Source: EEA.

Of importance for this study is the impact of the EU’s clean air policy on the EU’s black carbon emissions. The EU has already been tackling the amount of this short-lived climate pollutant reaching the Arctic from the EU e.g. by setting particulate matter (PM$_{2.5}$) targets and encouraging its Member States to report and improve their inventories. Furthermore, the EU has been able to curb its emissions of persistent organic pollutants (POPs) (60-97% reductions since 1990, depending on a specific pollutant) and heavy metals (e.g., over 70% of mercury emissions reductions between 1990 and 2014).

Figure 10: Emission reductions of selected POPs in the EU27+UK/NO/CH/IS between 1990 and 2017. HCB-Hexachlorobenzene; PCB-Polychlorinated biphenyls; PAH-Polycyclic aromatic hydrocarbons. Source: European Environment Agency 2020
The EU is also reducing the harmful emissions from its vessels (some of which are navigating in Arctic waters) through its participation in standard-setting in the IMO and having its own air pollution legislation in place. Paradoxically, the success in reducing sulphur dioxide in the EU also leads to further warming in the Arctic – as sulphur dioxide acts in the atmosphere as a climate coolant – requiring even stronger climate change mitigation measures. There is now increasing awareness that there are co-benefits in tackling various pollutants together, as they are interlinked, an approach underlined in the European Green Deal.

The EU has taken only a few Arctic-specific actions with regard to long-range pollution. It has been active in the context of the Arctic Council and has reported its progress (as a de facto observer) to the Arctic Council’s expert group on methane and black carbon. The EU also finances the project Action on Black Carbon in the Arctic region, which aims to support work to reduce black carbon and its negative effects on the Arctic. The overall project is led by the Arctic Monitoring and Assessment Programme working group of the Arctic Council. Overall, the EU’s participation in the work of the Arctic Council is relatively fragmented, in particular with regard to biodiversity questions.

The EU has continuously supported a heavy fuel oil (HFO) ban for the Arctic and encouraged Member States to take a vocal stance in support of the phasing-out of this type of fuel in the region. The use of HFO results in high emissions of air pollutants, including black carbon, with significant impact on regional climate forcing and serious health effects on local populations. The adoption of an HFO ban has been under discussion for much of the past decade. At the end of 2020 the IMO’s Marine Environment Protection Committee moved to ban the use and carriage of the HFO and the ban is expected to be formally adopted by the full IMO assembly during 2021.

The EU can limit the amounts of plastics transported into the Arctic from EU sources by reducing the mismanaged waste and uncollected litter, as well as limiting landfill deposition. The EU achieved some degree of success in that regard during the last decade. The impact of these measures may be limited at the global level, but significant (although impossible to measure currently) in the Arctic context. A broad range of EU policies have recently been developed or updated with relatively ambitious goals, e.g. a ban on many single-use plastics. An area of particular relevance for the Arctic is microplastic pollution from the EU. The areas of particular importance are unintentionally released microplastics from car tyres and synthetic textiles, where policy actions remain limited, even if there has been progress in recent years.

Global biodiversity is deteriorating at an alarming rate. The situation in the Arctic is relatively good compared to many other regions, but the northern ecosystems are undergoing rapid transformation due to climate change. The EU’s biodiversity strategy towards 2020 established clear targets for better protection of species and habitats but a mid-term review of 2015 concluded that not much progress in achieving these targets was taking place and evaluation of these 2020 targets is ongoing, while a new strategy towards 2030 has been adopted.

Policy options:

- The EU could consider committing to a common target for black carbon reductions in parallel to the actions of Arctic States in the framework of the Arctic Council Expert Group on Methane and Black Carbon (ref. policy option P18 in the main text).
- Utilise the Northern Dimension Environmental Partnership towards black carbon work (P20).
- Bring the long-range aspect of pollutants more strongly into the EU’s regulatory and institutional framework (P22).
● Improve the understanding of long-distance transport of plastic waste in the North Atlantic and air transport of microplastics (P23).

● Develop policy and technological measures for unintentionally released microplastics from synthetic textiles and road traffic (P24).

● Create a stronger institutional presence of the EU in the work of the Arctic Council’s Conservation of Arctic Flora and Fauna working group to advance the protection of Arctic biodiversity (P25).

● Consider establishing an internal policy coordination group of the European Commission to follow and, if necessary, take a stance on what should be the EU’s role in biodiversity governance of the Central Arctic Ocean (P26).

**EU actions related to its role in Arctic economic development**

The EU is a key market for resources extracted in the Arctic and it contributes to developments in Arctic economic sectors, with the stated aim of making this development more sustainable and inclusive. This section outlines the influence of EU policy on its economy’s demand for Arctic oil and gas and facilitating the expansion of renewable energy, as well as on the import and production of Arctic raw materials. The EU contributes to the demand for sub-Arctic fisheries and Arctic shipping and takes part in shaping regulatory frameworks governing these activities.

The EU attempts to actively shape its resource consumption and resource security, which will increasingly affect its economic interactions with the Arctic. The EU already had policies aimed at limiting its dependence on hydrocarbons, including in transport. The level of ambition has now been boosted with the adoption of the European Green Deal and increasing the 2030 target of renewable energy consumption to 32%. Taxation, incentives and the support for development and application of green technologies are to contribute to fundamental transformation of the EU’s energy system. Nonetheless, so far, EU dependence on oil and gas and their importation remains significant. The currently proposed carbon border adjustment mechanism could play a role in that regard, although it is at the moment impossible to say how it may affect the Arctic.

The EU is also interested in securing and diversifying access to raw materials including critical minerals, which are crucial for modern technologies including for renewable energy and electric transport. At the same time, the aim is to ensure that the resources imported to the EU are extracted as responsibly as possible, although the EU has only limited competence and influence with regard to Arctic minerals extraction. In the long-term, dialogues with Arctic States and trade relationships, such as the EU-Canada Comprehensive Economic and Trade Agreement (CETA), may contribute to responsible sourcing, but so far, they have produced limited tangible outputs. There is also a possibility in the future for Arctic extractive projects that contribute to EU raw materials security, to receive financing from the European Investment Bank (EIB). It is, however, important that the contribution of extracted raw materials to the global and European transition to the low-carbon economy does not run counter to local sustainability and livelihoods.

In the field of Arctic marine transport, apart from the global regulatory developments mentioned, the EU influences the port state control and inspection regime, which will be crucial for the full implementation of the new Arctic shipping rules under the Polar Code. Over the years, the EU has also contributed to strengthening vessel monitoring systems, positioning, information on sea ice and presence of icebergs through the Galileo and Copernicus programmes. The EU’s emergency response capabilities under the European Maritime Safety Agency (EMSA) can also be deployed.
in Arctic waters. These EU contributions are of value for the economic feasibility of Arctic shipping, just as they are for the environmental performance of maritime transport.

With regard to fisheries, the EU Common Fisheries Policy was criticised in the past, but it has gone through a number of reforms in the last decade, including introduction of a landing obligation, thus limiting the discarding of fish. The EU is one of the leading actors in the combat against illegal, unreported, and unregulated (IUU) fishing, with actions based on EU integrated maritime services from EMSA and the use of space technologies. It is an important member of the North-East Atlantic Fisheries Commission (NEAFC), it has strong fisheries relations with North Atlantic nations and is a signatory to the 2018 Central Arctic Ocean Fisheries Agreement. In the process of implementing the latter, the EU can constructively contribute to scientific cooperation towards evaluating the conditions for future fisheries in the Central Arctic Ocean.

Policy options:

- Contribute to strengthening the Polar Code (fishing vessels and non-SOLAS vessels) (P28).
- Strengthen port state control for Arctic rules (P29).
- Contribute to scientific work and cooperation on central Arctic Ocean fisheries (P27).
- Consider developing a comprehensive Arctic energy policy (P30).

The EU’s role in understanding the Arctic and its interactions with the region’s peoples and states

The EU is contributing to our understanding of the Arctic. In cooperation with the European Space Agency (ESA), the EU is a key actor in space programmes (e.g. Galileo, EGNOS and Copernicus). These provide services which are of significant value for the people who live in the Arctic, from geolocation data to up-to-date satellite information which allows rapid decision-making in harsh environments, for example concerning sea-ice coverage in Arctic and sub-Arctic waters. The European Marine Observation and Data network (EMODnet) generates in-situ marine data and observations. Copernicus provides a variety of practical services, open and free, including supporting disaster early warning and emergency operations support with rapid mapping. A good example where these capabilities have been utilized is that of large forest fires, which have plagued the circumpolar Arctic in recent years and which are likely to become more common due to climate change.

Findings from EU-funded Arctic-related research projects not only provide important contributions to the work of the Intergovernmental Panel on Climate Change (IPCC) and an understanding of global climate dynamics, but they are also increasingly oriented toward specific needs and challenges faced by Arctic indigenous and local populations. Through the 7th Framework Programme (2007-2013) and Horizon 2020 (2014-2020), the EU has enabled and led the creation of some of the world’s largest consortia and networks in terms of polar research and infrastructure. The EU is an active partner in major fora regarding Arctic science, including the Arctic Science Ministerial meetings and it actively contributes to work of the Arctic Council. Also of importance is the innovative co-operation of the Horizon-funded research projects via the EU Polar Cluster.

The EU has many pathways for interacting with Arctic states and peoples. The EU actively engages in issues of direct relevance for the Arctic on an international level via the United Nations and its specialised agencies, such as the IMO. Although formally not an observer, the EU actively participates in the Arctic Council and especially its working groups. It also contributes to the various regional and sub-regional Arctic cooperation fora: the Barents Euro-Arctic Council (European
Commission as a member), the Nordic Council, the Conference of Arctic Parliamentarians. The EU’s Arctic external relations also include relationships with all non-EU Arctic states, either by bilateral means or, for example, through the Northern Dimension, a joint policy between the EU, Russia, Iceland and Norway, which has undergone a degree of revival in the last few years.

The EU’s policy regarding Arctic Indigenous Peoples is evolving. The EU has been organising Arctic Dialogue meetings, where Arctic indigenous representatives and EU officials meet. These events are highly appreciated by indigenous representatives. However, the format of these meetings often does not allow for a more in-depth discussion on concrete problems, concerns and current EU policy developments. A major challenge is ensuring coherence throughout the EU’s multifaceted interactions with Indigenous Peoples – globally, in the Arctic, and internally within the EU/EEA Area. The 2016 Arctic communication stated the need to pursue such greater coherence. However, so far, general EU policies – for instance the latest biodiversity strategy – mention Indigenous Peoples only in the external context.

Gender equality is increasingly present in Arctic discussions. It is explicitly included in new Arctic strategies of Finland and Sweden and it has been promoted through Iceland’s Chairmanship of the Arctic Council. In 2020, the EU has adopted a series of new strategies aimed at achieving gender equality within the EU and around the world with emphasis on the empowerment of women and girls. The EU is also committed to advancing gender equality through the provisions of Horizon Europe.

**Policy options:**

- Include gender equality as one of the overarching principles in a new Arctic communication (P8).
- Promote and emphasise gender equality, and the empowerment of women in and through EU-funded Arctic scientific research (P14).
- Enhance local, community and Indigenous Peoples’ capacity-building to make EU-funded Arctic scientific research more resilient to disruptions such as the Covid-19 pandemic (P16).
- Minimise the environmental impact of EU-funded Arctic research activities (P17).
- Facilitate the EU’s contribution to increased satellite connectivity in the High Arctic (P10).
- Coordinate better the EU involvement in the work of the Arctic Council working groups (P5).
- Enhance engagement with the youth and the inclusion of young voices in EU-Arctic matters (P9).
- Enhance the internal coherence and integrated approach to Indigenous Peoples in the EU (P6).
- Make the interactions between the EU and Arctic Indigenous Peoples more action-oriented and concrete, as well as consider establishing more institutionalized dialogue forums (P7).

**The EU and the European Arctic**

The European Arctic shares a variety of characteristics and challenges with other parts of the circumpolar North, including human capital imbalances, depopulation of rural areas, high dependence on extractive industries, specific challenges related to the Arctic climate and its change, as well as the critical role of air transport for regional development.

The policy influence of the EU in the European Arctic stands out within the EU’s Arctic affairs as the territories of two EU Member States are located within the Arctic Circle, and Iceland and Norway are members of the European Economic Area. The EU also has close ties with Greenland. The EU’s
cohesion policy includes cross-border programmes, which are among the key EU instruments supporting sustainable development across the European Arctic, while other policies also play a role.

The EU cohesion policy programmes in Finland and Sweden as well as several transnational and cross-border programmes channel EU funding to the region and mobilise national resources. These are utilised for green growth projects, boosting local entrepreneurship, SMEs’ innovation, digitalisation as well as planning activities. The smart specialisation approach promoted in EU regional policy has, in the last eight years, been taken up and applied in European Arctic regional development planning, including outside of the EU. EU programmes have become indispensable elements of cross-border cooperation across the European Arctic including with northwest Russia. As an element of the EU’s Arctic policy, cooperation between these different programmes has been launched, and the effects of this collaboration are evaluated positively by most actors. From 2021, significant EU support for just transition away from peat will be available in northeast Finland and for the transformation of energy-intensive industries in northern Sweden.

There are also various possibilities for obtaining financing from the EIB. As EIB loans are linked to sustainability standards, and support EU policy objectives, this financing has a role in prioritising development that is more sustainable. EU funding will become more relevant following the Covid-19 pandemic. Various currently implemented projects already address Covid-19 impacts, but the upcoming multiannual financial framework will bring the response to a much higher level, supporting post-pandemic recovery, which includes the Next Generation EU instrument.

Greenland receives the largest amount of EU support per capita of EU overseas countries and territories (OCTs). This funding has been dedicated thus far to education and vocational training. Currently, there may be possibilities for opening other fields of cooperation, although the relatively low level of education remains a critical challenge in Greenland.

Various EU sectoral policies are of particular relevance in the EU/EEA Area Arctic. Large areas in the EU northernmost regions are part of the Natura 2000 network. EU funding, while limited in relatively wealthy Nordic states, can support transport investments. EU willingness to facilitate extraction of raw materials within the EU is important in the mineral-rich Fennoscandian Shield, although the EU’s direct influence on extractive activities remains limited. However, there are

Figure 11: Regions identified in European Semester Country Reports as facing serious socio-economic challenges deriving from the transition (marked in red, i.e. regions most “at risk”).
While it is difficult to assess which European regions are at the greatest risk related to transition, the regions were identified differently in each country based on “statistics such as employment in industries expected to decline, regional development, unemployment rates, youth unemployment rates, and age and gender distribution in the population” (EP 2020).
numerous EU projects aiming at making mining activities more responsible and following sustainability standards.

**Policy options:**

- Strengthen the Northern Periphery and Arctic Programme (NPA) and maintain its role as a facilitator of cooperation between northern programmes (P34).
- Provide stronger support for developing green air transport and mobility (P12).
- Continue promoting small project funds in the Arctic context (P35).
- Support social impact assessments and efforts for improving the awareness, acceptance and trust in raw materials extraction (P33).
- Consider the Indigenous Peoples’ rights and interests in Arctic raw materials extraction via dialogue, best practices and guidelines (P32).
- Facilitate further the digital transformation in peripheral regions (P11).

**The EU’s role in the Arctic**

The emphasis on the Arctic is rising with the increasing impacts of climate change in the region. The EU population and economy exert significant influence on the region via its environmental footprint and economic demand and the EU has been able to make progress in some areas partly owing to its regulatory and policy actions. Also in the future, those EU actions that change the way the EU functions as a major global economy will potentially have immense influence on the Arctic. Understanding this EU-Arctic nexus is particularly important at a time when the EU aims at fundamentally transforming its socio-economic system via the European Green Deal and post-pandemic recovery. The key question is whether the EU succeeds in meeting its ambitious transformation goals and whether the rest of the world, including the key global powers, is willing to make a similar effort. Arctic regions themselves will have to engage with transition, but the challenges related to remoteness, sparsity and regional economic profiles may make this road different if not more difficult compared to other parts of Europe. There is a need and there are existing mechanisms for the EU to support Arctic regions in their own transformation towards a sustainable, low-carbon economy while maintaining viable communities and societies.

At the same time, the multifaceted and complex presence and role of the EU in the Arctic makes developing a coherent and focused Arctic policy a highly challenging task. One of the most important pathways for the EU to influence Arctic developments in the long term is stronger integration of concerns specific to the Arctic into the EU’s general policymaking. Among possible ways this could be achieved is including more often Arctic perspectives in the EC’s regulatory impact assessments (P1). The oversight and coordination of the EU Arctic actions could be reconsidered, reflecting, e.g., the role of the EU cohesion policy programmes in the European Arctic and the significance of the European Green Deal for the current and future presence and role of the EU in the Arctic (P2).