



Nordic Council
of Ministers

Programme for Nordic Co-operation on the Environment and Climate 2019–2024



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Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, the Faroe Islands, Greenland, and Åland.

Nordic co-operation has firm traditions in politics, the economy, and culture. It plays an important role in European and international collaboration, and aims at creating a strong Nordic community in a strong Europe.

Nordic co-operation seeks to safeguard Nordic and regional interests and principles in the global community. Shared Nordic values help the region solidify its position as one of the world's most innovative and competitive.

Nordic Council of Ministers

Nordens Hus

Ved Stranden 18

DK-1061 Copenhagen

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Co-operation on the
Environment and
Climate 2019–2024**



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Preface

I am pleased to be writing the preface to this new programme that will serve as a guide for Nordic co-operation on the environment and climate up until 2024. This is a time of rapid changes and huge contrasts. Although there is growing international consensus on the implementation of the 2030 Agenda for Sustainable Development, the Paris Agreement, and other key international agreements on the environment, and despite the willingness of businesses, industry, and other players to advance the green transition, there is also increased polarisation between countries and a reluctance among some to show leadership and adopt the necessary measures. At the same time, the effects of climate change and the rapid loss of biodiversity are becoming increasingly evident.

For many years, the Nordic countries have demonstrated that close co-operation on the environment and climate at both policy and expert levels can make all the difference. Under the previous co-operation programme, we worked together to put the Paris Agreement in place. At the UNECE Environment for Europe conference held in Batumi in June 2016, the Nordic countries made a joint statement and commitment by endorsing the Batumi Action for Cleaner Air. Furthermore, the countries made a joint statement at the Ramsar Convention in 2015 on the importance of preserving the function of wetlands for the climate and biodiversity.

We were early in identifying the problem of plastics, in the Nordic Plastics Programme 2017-18. We have contributed to the work of the EU in developing a strategy for a non-toxic environment, such as by giving input to the Commission based on our Nordic action plan for sustainable textiles. Our influence has contributed to the EU's decision to ban a number of substances of very high concern in textiles. The Green to Scale project, which shows the potential for reducing greenhouse gas emissions by way of Nordic green solutions, has attracted international attention, as have efforts to support the phasing-out of subsidies for fossil fuels.

In 2017 and 2018, a review was conducted of Nordic co-operation on the environment and climate, led by Norway's former minister for climate and the environment, Tine Sundtoft. She has put forward 12 recommendations that we need to analyse in more detail in the implementation of this new programme.

The climate is one of humanity's biggest challenges. The Nordic countries have shown for a long time that a strong climate policy can be combined with sustained welfare and competitiveness. This message still needs to be spread. All the Nordic countries now have climate legislation, and several have climate policy frameworks with long-term objectives. Consequently, we see a need for an increase in the sharing of experience in the coming years. In addition, we want to make an ambitious

joint contribution to the implementation of the Paris Agreement and to continue to demonstrate our leadership. During Sweden's presidency of the Nordic Council of Ministers in 2018, a high-level meeting was held with the business community. The companies welcomed ambitious targets, as well as joint long-term regulatory frameworks that promote transformation. They called for continued and increased Nordic leadership at national, European, and global levels. If the Nordic Region does not take the lead and demonstrate that change is possible, who will?

Our economies are still far too centred around the rapid consumption of raw materials. SDG 12 of the 2030 Agenda for Sustainable Development, relating to sustainable production and consumption, poses a challenge. Consequently, the circular economy is prioritised in this co-operation programme. In addition, we are intensifying our efforts to combat the environmental impact of plastics, especially in relation to the influx of plastics and microplastics into marine and coastal areas. Nordic co-operation will continue to contribute to the transition to a non-toxic environment for those living in the region, and the Nordic Swan ecolabel will serve as a strong Nordic brand.

The rapid urbanisation of our countries is making sustainable urban development increasingly important, which is why we are initiating closer Nordic co-operation on sustainable cities.

Land-based and marine ecosystems are under immense pressure, not just in the Nordic Region but around the world. The depletion of biodiversity must be halted and reversed. Nordic co-operation is actively trying to stem these losses, such as through its efforts under the Convention on Biological Diversity. The UN Ocean Conference has put the spotlight on the marine environment, and Nordic co-operation plays a key role in strengthening ecosystem-based marine management. Our co-operation puts a clearer emphasis on the impact of climate change on biodiversity and the marine environment.

With this new co-operation programme, we want to continue strengthening Nordic co-operation and the Nordic countries' voice in the world.

Karolina Skog
Minister for the Environment, Sweden



PHOTO: MILJÖ- OCH ENERGIDEPARTEMENTET



1. Focus areas for Nordic co-operation on the environment and climate

THE NORDIC COUNTRIES WILL:

- co-operate on environmental and climate policy to contribute to the sustainable development of the Nordic Region, the EU/EEA, and the world;
 - co-operate in international negotiations and actively pursue the ambitious implementation of international agreements on the environment and climate, with the Paris Agreement as a key focus;
 - support and strengthen the implementation of the Sustainable Development Goals in the 2030 Agenda;
 - work to strengthen the EU environmental and climate policy framework;
 - work to stem the loss of biodiversity and promote sustainable management that safeguards natural values in the Nordic region;
 - pursue a circular economy and contribute to bringing levels of consumption and production within the bounds of nature's capacity;
 - work to minimise the risks posed to humans and the environment by chemicals and chemical substances in products;
 - work to stop the discharge of plastics and microplastics into marine environments;
 - work to uphold the Nordic Region's role as a pioneer in innovative new solutions that can improve the environment;
 - work to foster and reinforce synergies with other sectors and fields.
-

Nordic advantage and added value

The Nordic countries have been collaborating on environmental and climate policy for a long time, and are seen by many as role models in this field. This co-operation continues to evolve and emphasises support for the green transition of our societies. Our efforts must be strategic and focused on initiatives that provide Nordic added value. The Nordic advantage means that, by working together, the countries often attain better results than they would individually. The path from proposal to action is short in Nordic co-operation. This may relate to co-operation as part of international efforts or to taking a joint approach to specific challenges in the Nordic Region, such as the impact of climate change in the region and safeguarding Nordic natural values and ecosystems that provide our societies with important ecosystem services. Co-operation serves to support and complement policy development nationally, in the EU, and globally. Our efforts must be long term and progressive and take into account the earlier achievements of Nordic co-operation. Gender equality and the perspective of

children and young people are important in Nordic co-operation on the environment and climate. The Nordic countries will continue to implement innovative, far-reaching, and implementable solutions that minimise the negative impact on the environment and climate. Joint Nordic efforts that promote sustainability solutions can strengthen the Nordic Region's brand and position.

The Nordic Swan ecolabel will continue to promote sustainable consumption and production. It is important to look at the environmental impact from a lifecycle perspective and across the entire value chain. Nordic co-operation will pay special attention to several general and interdisciplinary topics across sectoral boundaries. A cross-sectoral approach provides a better overall picture, not least in the areas of energy and transport, sustainable urban development, and forestry and agriculture. Specific co-operation projects on plastics and textiles were initiated during the previous programme period. During this co-operation programme, similar initiatives in prioritised policy areas should be considered.



PHOTO: SCANPIX



PHOTO: SCANPIX

Nordic co-operation considers all Nordic natural habitats and societies. Key areas for co-operation include resource management and the sharing of experience in relation to small Nordic communities.

Active international efforts and partnerships

Global efforts towards sustainable development are in the implementation phase. The 2030 Agenda and its Sustainable Development Goals, or "SDGs", create opportunities for joint efforts in sustainable development, and represent an area where the Nordic countries will continue to be active. The environment and climate are of great importance to these goals. Consequently, the importance of cross-border co-operation is becoming increasingly clear and increasingly important. The goals relating to sustainable consumption and production (SDG12), climate (SDG13), oceans (SDG14), and biodiversity (SDG15) pose particular challenges from a Nordic perspective.

The Nordic countries will continue to be drivers in international negotiations, such

as by deepening the knowledge base and raising new issues. Joint Nordic action in areas such as the air, chemicals, waste, as well as on the climate and oceans, has resulted in the signing of international agreements that have brought about environmental improvements, not only for those living in the Nordic Region but around the globe. The ambitious implementation and development of major international agreements will be a priority during the programme period. The UN, the EU, and the OECD are especially important fora in which the Nordic countries, with their united voice, can make a difference. In addition, the Nordic countries will help to establish the conditions necessary for implementation in other countries, such as by sharing their experiences and knowledge.

Rapid changes in the climate and the environment in the Arctic are a global alarm bell. Nordic co-operation will assist in the acquisition of new knowledge with a sound foundation, with particular regard to the impact of climate change and the consequences of the pollutants affecting the Arctic. This knowledge will in turn be used to support well-founded policy



PHOTO: UNSPLASH



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decisions. Furthermore, it is important to support environmental co-operation in the Barents region. It is important to exploit synergies between the various political bodies in the northern region.

Thanks to their many years of active international efforts relating to the environment, the Nordic countries have gained extensive experience in this area. Dialogue and co-operation with other countries are of fundamental importance for increasing our understanding of the position of others and increasing our knowledge of specific issues.

Stronger EU/EEA policies on the environment and climate

The influence of the Nordic countries within the EU/EEA has contributed to environmental legislation that is more ambitious, such as in the field of chemicals. The Nordic countries will continue to work together to strengthen EU policy on the environment and climate.

Nordic co-operation on implementation of EU regulations and programmes offers better adaptation to Nordic conditions and, in many cases, contributes to more

efficient use of resources and better forward planning.

The Nordic countries will be a driver for the implementation of the EU's 7th Environmental Action Programme (EAP) and will push for the eighth programme to include a stronger EU environmental policy.

Increased knowledge and skills

The Nordic countries will work together to build and share their knowledge in areas where there is a need to identify new problems or to find new and effective means of realising joint ambitions for the environment, as well as to support knowledge-based management. Individuals, organisations, and businesses all need knowledge and skills if they are to contribute to the transformation of our societies.

In addition, Nordic co-operation will help to make it easier for businesses, municipalities, organisations, and individuals to make important everyday decisions that are of considerable importance to our climate and environment. The green transition of



PHOTO: UNSPLASH



PHOTO: HUGI OLAFSSONS

Nordic society requires the involvement and participation of business and industry, academia, and civil society on local, regional, and national levels.

New issues, problems, and solutions are constantly being identified in relation to the environment and climate. The future depends on the development of new knowledge and innovations in the field of science and technology, as well as in the social sciences, humanities, and inter-disciplinary fields. More knowledge is needed about how measures to improve the environment affect different individuals and groups. Children are especially sensitive in this regard, so

reducing the impact on them should be a key focus.

Increased knowledge about digitalisation is needed in order to highlight the opportunities and risks. Digitalisation can create new opportunities for resource efficiency and promote sustainable consumption. Similarly, digitalisation and the sharing economy can result in new consumption, trading, and travel patterns that can have a varying impact on the climate and environment, both positive and negative. Public actions need to be designed to exploit the potential of digitalisation while minimising its risks.



PHOTO: NORDFORSK



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2. Circular economy

OBJECTIVES

- Nordic co-operation has contributed to considerable progress being made towards closing material cycles and making them non-toxic and resource-efficient.
- Nordic co-operation has contributed to reducing the use of finite resources, reducing waste volumes, and increasing the use of waste as a resource.
- Nordic co-operation has strengthened tools relating to the green transition and circular economy.
- Nordic co-operation has contributed to the inclusion of plastics in the circular economy to the greatest extent possible instead of being released into the environment.

Current levels of consumption of raw materials and energy are placing an unsustainable burden on our planet's limited resources and threatening mankind and the environment. A circular economy is needed in which we seek to minimise resource consumption from the planning stage. The focus of societal development needs to be on closing cycles, using renewable energy and raw materials, and being resource-efficient at all stages. Ecodesign is an important tool. Products need to be designed so that they can be reused, recycled, shared, and repaired. Waste and energy must be used more efficiently. A fundamental requirement of a resource-efficient cycle is the phasing out of substances of very high concern.

It is important to analyse the environmental and climatic impact of products throughout the value chain. This should include the environmental impact in other countries of our own consumption.

The Nordic countries will help in the work to achieve the goals of the 2030 Agenda for Sustainable Development, as well as other international objectives for sustainable production and consumption. The Nordic countries will actively contribute to EU processes relating to the circular economy and work to increase exchanges with other countries, such as by sharing good examples. The Nordic countries will actively contribute to EU efforts to reduce the negative environmental impact of plastic.

2.1 Sustainable consumption and production

During the period of the programme, priorities are to

- promote the development of designs for products that are long-lasting, resource-efficient, non-toxic, and reusable;
- strengthen the Swan ecolabel so that it, together with the EU Flower ecolabel, has a more effective positive environmental impact, by increasing the range of and demand for eco-labelled products and services;
- expand co-operation with and between businesses and increase the amount of information available regarding new business models and best technology in order to achieve a circular economy.

Consumers and users wield considerable power in reducing the environmental impact of consumption and production. Nordic co-operation is contributing to the development of sustainable consumption and sustainable lifestyles. Nordic co-operation can assist in increasing our knowledge about the various types of environmental impact at different stages of the lifecycle, as well as improving communication between buyers and sellers on these issues. Key areas include food, transport, and housing. Efforts should

take the different consumption patterns of different groups into consideration.

The Nordic Swan ecolabel should be further developed alongside the EU Flower. More and more goods and services, including fund management, are now Swan-certified, and this should continue to grow. Climate impact is an important parameter in the development of the Swan ecolabel that should be strengthened. The Swan ecolabel can help to strengthen the circular economy, such as by developing



PHOTO: CAMILLE DURAN



PHOTO: SCANPIX

criteria, improving communication, and increasing digitalisation.

Green public procurement and investment are key means of promoting innovative products, system solutions, and services with a high level of environmental performance. Improved criteria and standards are important instruments for achieving a higher level of more sustainable production and consumption. Going forwards, it is important to consider the environmental impact of public procurement. Nordic co-operation should continue to pursue the development of appropriate methods and criteria, as well as share its good examples in the field of green public procurement. Furthermore, the role of ecolabelling in green public procurement should be strengthened.

Services account for a growing share of the economy. Nordic co-operation needs to improve awareness of sharing, repairing, co-ownership, and co-travelling if more actors are to benefit from them.

Nordic companies can combine competitiveness with environmental considerations through the dissemination of information about new sustainable business models. Efforts relating to Best Available Technology (BAT) are important, especially in relation to small and medium-sized businesses.

In many cases, Nordic companies have very high levels of efficiency in relation to energy and other inputs and are heavily involved in the development of new sustainable production methods. Nordic co-operation on eco-design contributes to innovation and increased resource utilisation in the region. Co-operation and the sharing of experience in relation to various instruments and support initiatives to bring about a circular economy are important. This includes various companies and/or municipalities working together to utilise each other's resources by using new system solutions as part of industrial symbiosis.



2.2 Resource-efficient and non-toxic material cycles

During the period of the programme, priorities are to

- intensify efforts to prevent and minimise waste and to increase the reuse and recycling of materials;
- develop innovative and competitive solutions regarding waste in the Nordic Region;
- work strategically to phase out substances of very high concern and reduce the risks of hazardous substances.

The waste hierarchy should be used throughout society. Overall, the generation of waste should be limited in terms of quantity, hazard, and negative impact on health and the environment. The basic premise for the waste generated is that it should be firstly reusable, secondly recyclable, thirdly recyclable by other means, and only lastly disposed of. Efforts must be put in place to combat littering.

Materials need to be produced in a more sustainable way, cycles need to be free from hazardous substances, and the recycling of materials must be made both possible and safe. Further efforts are needed to create markets for recycled materials. This applies, for example, to promoting the development of new innovative solutions for recycling.

In addition, it is worthwhile developing criteria for recycled material with the objective that the material must meet the same high standards and equivalent content requirements for hazardous substances as new materials within the same applications.

Co-operation throughout the value chain is required globally to achieve the best possible utilisation of resources and the least possible losses. Furthermore, co-operation needs to be intensified in the fight against illegal waste management and cross-border waste transport.

Nordic co-operation on plastics should continue in order to reduce the negative impact of plastics, including microplastics.

2.3 Sustainable cities

During the period of the programme, priorities are to

- intensify the sharing of experiences and co-operation in relation to Nordic solutions for sustainable urban development;
- promote the social, environmental, and economic development of Nordic cities to aid the implementation of the UN New Urban Agenda and the EU Urban Agenda.

Sustainable urban development is based on a holistic view of the city. It includes initiatives and integrated solutions for the planning and construction of infrastructure and buildings, which in turn help to increase sustainability and improve living environments. Sustainable transport solutions and climate-smart mobility are an important element in urban development. Shifting passenger transport from cars to other modes of transport – such as walking, cycling, and public transport – and switching to renewable fuels and electricity can reduce the environmental and climatic impact of travel while achieving better air quality and less noise. Co-operation should take the different travel patterns of different groups into consideration.

More urban green space, more parks and closer proximity to open space, and resilient ecosystems can provide a better foundation for climate change adaptation and improved quality of life. Access to healthy sound environments needs to be considered more. The Nordic countries have many similarities in terms of their social structures and urban challenges. They can learn from each other to find the best innovative solutions and tools for solving the climatic and environmental challenges facing our cities. Nordic co-operation on sustainable cities can help solve climate challenges and make progress in implementing the 2030 Agenda, the UN's New Urban Agenda, and the EU Urban Agenda.

2.4 Achieve a green transition in the Nordic Region

During the period of the programme, priorities are to

- contribute to the development of a joint international method for measuring the impact of consumption on the environment and climate;
- develop Nordic co-operation and the sharing of experience regarding tools and measures for the green transition;
- support and participate in dialogue on the development of financing solutions for the green transition.

The Nordic countries demonstrate that it is possible to curtail emissions while still enjoying healthy economic development. At the same time, increased consumption is fuelled largely by importing products that have a negative environmental impact in other countries. Increased international transport using fossil fuels also has a negative impact on the climate and environment. Efforts to find new ways to measure the overall impact and to move away from the one-sided use of old measures of welfare should continue in co-operation with the OECD and EU. It is important to contribute to EU

efforts with regard to the development of environmental footprints (PEF/OEF).

Financial flows need to be directed towards environmentally and climate-friendly investments to achieve a green transition and to fund innovative solutions that are seen as risky from a traditional funding perspective. This requires new thinking in the financial sector and possibly new or changed public initiatives. Nordic co-operation should be further developed in order to identify problems, solutions, and possible support initiatives. Possible initiatives include third-party



sustainability checks, markets for green bonds, green saving, and innovation procurement. The Nordic funding institutions NEFCO, NIB, and NDF can continue to play an important role in the green transition, which should be clarified in consultation with the relevant sectors.

The Nordic countries have extensive, successful experience in the use of economic instruments and other

market-based instruments, as well as in co-operation in this regard. Continued co-operation on instruments for achieving sustainable development, including certification, training, nudging, and other types of communication, is important. Environmental considerations need to be integrated in public enterprises and business and industry in order to prevent a negative impact on the climate and environment.





3. Climate change and air quality

OBJECTIVES

- The Nordic countries have contributed to the ambitious implementation of the Paris Agreement in order to achieve the goals of keeping global warming below two degrees and preferably below one and a half degrees.
- The Nordic countries continue to be frontrunners through ambitious objectives and actions, in the transition necessary to achieve the goals of the Paris Agreement.
- Nordic co-operation has been focused on being a driving force in the UNECE Convention on Long-range Transboundary Air Pollution, in the EU/EEA, and nationally behind the continued reduction of air pollution that is harmful to both health and the environment throughout the UNECE area.
- The Nordic countries have worked to take better advantage of synergies generated by more integrated efforts in the field of air and climate.

Climate change is one of humanity's biggest challenges. Global greenhouse gas emissions must be reduced dramatically. Greenhouse gases accumulate in the atmosphere over a long time, which means that net global emissions must eventually be brought down to zero or even less (i.e. negative emissions) if the temperature targets of the Paris Agreement are to be reached. Similarly, communities need to adapt to a changing climate to reduce their vulnerability. Air pollution must also be reduced for climatic and health reasons.

Measures relating to air and measures relating to the climate often go hand in hand. Air pollution and climate change frequently have common causes and common solutions relating to the burning of fossil fuels. It is important to clarify these links further and to find common programmes of action. Special attention must be paid to air pollution and health, where it is important to reduce airborne particulates, black carbon, and nitrogen compounds. In addition, the Nordic countries should help to promote the development of new fuels and transport solutions, as well as a shift towards more

efficient vehicle operations with reduced emissions.

Resolute measures and competitive solutions are needed, such as the continued development of new innovative and sustainable technologies. The Nordic countries are well positioned in terms of their common electricity market, abundant hydroelectric power accounting for a large proportion of the energy supply, wind power technology, solar energy, bioenergy, and geothermal energy, all of which should be maintained and developed further. The market for electric vehicles is developing rapidly and the proportion of Nordic companies developing new technology is increasing continuously. Long distances between inhabited areas and the cold climate pose particular challenges. There is a common need to develop the use of biomass for energy and materials while maintaining biodiversity and the carbon sink. Increased knowledge is needed regarding measures that reduce emissions from organogenic soils and increase carbon storage in the earth. More and more people are living in the Nordic region's cities. Sustainable urban development is necessary in order to improve air quality and overcome the climate challenge. New materials need to be developed and resources need to be used more efficiently within the urban environment in order to reduce greenhouse

gas emissions. Although the Nordic Region boasts many energy-intensive industries that wield huge innovative power, they also face certain challenges. The climate can benefit from the circular economy. The Nordic countries can demonstrate examples of co-operation internationally, which can offer a competitive advantage as well as demonstrate that the transition can progress more quickly and be more affordable than previously thought.

The Nordic countries will continue to co-operate in international negotiations on climate (in particular the UNFCCC) and air (in particular the CLRTAP), and participate in joint initiatives that help to ensure progress in negotiation work.

The Nordic countries support climate research and fact-based policies founded on best-available science, and so they will continue to support the UN Climate Panel (IPCC), both financially and through research efforts. Together, the countries should prioritise communication in order to disseminate the key conclusions of the IPCC, both within the Nordic Region and to the rest of the world. In addition, the Nordic countries should actively invest in climate change research, as well as research into how climate change can be limited and how best to create climate-resilient societies.

3.1 The Paris Agreement and global climate efforts

During the period of the programme, priorities are to

- pursue the ambitious implementation of the Paris Agreement in terms of climate change mitigation, adaptation, and finance;
- work to raise the level of ambition of collective climate commitments over time in line with the ambition mechanism of the Paris Agreement;
- contribute to the drafting, implementation, and further development of a robust regulatory framework for the Paris Agreement in relation to the transparency framework (MRV) and the 2023 global stocktake;
- continue to demonstrate leadership and to co-operate to intensify the climate transition in the Nordic Region, the EU, and globally.

The Paris Agreement¹ lays the foundation for global efforts to gradually reduce global climate emissions. The Nordic countries played a pivotal role in efforts to bring the Paris Agreement to fruition, and now need to pursue its ambitious implementation by the parties to the agreement. A robust regulatory framework is necessary for the credibility of the system. The Nordic countries will pursue the drafting, implementation, and development of a robust transparency framework. The early implementation of the Paris Agreement is steering the parties towards an early review of their nationally determined contributions (NDCs) and towards raising the level of mitigation ambition. This is in line with an effective and well-functioning ambition mechanism under the Paris Agreement. If the temperature targets set are to be met, the level of ambition of the current

NDCs must be raised. The 2023 global stocktake is essential in forcing gradual reductions in global emissions in line with what science requires. The Nordic countries will work to raise the global level of ambition. Like all other parties, the EU needs to review its NDC in light of the IPCC's special report on the 1.5° temperature increase and the outcome of the Talanoa Dialogue seeking to assess the collective efforts of the parties in relation to the long-term emissions reduction targets of the agreement. The Nordic countries will continue to work to establish dialogue and understanding between different groups of countries in climate negotiations.

¹ Denmark has made a territorial reservation in the Paris Agreement for Greenland.

International co-operation is essential to achieving the goals of the Paris Agreement. Article 6 of the Paris Agreement introduces new forms of international co-operation. The Nordic Region has a tradition of assisting in the development of international climate co-operation mechanisms and should continue to assist in, for example, developing methodology through joint studies and pilot activities.

The Nordic countries will play an active role in the Montreal Protocol in helping to reduce global emissions of hydrofluorocarbon (HFC) as well as encouraging a high level of ambition with regard to the scope of the protocol.

The Arctic is warming up more than twice as quickly as the global average. This is having major consequences on Arctic societies and ecosystems. The Arctic

Council's efforts to strengthen resilience and to look at the consequences of climate change in northern regions must be supported by the Nordic Region. The Nordic countries will play an active role in reducing the amount of climate pollutants, including short-lived climate pollutants (SLCP), affecting the Arctic. Work on these issues must also be pursued within the Climate and Clean Air Coalition (CCAC).

For international shipping and aviation, the shift to cleaner operations and the development of new fuels have accelerated, but the pace needs to be stepped up considerably. Nordic involvement in the international maritime and aviation organisations IMO and ICAO is important, not least because emissions from these sources are not part of the Paris Agreement and because there is a risk that they could increase significantly.



3.2 Financing

During the period of the programme, priorities are to

- pursue a shift in financial flows so that they contribute to climate-resilient low-emission development;
- contribute to the successful implementation of measures supported by Nordic climate finance.

Developed countries have a joint goal of mobilising USD 100 billion annually up until 2020 and of extending this commitment until 2025. A new quantified target will be set at the Conference of the Parties in 2025, using the USD 100 billion figure as the minimum. Co-operation between public and private actors is needed in order to mobilise private-sector

climate finance and to redirect financial flows towards renewable and fossil-free solutions. The Nordic countries are and will continue to be key contributors to international climate finance, both bilaterally and through contributions to multilateral environmental and climate funds, as well as by showcasing innovative solutions.



PHOTO: SCANPIX



PHOTO: MARIA MIKKELSEN

3.3 Framework and instruments for reducing emissions

During the period of the programme, priorities are to

- share experiences within the Nordic Region on policies and climate policy frameworks, and share positive experience with other countries;
- develop and improve the efficiency of EU emissions trading while promoting the reduction of emissions in the non-trading sector;
- identify how the Nordic policy mix can be made more efficient and help reduce the risks of greenhouse gas leakage and the distortion of competition.

The Nordic countries will work together on developing policies for the transition to low-emission societies, both in the Nordic Region and globally. Development paths, positive examples, and possible transitions should be analysed in order to reduce emissions and increase the uptake of greenhouse gases in accordance with the long-term goals of the Paris Agreement.

Several Nordic countries now have climate policy frameworks in place with long-term objectives. All the countries have climate legislation whose implementation is ongoing. The sharing of experiences should start at the Nordic level in order for the Nordic countries to learn from each other.

Sharp reductions of emissions are necessary, both in the Nordic countries and globally until the middle of this century and beyond. Co-operation should continue on effective design

and combinations of climate policy instruments. Putting a price on emissions is essential, so the EU/EEA system of emissions allowances should be further developed to strengthen the price signal and increase the efficiency of the system. Ambitious measures are required at European level even in other areas, such as transport, in order to drive the transition and ensure that climate goals are met.

In order to attain cost-effective reductions in emissions, regulatory frameworks and instruments need to be designed to prevent inefficiencies and greenhouse gas leakage between countries. Consequently, the Nordic countries should take a closer look at the Nordic policy mix during the programme period. Good, cost-effective examples of such instruments should be brought to the fore and shared even beyond the Nordic Region, to inspire and support climate efforts in other countries.

3.4 Climate change adaptation

During the period of the programme, priorities are to

- co-operate on the sharing of experience on climate change adaptation and the development of climate change adaptation measures.

Climate change results in temperature changes that affect sea levels, ice melt, ocean oxygen levels, precipitation and a greater risk of extreme weather. This in turn has consequences for many areas in society and for ecosystems. More precipitation increases the risk of flooding and can also result in landslips, landslides, and erosion due to increased land instability. Other effects of climate change include changes in humidity and snowfall, heatwaves, drought, an increased fire risk, poorer water quality, and risks to biodiversity and stocks of various species. Changes in the Arctic pose particular challenges.

The Nordic countries share many of the challenges posed by climate change and can work together to establish resilient and sustainable societies and to manage land and water in relation to climate change. There is a growing need to adapt cities to climate change and to analyse how they affect the surrounding environment. Greater Nordic co-operation should therefore be initiated to share knowledge and experiences, to contribute to the development of climate change adaptation measures, and to provide insights into how climate change adaptation and greenhouse gas emission reduction measures can be integrated.

3.5 Air pollution

During the period of the programme, priorities are to

- drive work in the UNECE Convention on Long-range Transboundary Air Pollution (CLRTAP) to help reduce air pollution in the Nordic Region, Europe, and the Arctic, and raise the level of ambition with regard to the scope of the protocol and its future revisions;
- work actively within the EU/EEA to continue to reduce emissions of air pollutants that are harmful to the environment and health;
- co-operate and share experiences in the work to develop national air quality programmes within the framework of the EU National Emissions Ceiling Directive (NECD);
- increase knowledge on the impact of air pollution and the relationship between air and the climate, as well as developing more integrated action strategies.

Air pollution has declined dramatically in Europe and North America over the past 30 years. Acidification has been slowed, ecosystems are recovering, and fish are starting to return to lakes that were close to extinction. Despite this, and despite the Nordic Region having relatively good air quality compared with other countries, exposure to air pollution still results in considerable harm to people's health and to ecosystems. The decomposition rate of reactive nitrogen cannot keep up with the increased supply rate caused by human activity. Consequently, nitrogen compounds accumulate in ecosystems, which has an impact on the climate, eutrophication, and eutrophication and reduces biodiversity. These issues increasingly require our attention.

Air pollution causes serious health problems such as cardiovascular disease, respiratory diseases, and cancer. Children are especially sensitive to air pollution and the impact is particularly potent during infancy. In addition to respiratory health, the cognitive development of children can also be affected. Sources of local poor air quality are primarily road traffic and small-scale wood burning. The problem is most prevalent in cities. Air quality and noise are both key elements in sustainable urban development. The Nordic countries should continue to work together in order to share their experience of successful methods of addressing air pollution, as well as learn from each other, explore new instruments, and raise the level of ambition of the EU regulatory framework.

The Nordic countries are affected by air pollution from Europe as well as from other continents. At the same time, some of the Nordic Region's air pollution makes its way abroad. Although major advances have been made in international air quality work, further vigorous efforts are required to reduce air pollution, for example to meet the more stringent emissions levels of the EU National Emissions Ceiling Directive (2016/2284). In implementing the NECD, the countries must establish their own national air quality programmes, showing how they will comply with the new emissions ceilings. Here, the Nordic countries can inspire each other to develop measures and instruments to fulfil their commitments. The Nordic countries will continue to jointly play an active role in efforts relating to the UNECE air convention, as well as contribute to the knowledge base. Increased knowledge

is needed on the effects and impact on health of reactive nitrogen, ammonia, and organic substances such as VOC.

The Nordic countries should also co-operate on measures and instruments that can reduce emissions of greenhouse gases, particulates (including black carbon), NO_x, and other air pollutants from current and future shipping activities in the Nordic Region and the Arctic. International solutions via the IMO are important. In addition, analyses of instruments, impact, and cost are required – not least ahead of international agreements and EU directives – in order to reduce emissions of small particles of nitrogen oxides from significant sources, as well as studies into small (fine and ultrafine) particle emissions and concentrations and their impact on health and the environment.





PHOTO: PEXELS

4. Chemicals – environment and health

OBJECTIVES

- Nordic co-operation has contributed to minimising the risks that chemicals and the chemical substances in products pose to human health and the environment.
- Nordic work has encouraged companies manufacturing and using chemicals to focus on substitution, so that substances of very high concern are phased out as far as possible.
- Nordic work has contributed to increased knowledge on hazardous substances and the development of methods for assessing and managing the risks relating to groups of hazardous substances.
- Nordic work has contributed to increasing the level of ambition of efforts relating to chemicals in the EU and globally.
- Nordic co-operation has contributed to the dissemination of knowledge to consumers about hazardous substances.

Hazardous substances in goods are a growing problem. The rapid turnover of goods such as consumer electronics, clothes, and toys in our everyday environments is increasing our exposure to hazardous substances. Several studies show that traces of substances considered to be endocrine disruptors and possessing carcinogenic properties have been found in human blood, urine, and breast milk. To reduce the risks and protect human health and the environment, the dispersion of hazardous substances must be reduced.

The Nordic countries have long been pioneers on the issue of chemicals. This

position has been advanced through supervision and active prevention work with regard to labelling, identification of chemical-related risks, and the substitution of hazardous substances. Nordic co-operation on chemicals issues has been particularly successful in terms of the impact, development, and implementation of EU/EEA regulations, including REACH, and by being a driving force behind international co-operation. The focus should still be on striving for a non-toxic everyday life. Particular attention needs to be paid to the protection of children, fetuses, and human reproduction.

The precautionary principle must form the basis of risk prevention efforts relating to chemicals. A key step is to focus work on limiting the use of substances of very high concern in products and goods in the EU and imported to the EU, for example by the companies' own work on substitution. Efforts will continue to increase knowledge about such substances in products and goods and improve accessibility to information in the supply chain. The aim is to minimise and limit the use of hazardous substances. Furthermore, it is important to monitor and trace the use of such substances and their presence in humans and the environment. The sharing of experience within the Nordic Region and in efforts related to the EU must focus on these issues. In addition, efforts to produce information on the cost of inaction must continue and be intensified.

Non-toxic material cycles are required to achieve a circular economy. Consequently, Nordic co-operation should continue to intensify its efforts to avoid the recirculation of hazardous substances.

Attention must continue to be drawn to risks associated with nanomaterials and endocrine disruptors, such as by developing knowledge requirements and applicability of methods of testing for impact on human health and the environment, as well as developing other relevant requirements within EU regulations and internationally via the OECD. The increase of e-commerce involving goods is an especially important area to address with regard to supervisory operations.

Nordic efforts should address chemical issues that are regulated through other legislation, such as the presence of chemicals in food and drinking water, as well as other risks to health and the environment, such as pharmaceuticals in the environment. In this regard, Nordic co-operation on antibiotic resistance is already underway. In addition, the impact of chemicals and pharmaceuticals on biodiversity may also need to be addressed. The Nordic countries will actively pursue developments in technology to ensure the better treatment and disposal of hazardous substances.



PHOTO: SCANPIX



PHOTO: UNSPLASH

4.1. Substance properties and risks

During the period of the programme, priorities are to

- improve knowledge about substances, their properties, and their risks;
- use this knowledge to encourage companies to increase their efforts to substitute hazardous substances with less hazardous alternatives to a greater extent;
- work to strengthen the EU chemicals regulations relating to grouping of hazardous substances;
- limit and minimise the risks from the use of hazardous substances;
- make available information about chemicals in materials, goods, and waste and ensure its use to prevent damage to the environment and health;
- co-operate on the supervision of chemicals in goods and products, in recycling, and in e-commerce.

Screening of a substance's occurrence in the environment and people's everyday lives is important, as new substances are constantly being developed and used in articles and products and whose danger has not been properly assessed. New chemical threats must be identified at an early stage, and hazardous substances must be prevented from entering the environment.

Knowledge of substances, their properties, and their risks must be developed faster and more efficiently than today. This can be achieved by, for example, developing, using, and ensuring the implementation of new test and non-test methods, as well as new models and tools.

Traditionally, substances are processed one at a time. Rarely taken into account is the



total exposure to the same substance or similar substances from different sources or exposure routes, known as cumulative exposure. Dealing with substances in groups based on their chemical structure, mechanism of action, intrinsic properties, or application can result in a significant improvement in work to manage chemical risks.

Cumulative exposure and combination effects must be included in the development of methods for group assessments of chemical substances. The Nordic countries will continue to assist with material for decision-making where it is possible to be proactive to enable more substances to be addressed by the EU.

A fundamental element of preventative work on chemicals is the substitution of hazardous substances with less hazardous alternatives. Efforts relating to substitution are also innovation-driven and can provide business and export opportunities for companies in the forefront. Nordic efforts can help to promote businesses' own work on substitution. Nordic co-operation should contribute to the phasing out of substances of very high concern. Of particular importance are very persistent substances, especially highly fluorinated substances, bisphenols and other endocrine disruptors, and neurotoxic substances. Persistent, bioaccumulative, and toxic substances (PBTs); allergenic substances; carcinogenic, mutagenic, and reprotoxic substances (CMRs); and substances that damage the

brain during its development should be phased out as far as possible.

Environmental monitoring, aggregated emissions information, and official controls of chemicals and articles are crucial. Here too, Nordic co-operation should assist in developing effective methods and raising awareness of cross-border impact. Information in the Nordic countries' databases of chemicals should be used: as a basis for risk-management efforts; in the implementation of EU chemicals and plant protection product legislation to prevent a negative impact on health and the environment; and in the development of international agreements.

Information on the use of chemicals of very high concern in materials, goods, and waste must be available to and used by companies (and their customers) that produce and market chemicals to prevent damage to the environment and human health. Better information systems and greater, more efficient communication in the supply chain should be developed. Growing imports of articles containing hazardous substances necessitate efforts at the global level to address the problems posed.

Information must be provided directly to users such as through labelling and new media. Special information on the effects on children and pregnant women is important. Here, the potential for Nordic co-operation should be investigated.

4.2 Global chemical efforts

During the period of the programme, priorities are to

- work globally to support new targets and strategies relating to chemicals and waste in order to limit the international spread of substances of very high concern;
- work to improve transfer of information on hazardous substances;
- pay special attention to the presence and impact of chemicals in the northern regions and the Arctic.

During the programme period, key approaches will be established within international chemical work through the development of new targets and strategies in SAICM for the period beyond 2020.

The Nordic countries will work to intensify international efforts to limit hazardous substances, both within the frameworks of the Minamata Convention, the Stockholm Convention, and the Montreal Protocol (including implementation of the Kigali Amendment) and by striving to include in global agreements other hazardous substances that are spread internationally. In this way the Nordic countries are pushing for the substitution of hazardous substances.

Since most global chemical production takes place outside the EU/EEA, the responsibility for producing information about the substances' properties and disseminating this information needs to increase on a global scale. The Nordic countries need to continue their

involvement in efforts relating to testing methods within the OECD and promote the increased worldwide application of classification criteria via the Globally Harmonized System for Classification and Labelling (GHS).

Hazardous substances are spreading in the northern regions, especially in Arctic ecosystems, by waste, dispersion throughout the food chain, and long-range air transports. The Nordic countries must continue to draw attention to this, especially in their efforts within the AMAP and ACAP working groups of the Arctic Council.

International co-operation is also about providing bilateral and multilateral support, in a variety of ways, to other countries in establishing and developing their own chemicals efforts. The Nordic countries are leading the way in this area and must continue to offer to share experience and dialogue with interested countries.



PHOTO: MARIA MIKKELSEN

5. Biodiversity

OBJECTIVES

- Nordic co-operation has contributed to stopping the loss of biodiversity, and reducing fragmentation and promoting sustainable use of natural and cultural environments.
- Nordic co-operation has contributed to increasing knowledge about the impact of climate change and various climate measures on biodiversity.
- Nordic co-operation has assisted in the achievement of the Aichi targets and in developing these into an ambitious global framework for the period beyond 2020, to be integrated into work relating to the Sustainable Development Goals and the 2030 Agenda.
- Nordic co-operation has contributed to increasing knowledge about ecosystem services and to ecosystems providing important ecosystem services.
- Nordic co-operation on natural and cultural environments as a basis for outdoor activities and value creation has been further developed.

Human survival and well-being depends on biodiversity. Natural variety enables the sustainable cultivation and use of plant resources, creates the conditions for outdoor activity, and helps to alleviate climate change. Nature provides mankind with ecosystem services such as pollination, carbon storage, and water and air purification. In the Nordic Region, people have very good access to nature and can manage natural values by way of

protection, restoration, farming, care, and maintenance. Access to nature, outdoor activities, and cultural environments are an important part of people's well-being.

Loss of biodiversity is one of the biggest challenges the world is currently facing. Biodiversity has been depleted and nature fragmented due to exploitation, forestry and agriculture, and pollution. Although there have been gradual improvements,

environmental considerations and the protection of nature need to be further improved, and areas need to be restored, such as drained wetlands. Mowing and animal pasture customs make a positive contribution and support the biodiversity of such land. New threats have arisen from the establishment of invasive alien species, the spreading of disease, and climate impact. Nordic co-operation will help to minimise the threat to biodiversity by, for example, promoting long-term protection and sustainable use, restoring and recreating important natural environments, and reducing the encroachment on and fragmentation of natural and cultural environments.

Since many activities affect biodiversity, it is important to develop ecosystem-based management and to integrate natural values into decision-making. A green infrastructure must be developed that safeguards the ecological relationships within the landscape. An emphasis on ecosystem-based management is important with regard to decisions on land use. For example, co-operation on method development may relate to mapping and how to evaluate and take ecosystem services into account. Knowledge of how to protect, maintain, and manage Nordic biodiversity must be deepened.

There are many similarities between ecosystems and populations of species in the Nordic countries. In many cases, these

populations straddle national borders. Co-operation is needed to prevent the spread of invasive species and outbreaks of disease. The cultural and historical similarities between the Nordic countries mean that several issues are similar in the different countries. This means there is good potential for Nordic co-operation on how best to protect, manage, and restore nature so as to safeguard biodiversity and ecosystem services. Another important contribution is ongoing Nordic co-operation on genetic resources. Furthermore, shared management models can be developed for cross-border species and ecosystems.

With regard to global co-operation on biodiversity, the CBD along with the Aichi targets, CITES, and the Ramsar Convention all play key roles. The Nordic countries have contributed to the establishment of the international panel for biodiversity (IPBES). The UNESCO World Heritage Convention and the European Landscape Convention are also important. The Nordic countries are continuing to work together on international and regional efforts relating to biodiversity. Efforts should focus on fulfilling the purpose of the Convention on Biological Diversity and integrating this into efforts relating to the global Sustainable Development Goals and the 2030 Agenda.

5.1 Sustainable use of ecosystem services

During the period of the programme, priorities are to

- ensure the long-term sustainability of the management of biological resources and ensure that this is based on the application of the ecosystem approach.

The management of land and water, including the oceans, must be based on the ecosystem approach in order to preserve biodiversity and ecosystem services. This involves establishing a holistic perspective on the conservation of natural values and the sustainable use of natural resources, with the aim of ensuring that the use of ecosystems falls within the limits of nature. This applies in particular to agriculture, forestry, fishing, etc., as well as to the planning and operation of, for example, roads, urban planning, and tourism. This holistic perspective should also clarify the social significance

of the cultural environment for cultural ecosystem services such as recreation and experiences in nature. The positive health aspects of functioning ecosystems, especially in or near urban environments, should also be clarified.

Co-operation is needed with and between the relevant sectors in order to reduce emissions to the air and water, ensure good animal welfare with minimal use of pesticides and antibiotics, consider the long-term production capacity of land, and conserve endangered species and stocks.

5.2 Protect nature and preserve its diversity

During the period of the programme, priorities are to

- co-operate on the fulfilment of the Aichi targets and actively and jointly participate in the process relating to new global targets for the period beyond 2020 in the Convention on Biological Diversity;
- co-operate to conserve biodiversity and natural and cultural values in the landscape, such as by developing green infrastructure;
- co-operate to limit the spread of invasive alien species and the spread of diseases in nature;
- co-operate on the utilisation and development of attractive areas for outdoor activities;
- co-operate to develop awareness of the status and trends of species and ecosystems in the Nordic Region.

Sustainable farming methods and long-term protection of valuable nature are needed. Each of the Nordic countries is engaged in important efforts to protect valuable nature and achieve the Aichi targets. In addition, bilateral or trilateral co-operation is required for increased protection in border areas. A green

infrastructure is needed to preserve the landscape's natural and cultural values, biodiversity, and ecosystem services such as by creating ecological networks. Further efforts are needed to deepen our knowledge of species and ecosystems in order to protect nature and preserve its diversity.



The Aichi targets apply through to 2020, and work to implement the agreed targets and develop targets for after 2020 are central to global efforts relating to biodiversity. For EU Member States, these targets are implemented through, for example, the EU Biodiversity Strategy. The Nordic countries will strive for efficient implementation in all regions to ensure that at least the same targets will apply going forward. Key Nordic natural habitats include the Arctic, mountain ranges, natural pastures, mowed natural grasslands, forests, lakes, streams, wetlands, archipelagos, coastal areas, and seas. The protection of Arctic species and ecosystems is crucial, as are efforts to ensure sustainable development in Arctic areas. Efforts relating to biodiversity in the Barents Council and the CAFF and PAME working groups of the Arctic Council should be supported.

In recent years the Nordic countries have worked to limit the spread of invasive alien species, such as the raccoon dog. These efforts should continue. The rapid reduction of certain species, especially pollinating insects and mussel-feeding diving ducks, is a problem shared by the Nordic countries. In many cases there are no clear answers to the underlying causes. There is a considerable benefit in Nordic co-operation investigating and

addressing these threats. In addition, the Nordic countries should work together to manage species where there are conflicts with the sustainable use of land, forests, and oceans. Consequently, it is important to continue to work together in order to develop a better knowledge base for future measures. The same applies to the spread of disease among different species in the Nordic Region, as well as to the impact of marine waste on the fauna of Nordic oceans and the impact of litter and erosion in areas of high natural and cultural value.

Cultural environments and landscapes are threatened by environmental pollution and climate change. Nordic co-operation should promote the effective and appropriate protection of the unique cultural environments of landscapes.

It is important that there are good conditions for sustainable outdoor activities and the continued development of natural and cultural tourism. Furthermore, there is a need for continued Nordic co-operation on the value of outdoor activities and the development of models for sustainable tourism, especially nature- and culture-based tourism. Outdoor activities need to be inclusive so that everyone can participate in them.

5.3 Climate and biodiversity

During the period of the programme, priorities are to

- emphasise work to safeguard biodiversity and ecosystem services in climate efforts.

Species and ecosystems are under threat from climate change. Similarly, resilient ecosystems are important, both for limiting greenhouse gas emissions and for continued efforts to adapt the landscape to a changing climate. The consequences that may arise due to climate change include the disappearance of species or spread of invasive species, changes to the water supply in water courses, changed salinity and acidity of oceans, and ecosystem failure due to increases in temperature. Climate change is progressing fastest in the Arctic and poses the greatest threat to nature there. Consequently, the Nordic countries should continue to support the efforts of the Arctic Council in relation to these issues.

Nordic efforts should focus on developing joint methods that safeguard the use of ecosystems or make them more resilient. Robust and resilient ecosystems are especially important in a changing climate. The restoration of ecosystems, including wetlands, is essential.

Nordic co-operation can focus on deepening knowledge of how ecosystems can be used sustainably so that biodiversity is preserved or restored in light of climate change and the need for adaptation to climate change. The depletion of biodiversity must be halted and reversed.

In addition, experience of suitable measures should be shared, since many



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areas of the Nordic Region have similar natural habitats and climate impact. Furthermore, there is a need for deeper knowledge of the impact of climate change on and the improved resilience of wetlands and forests. Forest products and biocrops play a key role as substitutes for fossil fuels and fossil-based materials. In the development of the bioeconomy, it is important to both develop and intensify the perspective of biodiversity and other ecosystem services.



PHOTO: MARIA MIKKELSEN



PHOTO: MARIA MIKKELSEN

6. Oceans and coastal areas

OBJECTIVES

- Nordic co-operation has contributed to strengthening marine ecosystem-based management.
 - Nordic co-operation has contributed to limiting marine litter, waste, and pollution, especially plastics and microplastics.
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The Nordic countries have long coastlines, and their proximity to oceans and seas is of great importance to health and welfare. Healthy oceans are a necessity for a sustainable blue economy. The state of coastal waters and the oceans is very serious. Ecosystems, and thereby the ocean's ecosystem services, are negatively affected by climate change, marine acidification, unsustainable fishing, marine litter, environmental toxins, noise, and mineral extraction. Climate change and ocean acidification weaken ocean resilience, and also the ocean's ability to absorb and break down nutrients and toxins, as well as its ability to regulate the climate, are all exacerbated. This affects biodiversity and human health. Marine litter, including plastics and microplastics, threaten coastal and offshore industries such as fishing and recreation – that is to say the sustainable blue economy. A particular challenge in the North Sea is balancing oil and gas extraction with environmental considerations. In the North-East Atlantic and the Arctic Ocean, climate change is the most acute issue, and has resulted in increased marine acidity and reduced ice coverage. Reduced ice coverage facilitates increased shipping traffic and access to marine resources for large-scale exploitation. In the Baltic Sea, eutrophication is still a major problem. Sustainable fishing practices are essential

in all the Nordic seas and oceans to prevent overfishing and a negative impact on marine ecosystems. The goal is to have balanced ecosystems and minimal emissions of substances that adversely affect the natural state of the oceans.

Cross-sectoral co-operation is required to solve many of the challenges, where solutions often lie within the mandates of other sectors in society. Ecosystem-based management of the ocean is necessary for managing and developing a sustainable blue economy.

The Nordic countries participate in co-operation within the regional marine conventions (HELCOM and OSPAR) and in the UN. In addition they are involved in ongoing co-operation in both the PAME working group of the Arctic Council and the EU, including the EU Strategy for the Baltic Sea Region (EUSBSR). Nordic co-operation can be a source of knowledge about waste, pollution, and noise from vessels for organisations such as the IMO. Nordic co-operation is important for supporting regional and global co-operation, such as by providing knowledge about methods and environmental impact. NEFCO is important for supporting efforts to reduce emissions into the Baltic Sea.

6.1 Oceans and marine resources

During the period of the programme, priorities are to

- contribute to protecting and ensuring the sustainable use of the oceans and marine resources, for sustainable development in accordance with the UN Sustainable Development Goals;
- contribute to new innovative solutions that can restore marine and coastal ecosystems.

The oceans and their biodiversity and ecosystem services are an important resource that contributes to food supply, employment, and economic development. The UN Ocean Conference in 2017 focused on marine issues and SDG 14: "conserve and sustainably use the oceans, seas and marine resources for sustainable development". The continued implementation of this goal also contributes to progress in the other goals of the 2030 Agenda. There is a need to identify, prevent, and reduce all types of marine pollution; sustainably manage, protect, and restore marine and coastal ecosystems; and intensify the

implementation and proper monitoring of and compliance with national, regional, and international regulations.

International law, as expressed in UNCLOS, is the overall international framework for all activity in the oceans. Voluntary commitments and various partnerships from the UN and other global marine conferences will be followed up, and Nordic co-operation is needed on their implementation. In addition, ecosystem-based management and integrated water and ocean management are needed, as is intensified regional marine co-operation.



PHOTO: SCANPIX



PHOTO: MARIA MIKKELSEN

6.2. Emission of pollutants and waste into the oceans and coastal areas

During the period of the programme, priorities are to

- intensify efforts to combat the flow of litter, including plastics and microplastics, into the sea and coastal areas;
- co-operate to reduce emissions of environmental pollutants into the sea;
- continue efforts to reduce eutrophication.

Most pollution and waste in the sea comes from sources on land. A source-to-sea approach is essential for understanding and addressing the impact of land-based pollution and marine litter in the ocean. Efforts relating to safe chemical and waste management are key, as are those relating to cities and sustainable construction. Globally, existing instruments need to be implemented and international frameworks for hazardous chemicals need to be developed. It is crucial to assist in the implementation of the UNEP process for evaluating different options for fighting marine waste and microplastics, such as the review of UNEP's Global Program of Action for the Protection of the Marine Environment from Land-based Activities (GPA).

The Nordic plastics programme addressed plastic pollutants in the oceans. Further efforts are needed to increase knowledge of this and improve instruments to reduce the burden. It is important to co-ordinate the implementation of OSPAR's

and HELCOM's action plans for marine litter and to actively assist in EU efforts to reduce the environmental impact of plastics.

Environmental toxins in the ocean are spread in several different ways and accumulate in the oceans. Efforts to map new risks, sources, and distribution routes must continue, as must efforts to stop emissions of environmental toxins. The Copenhagen Agreement between the Nordic countries on co-operation in combating marine pollution by oil and other hazardous substances remains relevant.

In the Baltic Sea, eutrophication is a serious problem that needs to be solved. These issues are addressed in HELCOM's action plan BSAP and in the EU Water Framework Directive and EU Marine Strategy Framework Directive. The EU Strategy for the Baltic Sea Region can strengthen cross-sectoral and regional co-operation on knowledge and action.

6.3 Marine ecosystem-based management and protection of marine areas

During the period of the programme, priorities are to

- pursue representative, ecologically coherent, and well-managed networks of marine protected areas in order to help achieve the agreed international goals;
- support the ecosystem-based marine spatial planning and management of marine resources, including sectoral integration, and assisting in the development of a sustainable blue economy;
- pursue a legally binding instrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (the BBNJ process);
- work to deepen and share knowledge of Nordic marine ecosystems.

The long-term protection and sustainable management of ocean and coastal biodiversity are essential for achieving the Sustainable Development Goal relating to the oceans. In turn, the protection, planning, and sustainable use of the oceans are a condition for the development of a sustainable blue economy. There are many actors involved in regional and global ocean management, which necessitates improved governance and improved co-operation between the various sectors and levels. It is important to establish an implementation agreement for the UN Convention on the Law of the Sea (UNCLOS) for the protection of biodiversity in areas beyond national jurisdiction.

An important tool for protecting ocean biodiversity is the establishment of representative, ecologically coherent, and well-managed networks of marine

protected areas, which is also one of the Aichi goals. This should be done in accordance with international obligations, including knowledge-building and best practice. It is important that these networks are actively planned and designed with respect to climate change. Another key tool is ecosystem-based marine spatial planning. Ecosystem-based planning considers how increased human impact and other impact factors in coastal and ocean areas (through emissions, shipping, fisheries, energy) should be managed in order to protect and preserve ocean biodiversity and ecosystem services. Marine spatial planning can help in the visualisation of the cumulative environmental impact of different solutions. It is the aggregate cumulative impact that determines the scale of the environmental impact of the use of the oceans. Consequently, cross-sectoral planning and sectoral integration are necessary.

6.4 Oceans and the climate

During the period of the programme, priorities are to

- draw attention to the relationship between climate change and the marine environment in order to include climate change and ocean acidification in ocean management;
- work to draw attention to the relationship between the oceans and climate in the climate convention.

Greenhouse gas emissions have an impact on the climate; they warm, acidify, and deoxygenate the oceans and lead to changes in ocean currents. Climate change results in rising sea levels, thereby increasing the vulnerability of coastal ecosystems and communities, as well as the ability to maintain traditional industries. It is vital for marine and coastal biodiversity that climate change is curbed and ecosystems restored and protected. Marine biodiversity is a key area in risk reduction and adaptation. Although coastal ecosystems have an enormous carbon storage capacity, they can also leak carbon dioxide if their ecosystem functions are damaged or destroyed. In the Nordic countries, climate change is resulting in increased erosion in coastal areas.

Together, the Nordic countries can raise these issues in international fora and

contribute their knowledge. In addition, issues relating to ocean resilience and climate change adaptation are gradually being included in several global conventions and processes, such as the CBD and UNEA. Within the UN Climate Convention, attention must be drawn to the relationship between the oceans and climate, and the importance of the sustainable protection and management of ocean and coastal ecosystems to maintain ocean resilience. The Ocean Pathway initiative and the Because the Ocean Declaration specifically seek to clarify the role of the ocean in climate efforts within the climate convention, including the contributions of the member states. Continued active participation in the Arctic Council is important in terms of the design of marine protection and management.

7. Implementation

Nordic Council of Ministers

The environmental and climate co-operation of the Nordic governments is governed by the Council of Ministers for the Environment and Climate (MR-MK), which consists of the Nordic ministers for the environment and climate from Denmark, Finland, Iceland, Norway, and Sweden, as well as one representative each from the Faroe Islands, Greenland, and Åland. The Council of Ministers has primary political responsibility for Nordic co-operation in the environment and climate sector.

Working Committee of Senior Officials, Working Committee, and Secretariat

Under the Council of Ministers sits the Committee of Senior Officials for the Environment and Climate (EK-MK), which consists of officials from the respective countries, as well as one representative each from the Faroe Islands, Greenland, and Åland. EK-MK is responsible for implementing the co-operation programme. The Committee of Senior Officials is assisted by a working committee (AU). The Secretariat to the Nordic Council of Ministers co-ordinates co-operation with the country that currently holds the presidency and supports the implementation of the co-operation programme.

Working groups

Implementation of the co-operation programme is carried out primarily in working groups of experts. The following working groups will be in place during the programme period:

- Nordic Working Group for Circular Economy (NCE)
- Nordic Working Group for Climate and Air (NKL)
- Nordic Working Group for Chemicals, Environment, and Health (NKE)
- Nordic Working Group for Biodiversity (NBM)
- Nordic Working Group for Oceans and Coastal Areas (NHK)
- Nordic Working Group for Environment and Economy (NME) (jointly with the finance sector)

The mandates of the working groups are determined by EK-MK. They are provided with a budget for their activities each year and report on these to EK-MK once a year. The task of the working groups is to propose, support, and implement specific projects and initiatives within their respective fields of responsibility. The projects must provide a Nordic advantage and added value.

The working groups will work together to exploit synergies, address cross-cutting issues, and improve administration,

such as by working together in clusters. Temporary groups may be created during the programme period. EK-MK will evaluate whether the organisation of the working groups should be reviewed in conjunction with the mid-term evaluation. If the working group feels it needs sub-groups, EK-MK may decide to establish such groups. Budgetary changes may affect the implementation of the co-operation programme.

Planning, monitoring, and evaluation

The objectives and priorities contained in the programme must be followed up. In their annual working programmes and reports, the working groups should describe their efforts in relation to the various goals and priorities.

A joint evaluation of the co-operation programme will be made midway through the programme period.

Communication and co-operation

Effective, efficient, transparent, and bi-directional communication is key to success. Informed choices by different actors are crucial for establishing an effective environmental and climate policy. New knowledge must be gathered and conveyed and positive examples disseminated. The sector must continue to assist in deepening knowledge and constantly work to

improve communication. Strategic communication should permeate all activities, and different and new channels of communication should be used to ensure good dissemination.

Information on the environmental impact of different policies should be disseminated among the sectors, while the potential for taking action and promoting innovative technology and system solutions should be highlighted. In order to bring about effective solutions for sustainable development, communication between countries and groups of countries needs to be intensified.

Addressing current environmental and climate challenges is not solely the responsibility of the environment and climate sector. Several sectors and policy areas need to address the issues, and extensive cross-sectoral co-operation is needed to bring about change and a transition. The integration of environmental and climate issues into sectoral efforts is crucial and requires inter-sectoral communication.

Furthermore, it is important to pursue co-operation with businesses and industry, civil society, academia, and other relevant stakeholders regarding the implementation of the programme.



Independent co-operation initiatives

Nordic Swan Ecolabel

The Swan is the official ecolabel of the Nordic Region. It was established by the Nordic governments in 1989 and is an independent ecolabel within the sphere of responsibility of the Nordic ministers for the environment and climate. The Nordic Council of Ministers makes a yearly contribution to the Swan ecolabel.

Its purpose is to have a voluntary pan-Nordic ecolabelling system that helps to reduce the impact of everyday consumption on the environment. The Swan ecolabel means that the environmental impact of goods and services is taken into account throughout their lifecycle – from raw ingredient to waste product. The ecolabel imposes strict environmental and climatic requirements, as well as requirements relating to function and quality.

The system is co-ordinated by the Nordic Ecolabelling Board (NMN).

svanen.se/en/

NEFCO

NEFCO (Nordic Environment Finance Corporation) is an international funding institution owned by the Nordic countries. NEFCO funds projects with a focus on Eastern Europe. The aim is to bring about environmental improvements in

the interests of the Nordic countries.

Recently a new NEFCO strategy has been adopted, which stipulates four focus areas for the organisation: green growth, climate, the Baltic Sea, and the Arctic and Barents Sea. Each country appoints a representative to the board of the organisation. The Nordic ministers for the environment raise questions about the organisation's direction as required.

Nordic co-operation has an additional two funding institutions. The Nordic Development Fund (NDF) under the Nordic ministries of foreign affairs works to facilitate climate investments in low-income countries. The Nordic Investment Bank (NIB) under the Nordic ministries of finance funds projects that benefit competitiveness and the environment.

nefco.org

The Nordic Council Environment Prize

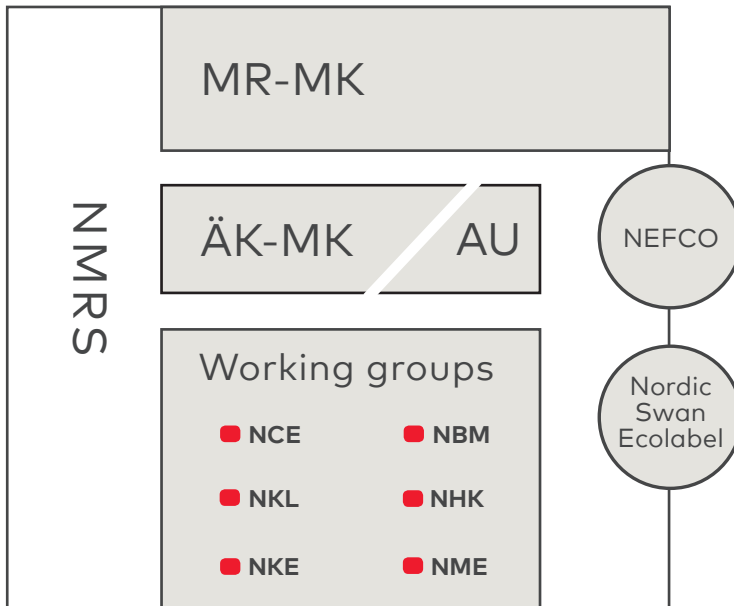
Once a year, the Nordic Council Environment Prize is awarded to a company, organisation or individual for exemplary work to integrate respect for the environment into their business or work, or for some other form of extraordinary contribution on behalf of the environment.

norden.org/en/environmentprize

Index of abbreviations and terms used in the text

- **ACAP** Arctic Contaminants Action Program
- **AMAP** Arctic Monitoring and Assessment Programme
- **BAT** Best available technology (such as in the EU IED directive)
- **BBNJ** A potential legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction
- **BSAP** Baltic Sea Action Plan (under HELCOM)
- **CAFF** Conservation of Arctic Flora and Fauna
- **CBD** Convention on Biological Diversity
- **CCAC** Climate and Clean Air Coalition
- **CITES** Convention on International Trade in Endangered Species of Wild Flora and Fauna
- **CLRTAP** Convention on Long-Range Transboundary Air Pollution
- **CMR** Substances classified as carcinogenic, mutagenic, or reprotoxic
- **GHS** Globally harmonized system for the classification and labelling of chemicals
- **HELCOM** The Helsinki Commission
- **HFC** Hydrofluorocarbon
- **ICAO** International Civil Aviation Organization
- **IMO** International Maritime Organization
- **IPBES** Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
- **IPCC** Intergovernmental Panel on Climate Change
- **MRV** Measurement, reporting, and verification of greenhouse gases
- **NDF** Nordic Development Fund
- **NDC** Nationally determined contributions

- **NEFCO** The Nordic Environment Finance Corporation
- **NIB** Nordic Investment Bank
- **NMN** Nordic Ecolabelling Board
- **NO_x** Nitrogen oxides
- **OECD** Organization for Economic Co-operation and Development
- **OEF** Organisation Environmental Footprint
- **OSPAR** Convention for the Protection of the Marine Environment of the North-East Atlantic
- **PAME** Protection of the Arctic Marine Environment
- **PBT** Persistent, bioaccumulative, and toxic substances
- **PCB** Polychlorinated biphenyl
- **PEF** Product environmental footprint
- **RAMSAR** Convention on Wetlands
- **REACH** Registration, Evaluation, Authorisation and Restriction of Chemicals
- **SDG** Sustainable Development Goals within the 2030 Agenda
- **SLCP** Short-lived climate pollutants
- **UNCLOS** United Nations Convention on the Law of the Sea
- **UNEA** UN Environment Assembly (see UNEP)
- **UNECE** United Nations Economic Commission for Europe
- **UNEP** United Nations Environment Programme
- **UNESCO** United Nations Educational, Scientific and Cultural Organization
- **UNFCCC** United Nations Framework Convention on Climate Change
- **VOC** Volatile organic compounds



The following working groups will be in place during the programme period:

- Nordic Working Group for Circular Economy (NCE)
- Nordic Working Group for Climate and Air (NKL)
- Nordic Working Group for Chemicals, Environment, and Health (NKE)
- Nordic Working Group for Biodiversity (NBM)
- Nordic Working Group for Oceans and Coastal Areas (NHK)
- Nordic Working Group for Environment and Economy (NME) (jointly with the finance sector)





Nordic Council of Ministers
Nordens Hus
Ved Stranden 18
DK-1061 Copenhagen
www.norden.org

Programme for Nordic Co-operation on the Environment and Climate 2019–2024

For many years, the Nordic countries have worked together successfully on the environment and climate, which has contributed to significant progress both in the Nordic Region and internationally. However, in recent years, the challenges we face have grown in size and quantity, making co-operation increasingly important.

Between 2019 and 2024, the Nordic countries will work together to bring about sustainable development in the Nordic Region, the EU, and internationally. Together, the countries will pursue the ambitious implementation of international agreements on the environment and climate – in particular the Paris Agreement – and work together to strengthen the EU's regulatory framework regarding the environment and climate.

The Nordic countries will continue to be front-runners in terms of bringing about change. Nordic co-operation on the environment and climate seeks to halt the loss of biodiversity and bring about the sustainable use of natural resources. Together, we will work to accelerate the transition to a circular economy that limits our consumption and production to the capacity of nature. Other important areas of co-operation include efforts to minimise the risks posed by chemicals and hazardous substances, and stop the discharge. Compared with previous programme periods, there is a stronger emphasis on co-operation on sustainable cities, climate adaptation, and green financing.

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