

Views from North Norway European Office on the future of the European Research & Innovation Framework programmes 2021-2027

North Norway European Office, on behalf of its owners and partners, welcomes the open consultation on the past, present and future of the Horizon Europe Framework programme. In this position paper, we would like to put forward views on the future of the framework programme, and the Strategic Plan for 2025-2027. North Norway European Office represents the regional authorities, the two northern universities and several public organisations in North Norway. Combined, we have a wide perspective on how the Arctic region can contribute to the overall aims of Horizon Europe, and on the research and innovation (R&I) needs in the Arctic.

North Norway European Office's views on the future of Horizon Europe in brief:

- Europe's Arctic regions, including North Norway, are highly developed with access to rich natural resources, internationally acknowledged research institutions, innovative industries and with a geographical location that is optimal for demonstration and pilot projects. The region can be of vital importance for the UN SDGs and the EU Green Deal.
- The Strategic Plan for Horizon Europe 2025-2027 should include a broad perspective on Arctic R&I, with a particular focus on interdisciplinary research and innovation. This includes ensuring Arctic perspectives also in calls and projects not specifically aimed towards the Arctic.
- The Strategic Plan should highlight the need for more focus on Social Sciences and Humanities (SSH) in R&I in the Arctic. This includes both the clusters, partnerships, and missions. The SSH perspective needs to be a part of the work from the start, and not an add-on.
- Increasing the knowledge on the effects of climate change in the Arctic is of vital importance. The research should include resilience, working with local communities and policy makers to find solutions and increasing knowledge and work towards a resilient and climate neutral Arctic.
- The HEU needs to consider the new geopolitical landscape of the Arctic. It is important that the EU's research funding reflects the new reality. Furthermore, a populated Arctic is a safe Arctic. We need people to live in and move to the Arctic to ensure the safety of the region. Taking the new geopolitical situation into account, the issue of demographic challenges in the Arctic, contributing to more knowledge on how to reverse the population decline and lack of workforce, is of importance to the EU.

- The Strategic Plan 2025-2027 needs to clarify the synergies between the new parts of Horizon Europe; clusters versus partnerships versus missions – which ones give what opportunities, and how they contribute to the main targets of Horizon Europe and the EU Green Deal, including unrealised potential. The application process as well as the administrative procedures of projects needs to be simplified.
- Highlighted priorities for 2025-2027 include carbon capture, utilisation and storage, hydrogen, energy efficiency, circular economy and bioeconomy, and demographic and geopolitical changes.

The region can be of vital importance for the UN SDGs and the EU Green Deal.

In North Norway we are not just talking about the green transition, we are in the middle of it. We have well-established collaboration across industry, R&D, private and public actors that will contribute to sustainable development and circular economic value creation for companies and societies in the north. We also work closely with our neighbouring regions in Sweden and Finland, through the Northern Sparsely Populated Area network, which in several of these fields has the same competence and resource base as we have. The European Arctic therefore has great potential to become a significant player in the green transition.

The priorities in Horizon Europe must consider that the Arctic is not one unified region, and the programme should strive for a higher proportion of participants from different R&D institutions, industries and communities located in the Arctic. Their first-hand knowledge, in combination with our natural resources, is of vital importance for Europe's green transition. This also includes the Indigenous peoples, whose traditional knowledge, developed throughout centuries, is valuable to understand the effects of climate change in the Arctic.

Research and innovation are essential factors for the sustainable development of the European Arctic. The European Green Deal and EU funding programmes give North Norway an advantage to be even more innovative and green in the years to come.

The Strategic Plan for Horizon Europe 2025-2027 should have a broad perspective on Arctic research.

Science and innovation play a significant role in the Arctic regions' ability to deliver added value to Europe. The EU has an important role as a funder and coordinator of the regions' efforts to deliver according to the Green Deal and UN SDG. The EU priorities on Arctic science have been a success story over the last years together with the operation of Copernicus. However, a large share of the EU's contributions to the Arctic remains unrecognized. The knowledge on the Arctic stated in results and statistics of Horizon Europe projects on the Arctic should include all projects contributing to increasing this knowledge, in addition to the projects targeted specifically towards the Arctic. The EU should also include research funded by the framework programmes, which are not specifically funded for Arctic R&I, but where there is an Arctic partner, a case, a test site, or other ways where more knowledge on the Arctic is developed.

The EU has taken an engaged role in establishing a link and dialogue with the regions in the Arctic, especially through the updated EU Arctic Policy of 2021. The EU Arctic Policy states that the EU intends to invest in the future of the people living in the Arctic, and to promote sustainable use of natural resources to contribute to the European Green Deal. The policy recognises the EU contribution to polar and climate research, but to some extent overlooks the wider scope on research linked to regional development, including social sciences, energy, food, creative and cultural industries, indigenous peoples, raw materials, aquaculture, and space infrastructure. These perspectives should be reflected in the Strategic Plan for Horizon Europe 2025-2027.

The Strategic Plan for Horizon Europe 2025-2027 should also include an increased focus on interdisciplinary science, including the Social Sciences and Humanities, from the start.

We welcome the increased focus on SHH in the strategic plan for 2020-2024 and the work programs for pillar 2, and hope this will continue in the upcoming strategic plan. To ensure sustainable societies in the High North, an increased emphasis on social science research will provide a balanced knowledge production in addition to existing STEM-research initiatives. Arctic communities need to produce their own knowledge, also through citizen science, not only as raw materials providers, but as innovative and attractive communities.

The report *Arctic Research and Innovation of 2018* reaffirms the EU's dedication to science and innovation as a force for continued development of the Arctic. However, the projects mentioned by the EU are limited to polar research, which leaves knowledge gaps on how to ensure social and economic sustainability in the High North. Nord University is ready to provide significant contributions in this regard through social science research by and for the Arctic. Likewise, UiT – The Arctic University of Norway together with its partnership, The Arctic Five, aims to lead the way in Arctic research and to become an even closer partner for the EU.

Increasing the knowledge on the effects of climate change in the Arctic is of vital importance.

North Norway stresses the role the EU can take when it comes to understanding and mitigating climate change. It is in the interest of the people living in the Arctic and Europe to mitigate climate change and safeguard the environment.

The Arctic region is the focus of growing attention, with increasing interests related to energy, minerals, and utilization of marine resources. The immediate impacts on the peoples of the north, flora and fauna, and the longer-term global impacts need to be considered. However, knowledge about the region lags the ambitions for development. For example, more research is needed towards renewable energy production, energy storage, deep sea mining, aquaculture, and fisheries – and their environmental and societal footprints. This is vital for the development of knowledge-based management strategies coupling ecosystem functioning, connectivity, resilience, and monitoring.

Among the peoples affected the most by climate change are indigenous peoples, holding a special legal status in international law, and whose areas have a special legal status in several countries in the Arctic.

Attention should be given to the indigenous peoples, both regarding their livelihoods as well as the fact that in combination with scientific data, indigenous knowledge can play a role in developing adaptation and mitigation measures in the Arctic.

Clarification and application process

The Strategic Plan 2025-2027 needs to clarify the synergies between the new parts of Horizon Europe; clusters versus partnerships versus missions – which ones give what opportunities, and how do they contribute to the main targets of Horizon Europe and the EU Green Deal, including unrealised potential.

The application process as well as the administrative procedures of projects, need to be simplified. This includes a more understandable and more easily accessible language in the individual calls. This is especially important for bringing in SMEs, local communities, and the voluntary sector as participating project partners in Horizon Europe.

The Strategic Plan for Horizon Europe 2025-2027 must address the need to simplify the application process, not only the funding and tenders portal, but also the language used. It should be clear and simple to understand which EU political priorities are underlying the different clusters, missions, partnerships, and calls, and how to utilise this in a project. Excellence must be the principle in R&I funding in the framework programme. However, understanding the communication from the EU on the matter, should not be a bottle neck for having success in the Horizon Europe programme.

It also should be more clearly stated how SMEs and local and regional levels can participate in HEU. It is through transition and innovation among SMEs and local communities that we will be able to reach to EU Green Deal goals. Up until now HEU is for many SMEs and local communities considered unavailable, and their participation relies, to a high extent, on invitations from R&D institutions. In many parts of Europe, which base their industry on natural resources, HEU is a unique tool for more sustainable and innovative resource extraction. It must become easier for businesses and public enterprises to see what opportunities HEU can represent for them, based on their challenges and opportunities.

Furthermore, the administrative procedures of projects need to be simplified, to minimize the administrative burden.

Highlighted priorities for 2025-2027

We would like to highlight some of the priorities for North Norway, that are of importance also for the EU, and therefore should be included in the Strategic Plan 2025-2027.

Carbon Capture, Utilisation and Storage (CCUS)

Carbon Capture and Storage are some of the most important technologies to reduce greenhouse gas emissions. Several projects in North Norway have come a long way in proving the effect and ripple effects of CCU and CCS. Some examples:

- Kvitebjørn Varme AS, a district heating company in Tromsø, have ambitious plans to capture plant's emissions and reuse it in district heating. At Finnfjord ferrosilicon smelter plant outside of Finnsnes, they have together with UiT The Arctic University of Norway, managed with the use of algae to reduce the CO₂-footprint of the company. Through utilising emission gases and heat surplus in a circular loop through a photobioreactor, the ambition is to achieve a sustainable production of microalgae as raw material for salmon feed.
- The world's first carbon capture pilot for smelters was inaugurated at Elkem in Rana. The Mobile Test Unit delivered by Aker Carbon Capture, is now connected to Elkem's plant in Rana, which produces high-purity ferrosilicon and microsilica. With full-scale implementation, 1.5 million tonnes of CO₂ can be captured from their combined emissions. In a couple of months, testing will commence at SMA Mineral.¹

Through development and verification of new technology for carbon capture, the CO₂-HUB Nord accelerates innovation and industrialization of the carbon capture, utilisation, and the storage value chain. Industrialization of such technology is considered as an important contributor to reducing CO₂ emissions and delivering on the global sustainability goals. However, several challenges need to be solved before carbon capture technology can be commercial. HEU can play a vital role in solving these challenges and disseminate results from pilot projects like the three mentioned above to the whole of Europe.

Hydrogen

North Norway welcomes the commitment from the EU on hydrogen, both in terms of the R&I perspective, but also the aim to scale up production within 2030. There are at least 14 ongoing hydrogen initiatives in North Norway, and we are committed to further develop strong hydrogen hubs for the future, together with the EU. In the green energy transition, hydrogen will be a vital part of ensuring a sustainable development in the Arctic.

Research and innovation are vital for the expansion of hydrogen to succeed. Funding opportunities for developing necessary technologies and infrastructure will be important. Targeted calls for funding, aiming at the specific challenges identified in the EU Hydrogen Strategy, will be of great importance for the transition of the energy-intensive industries in North Norway. In the targeted calls, the Arctic conditions should be taken into account, including the low temperatures and long distances in our regions.

Circular economy and bioeconomy

North Norway European Office welcomes the continued focus on circular economy and bioeconomy and encourages a further upscaling for the Strategic Plan 2025-2027. The path towards sustainability includes a transformative change of the European economy and society to reduce environmental degradation, halt and reverse the decline of biodiversity and better manage natural resources while meeting the EU's

¹ The carbon capture pilot testing is a collaboration between the industry and research institution in the region; Elkem, Mo Industripark, SMA Mineral, SINTEF, Alcoa, Celsa Group, Ferroglobe PLC, Norcem AS, NorFraKalk AS, ACT Cluster and Aker Carbon Capture.

climate objectives and ensuring food and water security, as stated in the Strategic Plan for 2021-2024. There is a need for increased effort to make products last as long as possible, be repaired, upgraded and, to a greater extent, reused.

- We recommend that the next Strategic Plan has an even stronger focus on the potential for energy efficiency and greenhouse gas reduction within the building and construction sector. Not only regarding the renovation of old buildings but also in the construction of new private and public buildings. With the use of new technology and new methods there is huge potential for energy-efficiency and climate neutrality within these industries. The concrete and cement industries are keys in the circular economy and should be prioritized in the upcoming Strategic Plan with more clearly stated goals to support research and innovation within the concrete industry, maximising use of resources and slowing the circular economy loop.
- Marine resources, including marine biotechnology, fisheries, as well as aquaculture should be further prioritized in the next Strategic Plan. Vast resources in the Arctic can make great contributions to the green transition. The Arctic can serve as a test bed for the commercialisation of Arctic natural resources for the EU market. To illustrate this, it could be mentioned that the Arctic is the home to increasingly more important fish stocks, but also a much-needed aquaculture industry. Another example is the marine biotechnology industry in North Norway, where it has been built a complete value chain for the exploitation of marine biodiversity for commercial purposes.

Demographic and geopolitical changes

Russia's invasion of Ukraine in February 2022 changed the geopolitical landscape also in the Arctic. This needs to be reflected in the HEU Strategic Plan 2025-2027.

More knowledge of how this affects the Arctic in a long-term perspective is needed. Moreover, it is necessary to replace the loss of knowledge and research partners for the R&I actors in the Arctic. Both safety, security, and access to critical raw materials from the Arctic demand an economic and social development of these regions. At the same time, we need more knowledge and technology, in close cooperation with the regional and local actors. Furthermore, a populated Arctic is a safe Arctic. We need people to live in and move to the Arctic to ensure both a sustainable development of the Arctic, as stated in the EU Arctic Policy of 2021, as well as the safety and security of the region. The Arctic regions are either close to or share borders with Russia. Against this backdrop it is vitally important to address the demographic challenges in the Arctic, to contribute to more knowledge on how to reverse the population decline and lack of workforce.



North Norway European Office

North Norway European Office (NNEO) was established 1. January 2005 and is owned by the three northern most counties in Norway: Nordland and Troms & Finnmark. NNEO is located in Brussels and serves as a door opener and an arena maker for Northern Norwegian actors in relation to the European Union.



The office holds an informational role, with particular focus on the European Arctic policy, regional policy, current industrial policies and Northern European cooperation.

Contact: +32 471 52 02 68/ brussel@northnorway.org



Nils Kristian Sørheim Nilsen

Director

North Norway European Office

