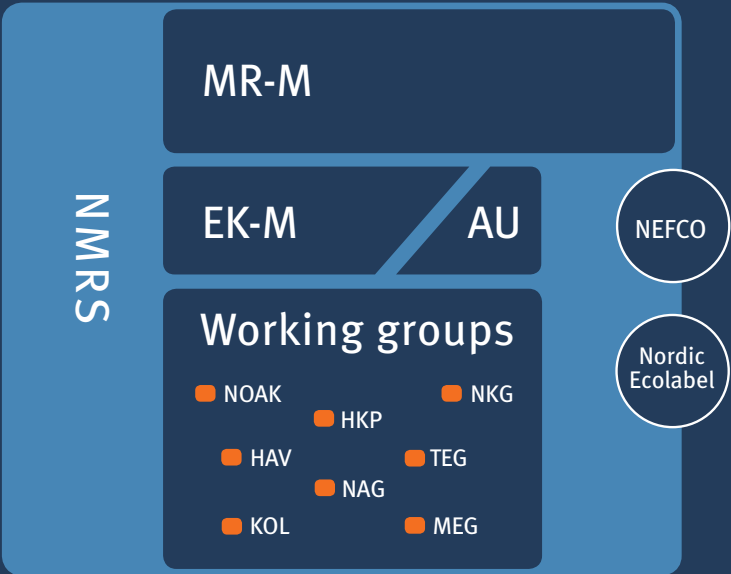


Nordic Environmental Action Plan 2013–2018





ORGANISATIONAL CHART



AU	Working group under EK-M
EK-M	Committee of Senior Officials for the Environment
HAV	Nordic Marine Environment Group (MR-M)
HKP	Working Group for Sustainable Consumption and Production (MR-M)
KoL	Climate and Air Quality Group (MR-M)
MEG	Working Group on Environment and Economy (MR-M)
MR-M	Nordic Council of Ministers for the Environment
NAG	Nordic Waste Group (MR-M)
NEFCO	Nordic Environment Finance Cooperation
NKG	Nordic Chemical Group (MR-M)
NMRS	Nordic Council of Ministers Secretariat
NOAK	Nordic Working Group for Global Climate Negotiations (MR-M)
Nordic Ecolabel	The official Nordic ecolabel
TEG	Terrestrial Ecosystem Group (MR-M)

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

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Nordic Environmental Action Plan 2013–2018



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Foreword

My first job as Norway's Minister for the Environment was to welcome my fellow Nordic environment ministers to Svalbard in March 2012 for the first of such meetings under the auspices of the Norwegian Presidency of the Nordic Council of Ministers. Climate change, needless to say, was one of the main agenda topics. We agreed on a declaration to reduce carbon emissions in the Arctic Region, and discussed at length the environmental challenges facing the north, an area of immense yet vulnerable natural beauty, an environment under threat, with melting ice and climate change critical issues.

Latest satellite images indicate that never before has there been so little ice around the North Pole as right now. There is a pressing need therefore for a new and binding international climate agreement, and time is of the essence.

Research into climate change and environmental pollution on Svalbard and elsewhere in the Arctic has attracted considerable international attention and provided the basis for several important environmental agreements.

One example of positive Nordic environmental cooperation is our almost realised global mercury agreement initiative. Other good examples include follow-up to the Gothenburg Protocol on air pollution and development of the Nordic eco-label. Close collaboration between Nordic experts has over time helped strengthen national policies and joint input on international processes.

Inclusive green development is a top priority for this environmental action plan. We need to build on our knowledge of effective deployment of resources, sustainable production and consumption. We must establish a system by which industry and business report on the environmental impact of their production processes, energy use and transport, as a step towards more environmentally friendly societies.

Increased resource consumption and pollution have forced the natural environment into retreat all over the world. The pace at which species become extinct is increasing. In the Nordic countries this has been partially offset by active environmental policies in place since the 1970s. Our experience is that a price must be put on ecosystem services

such as clean air and clean water, mindful that we tend to look after the things we value.

We need more precise methods of quantifying developments in welfare. To reflect the overall welfare of our society, per capita GDP must be supplemented with information on the value of the natural environment. It is therefore essential to promote an appreciation of the valuable services that ecosystems and natural capital provide, to monitor changes in environmental conditions and to ensure the quality of ecosystem services. Making sure that society at large is aware of the vital importance of ecosystem services is a significant undertaking in itself.

Follow-up on the report to the Nordic prime ministers, *The Nordic Region – Leading in Green Growth*, will play a key role in Nordic environmental cooperation. The environmental sector has overall responsibility for waste, and will in cooperation with other sectors focus on green procurement and on developing the Nordic eco-label, and other instruments.

Following up on Rio 2012 is another priority of Nordic cooperation. In collaboration with the UN, the EU and other nations, the Nordic countries must play an active role in boosting resource efficiency, sustainable production and consumption, and inclusive green development, a valuable offshoot of which will be new opportunities for economic development and green jobs in the region.

The Nordic countries will support key processes within the EU, OECD, international environment conventions and the UNEP, in so doing helping to improve international environmental regulations.

At present, official Nordic cooperation is an important framework for coordinating the Nordic Region's dealings with the EU. At the same time, Nordic policy has become increasingly important to European policy as a whole, with Nordic cooperation becoming an integral part of European cooperation.

The Nordic countries are characterised by equality, trust in public institutions and dialogue with civil society. Our efforts to promote inclusive green development must build on these features of the Nordic way of life.

Nordic environmental policy has already produced positive results and success stories. It is therefore my sincere hope that Nordic cooperation will inspire other countries and help underpin the important work of developing and implementing international environmental agreements.

Bård Vegar Solhjell,
Minister for the Environment
Norway

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Introduction

Over the past forty years, the Nordic countries have achieved significant results by working together on the environment, combining economic growth and welfare development with an ambitious environmental policy, and actively contributing to environmental improvements in the Nordic Region and beyond.

Promoting sustainable production and consumption, environmentally friendly technology and green economic growth in collaboration with other sectors, including the corporate sector, and international organisations, are important challenges facing Nordic cooperation. Follow-up to the UN Conference on Sustainable Development in Rio 2012 will play a key role in future Nordic cooperation.

Based on the principle of deriving the greatest possible synergy and added value from Nordic cooperation, this Environmental Action Plan prioritises the following areas:

1. Inclusive green development
2. Climate change and air pollution
3. Biodiversity, ecosystems and ocean acidification

4. Health and environmentally hazardous chemicals

Nordic cooperation on the development and implementation of EU/EEA regulations and of international environmental conventions will also be a priority during the period covered by this Environmental Action Plan. It is important that a new and legally binding climate treaty be adopted, the signatories to which will be obligated to cut emissions from 2020. Also high on the agenda will be closer cooperation on green economic growth and contributing to promoting sustainable welfare.

This Environmental Action Plan will serve as a policy document for work within the framework of the Nordic Council of Ministers for the Environment (MR-M) over the next six years, i.e. 2013–2018. With its focus on solutions, the programme presents ways in which the Nordic Region can make a significant difference, covering as it does this time a six-year period.

This Environmental Action Plan is based on the challenges we face and should be seen as one of several instruments designed to

facilitate the implementation of the Nordic strategy for sustainable development.

Cooperation rests on the principles of Nordic synergy and added value, i.e. countries working closely on issues to achieve better results together than could possibly be achieved separately.

Important international forums for Nordic environmental cooperation include the UNEP, OECD and UN environmental conventions, for instance, the UNFCCC and the Convention on Biological Diversity. Nordic countries provide academic and professional input into the process of negotiating and drafting conventions. Sharing information and knowledge also enhances the influence exerted by the Nordic Region.

Finding solutions to environmental issues in neighbouring countries and regions is a high priority of Nordic cooperation. The Nordic countries have therefore established the environmental financing institution NEFCO to support Nordic environmental projects in North-West Russia, Ukraine and Belarus. The Nordic Region also contributes to funding major environmental projects

and the export of Nordic environmental technology. The Nordic countries are actively involved in environmental cooperation on the Arctic Council and the Barents Euro-Arctic Council, in the Baltic Sea Region, and via the regional marine conventions HELCOM and OSPAR. Work on the Nordic eco-label is being developed and improved.

The impact of global environmental threats is particularly evident in the Arctic, with reduced ice cover, accumulation of toxins in the food chain and other negative effects on the environment and human health. Nordic environmental cooperation focuses on preserving the unique Arctic environment and promoting Arctic perspectives in international forums.

It is also important to highlight some unique characteristics of parts of Nordic society, including working together on resource management, and exchange of experience on smaller Nordic communities.



1. INCLUSIVE GREEN DEVELOPMENT

● Objectives:

To control social development by means of active and coordinated policies on the environment, the economy, business and industry, research and innovation, and to achieve greater resource efficiency, reduced environmental impact and improved welfare within safe ecological limits.



Economic growth and development are associated with increases in resource use and environmental impact. Current growth is characterised by a lack of integration of environmental considerations into decision-making and pricing systems.

Economics and welfare build on natural resources, ecosystem services and value generated from the use of metals, minerals, fossil and non-fossil fuels, fresh water, arable land, natural areas and marine resources. Genetic resources will be crucial for food safety in the future. Environmental protection and economic growth must be reconciled via transition to a green economy and green growth. This applies at global, European and

The broader welfare perspective ought to include the valuation of natural capital and ecosystem services. Economic instruments ought to be used to a greater extent.

Nordic levels, and represents a challenge to both developed and developing countries.

It will become more important to find alternative ways of quantifying welfare in order to promote sustainable development. The broader welfare perspective ought to include the valuation of natural capital and ecosystem services. Economic instruments ought to be used to a greater extent, so that environmental costs are increasingly incorporated into the price system. Environmentally harmful subsidies ought to be cut or abolished. Sustainable development requires that all sectors of society and all stakeholders are involved and that they take the environment into consideration.

Efforts to promote a green economy and green growth in different fora, such as the OECD and UNEP, in collaboration with other international institutions, are high priorities for the Nordic countries.



In Europe, the EU 2020 strategy, the EU's roadmap for resource efficiency, and the 7th Environmental Action Programme are key initiatives that will be pursued in the Nordic countries.

The Nordic countries are among the leaders in the incipient transition to a greener form of growth. They have proved that environmental impact and resource consumption can be reduced while maintaining economic growth and social welfare.

▼ Important examples of how this will be done:

- The principle of “polluter pays”
- Economic instruments: taxes, quota systems, funds, removal of subsidies
- Laws and regulations
- Planning and environmental impact assessments
- Integration of natural values and services in decision-making systems
- Management plans based on the ecosystem approach
- Measures to increase resource efficiency
- Voluntary agreements, for instance, waste prevention and recycling requirements (waste/producer responsibility)
- Public procurement schemes
- Eco-labelling and environmental information
- Research, development and dissemination of environmental technology
- Environmental management and corporate social responsibility (CSR)
- Inter-sectoral partnerships in the energy, health, business, consumer, finance, agriculture, fisheries, forestry, mining and transport sectors
- Valuation of ecosystem services
- Dialogue with the private sector and civil society
- Facilitating sustainable lifestyles

1.1 Sustainable production and consumption

● Objective:

To adapt production and consumption to safe ecological limits, so as to benefit the environment and human health and ensure the efficient and sustainable use of resources.

In many ways the Nordic countries constitute a common market characterised by the same range of products and similar consumption patterns. Together the Nordic countries can help develop environmentally adapted production methods and sustainable consumption. A sustainable lifestyle can be achieved through pricing, standards, communication, eco-labelling and environmental information on products and services. International cooperation, including Nordic cooperation on climate and green public procurement, has produced positive results.

It is important to create market conditions that stimulate eco-innovation and eco-design. This will encourage businesses and consumers to make investments and purchases that help reduce and prevent future environmental problems.

Environmental legislation, regulations, requirements placed on environmental and economic instruments will promote innovation and progress in environmental technology. This will place Nordic companies in a stronger position to exploit the market

opportunities created by growing demand for environmentally friendly products. In an international economy, coordinating national legislation will help ensure fair competition.

In the consumer society, environmental communication is an important tool in efforts to promote sustainable consumption. For this reason the Nordic countries work closely together on eco-labelling. The Nordic eco-label gives consumers an opportunity to select the most environmentally friendly products on the market, stimulating in turn the incorporation of environmental perspectives in product development. Nordic countries also work together on indicators for promoting sustainable consumption and lifestyles. There is a need for further development of criteria for industries that have impacts on the environment and climate, where eco-labelling could make a difference. Examples include construction, transport, leisure and tourism. Criteria for public procurement should also be developed further, with the aim of finding synergies between the Nordic and EU eco-labels.

Public procurement accounts for a large proportion of the market and has great potential in both the Nordic Region and the EU. This is prioritised highly in all Nordic countries in order to promote sustainable production and consumption. The public sector's role as a forerunner is also very important when it comes to innovation and the development of green technologies.



The private sector will be encouraged to increase its efforts in green procurement, partly through stipulations laid down for company reporting.

The Nordic countries want to prevent resource scarcity and the unsustainable exploitation of natural resources through improved resource efficiency and adaptation of production and consumption.

▼ Priorities:

- Promoting sustainable consumption and production by introducing laws and financial instruments, and by implementing UN and EU action plans for sustainable production and consumption
- Facilitating closer coordination and use of various instruments for environmental communication, such as the Nordic and EU eco-labels, and further developing standards and environmental declarations as part of Nordic contributions to EU efforts
- Developing and enhancing the work of the Nordic eco-label to maintain its position as a familiar and effective label
- Further development of green technical norms, and influencing developments so that green public procurement becomes common practice in the Nordic Region and a standard element of Nordic efforts to influence the work of the EU
- Encouraging the further development of technology, procurement and public-sector contracts that will help increase the proportion of environmentally friendly goods and services

1.2 Resource efficiency and waste

● Objective:

To decouple consumption of resources from economic growth through improved resource efficiency and the prevention and recycling of waste, and to minimise the environmental impact of production, goods and waste, in a lifecycle perspective.

Globally, signs are emerging that resources are becoming scarce and that prices of key commodities will rise.

The Nordic countries want to prevent resource scarcity and the unsustainable exploitation of natural resources through improved resource efficiency and adaptation of production and consumption.

To promote green economic growth, it is important to work towards product life cycles characterised by resource efficiency and a high degree of materials reuse and recycling. It is also important that products do not contain hazardous substances, and requirements must therefore be placed on production through the introduction of standards. Waste that contains hazardous substances should be taken out of circulation and not recycled, to prevent the spread of pollutants in ecosystems.

The Nordic countries must continue to be a driving force for the development, organisation, implementation and coordination of



international waste conventions and other key agreements. The EU Framework Directive on Waste focuses on managing the flow of materials. Guidelines regarding waste prevention, reuse, recycling, energy use and final disposal are stated explicitly and in order of priority. The Nordic countries will work to further develop and implement this directive.

The Nordic countries are working actively on resource efficiency, green technologies and environmental technology, both individually and together via the implementation of the European Eco-innovation Action Plan (EcoAP). Major environmental benefits can be achieved by making the resource-efficient and environmentally friendly technologies already on the market more widely available. The Nordic countries will continue to work together to widen the market for green technologies.

EU strategies for sustainable production and consumption and green public procurement describe the direction the EU wants to take. Work on new or revised directives on eco-design and industrial emissions (IED) can be of great importance when it comes to setting high standards for material and resource consumption.

Close follow-up of the proposed EU low-carbon roadmap for 2050, as well as the roadmap for resource efficiency, will also be high on the agenda.

▼ Priorities:

- Further developing instruments and creating the conditions for greater resource efficiency
- Focusing on waste prevention, material efficiency and recycling, and contributing to the development of EU work in this area
- Avoiding the recycling of materials that contain potential hazardous substances, and ensuring that product life cycles, as far as possible, are free from hazardous substances
- Working to ensure that EU rules set responsible requirements for recycling and the content of hazardous substances, in products derived from waste, including *End of Waste*
- Working to ensure compliance with EU rules, and achieving international consensus so that information about goods containing hazardous materials is made available throughout the entire life cycle of the product, including when they become waste
- Developing Nordic input to work on eco-design in the EU
- Further developing Nordic cooperation on prevention of food waste and drafting Nordic inputs to EU and UN processes in this field
- Continuing work on promoting inclusive green development, and following up on the initiatives taken by the Nordic prime ministers concerning waste





2. CLIMATE CHANGE AND AIR POLLUTION

● Objective:

To reduce emissions of greenhouse gases and air pollutants in order to avoid serious climate change, thereby sticking to the target of restricting global warming to below 2 degrees Celsius and limiting negative environmental and human health effects.

Since the Industrial Revolution the concentration of greenhouse gases in the atmosphere has increased by about 30 percent. The global average temperature has increased by 0.8°C compared with pre-industrial levels. Scenarios produced by the UN climate panel (IPCC) show that if this trend continues, without new emission-reduction measures, the global average temperature up to 2100 risks increasing by 1.8–4°C compared with the average for the 1980–1999 period.

At regional level the Arctic Council has prepared the *Snow, Water, Ice and Permafrost in the Arctic* report (SWIPA report). This report indicates that sea ice and the Greenland ice sheet have been receding for the past decade. When Greenland's ice melts, it not only affects those who live in the Arctic but also contributes to the global rise in sea levels. A further rise in temperature in the Arctic may contribute to thawing of the permafrost. This could lead to methane being released and discharged

into the atmosphere. Methane is a potent greenhouse gas, and such emissions could speed up global warming.

The Nordic countries are working to establish a new global climate agreement under the UN climate convention (UNFCCC), with legally binding commitments for all nations. Such an agreement will help to reach the target to limit the global temperature increase below 2°C. The EU has published a low-carbon roadmap for 2050, and several Nordic countries are in the process of drawing up national plans of action to promote the development of the low-carbon society.

Work on stricter global emissions targets will be central until 2020. Improved energy efficiency in all sectors, increased use of renewable energy sources and environmentally friendly energy are the relevant measures. The Nordic countries will work to phase out subsidies to fossil fuels and introduce taxes that reflect environmental impact. This will provide the right incentives to reduce emissions from energy and transport, including international shipping and aviation. The Nordic countries will seek sustainable solutions to the production and use of biofuels, while ensuring that this does not displace food production. This will be avoided by minimising the indirect effects of land use.

Air pollution damages ecosystems and human health. Pollutants such as sulphur, nitrogen oxides, small harmful particles,



persistent organic pollutants (POPs) and heavy metals are transported over long distances and across national borders. International agreements are necessary to reduce these pollutants. The Nordic countries will continue to collaborate on the development and implementation of new international agreements on the reduction of air pollution, and also work together on developing national measures and instruments, and exchanging experience on individual work in the area.

The collective term “short-lived climate forcers” refers to soot particles, tropospheric ozone, methane and other gases and particles with short atmospheric lifespans, which are believed to have contributed to global warming and could accelerate the melting of ice and snow. The effect of reducing the levels of short-lived climate forcers is assumed to be greater in the Arctic, where the expected temperature rise will still be great. Greater efforts to reduce emissions and the formation of short-lived climate forcers in the short and medium term, together with a significant reduction

in emissions of long-lived greenhouse gases such as CO₂, will be essential. Emissions of soot also cause health problems, and therefore limiting these emissions has a doubly positive effect. Work is ongoing in this area in several international forums such as the Arctic Council, the UNEP and the Convention on Long-range Transboundary Air Pollution (LRTAP). The Nordic countries will redouble their efforts to reduce emissions and the formation of short-lived climate forcers nationally, regionally and globally.

Measures to reduce the concentration of short-lived climate forcers in the atmosphere will not replace ongoing work under the UNFCCC to reduce emissions of CO₂ and other long-lived greenhouse gases.

International agreements are necessary to reduce these pollutants. The Nordic countries will continue to collaborate on the development and implementation of new international agreements on the reduction of air pollution.

▼ **Important examples of how this will be done:**

- Following up on the UNFCCC, the Kyoto Protocol and the Gothenburg Protocol
- New international agreements on climate and air pollution with legally binding commitments for all countries
- Voluntary cooperation with relevant countries and organisations to reduce emissions. Cooperation on climate-friendly conversion and long-term emission reductions
- CO₂ tax
- Quota trading and other flexible market mechanisms
- Standards and energy labelling
- Collaboration with other sectors on low-emission solutions
- Research and development
- Development of national strategies for climate change adaptation
- Information

2.1 Climate change

● Objective:

To finalise a global climate agreement in 2015, coming into force in 2020, with legally binding commitments for all countries. The agreement must enshrine tangible commitments on emission reductions for both developed and major developing countries, and help ensure that global warming is limited to below 2°C.



A process has started to negotiate a new legally binding climate agreement to include all countries. These negotiations will be completed in 2015. The agreement will apply from 2020. Up to 2020, all Nordic countries will be covered by the second commitment period under the Kyoto Protocol. At the same time, a programme of work will be negotiated to increase ambitions as 2020 approaches.

The Nordic countries have set high targets and want to fulfil their obligations by showing that it is possible to reduce emissions cost-effectively both within the region and in collaboration with other major emitting countries. The Nordic countries will have an important role to play in establishing the basic premises for the negotiation of the new climate agreement to apply from 2020. All countries with major emissions must work for the implementation of cost-effective measures. There will be a common but differentiated

responsibility to reduce emissions, limit global warming and contribute to the implementation of a legally binding agreement.

Reducing greenhouse gas emissions will often have *win-win* effects in terms of reduced local air pollution and positive health effects for humans and the environment, as has been noted when working with major emitting countries.

Individually, the Nordic countries have implemented various climate-adaptation measures. They are therefore well positioned to exchange knowledge and develop good examples in this field. The private sector should be involved in order to generate innovation in climate adaptation.

Individually, the Nordic countries have implemented various climate adaptation measures. They are therefore well positioned to exchange knowledge and develop good examples in this field.

▼ **Priorities:**

- Developing instruments for cost-effective reductions of greenhouse-gas emissions and short-lived climate forcers through national measures and the environmental financing institution NEFCO
- Developing joint Nordic analyses of important questions pertaining to climate negotiations and related activities, in order to contribute to the results of the negotiations and to follow-up at national and regional level
- Promoting the development of new, well-functioning market-based mechanisms in order to stimulate cost-effective reductions through sector-based instruments
- Contributing to the development of the Green Climate Fund and innovative funding mechanisms
- Encouraging the use of climate-friendly Best Available Techniques (BAT)
- Contributing to the promotion of international solutions through the International Maritime Organization (IMO), in order to reduce emissions from marine transport
- Facilitating the transition to low-carbon societies in the Nordic countries
- Supporting the work of the Arctic Council and the Barents Council on climate change and its effects on ecosystems in the north.



2.2 Air pollution

● Objective:

To restrict damage to the environment and to human health caused by air pollution to the limits stipulated in international standards for air quality or the limits of nature's tolerance, and to keep countries' total emissions and emissions from individual sources below internationally determined limits.

Air pollution damages ecosystems and human health, ignores national borders and is transported over long distances by air currents. International cooperation is therefore of the utmost importance in this area. International efforts have resulted in reduced emissions of substances that cause acidification and eutrophication, as well as reductions in fine particles, heavy metals and organic pollutants. Nordic environmental cooperation has contributed significantly to the development of effects-based agreements under the Convention on Long-Range Transboundary Air Pollution (LRTAP) and EU legislation in this field. Within LRTAP, efforts are also being made to reduce emissions of mercury, persistent organic pollutants (POPs), heavy metals, polyaromatic hydrocarbons, dioxins and particles (including soot).

The revision of the Gothenburg Protocol in 2012 and the EU's Thematic Strategy on Air Pollution will govern work on air quality in

the years ahead. The EU strategy is based on the impact on human health of air pollution as the main driving force for initiatives. The EU is currently the most important player in the development of legislation to improve local air quality.

Air quality in several major cities in the Nordic Region is sometimes worse than the recommended maximum levels permitted by EU directives on air quality and WHO guidelines. Studies show a significant excess mortality caused by air pollution, mainly associated with fine particles. As a result, swift action is called for, both locally and nationally. In addition, environmental damage and the impact on human health of fine and ultrafine particles in particular deserve to be investigated further. There is a need for international measures that focus on emissions that transcend borders and their effects, as well as the economic consequences associated with fine and ultrafine particles.

Other problems caused by air pollution, such as acidification and eutrophication, are far from resolved. The acidification problem persists in large parts of the Nordic Region. However, nitrogen deposits are of more pressing concern than sulphur deposits. Nitrogen deposits affect biodiversity. Through interaction with methane and sunlight, tropospheric ozone is formed, which leads to a reduction in agricultural production. The long-range transport of organic pollutants and heavy metals that

are enriched in the food chain is a persistent problem that requires action.

The Nordic Region should therefore continue to support the development and implementation of measures based on scientific data for reducing air pollution from major sources such as households, energy, transport, industry and agriculture, and ensure that international agreements are fulfilled.

▼ **Priorities:**

- Providing input into international negotiations and EU directives to reduce harmful air emissions and emissions of transboundary air pollution
- Working to reduce emissions and the effects of substances that cause acidification and eutrophication
- Preventing and reducing transboundary emissions of mercury, polyaromatic hydrocarbons and dioxins
- Improving knowledge of the interaction between air pollution and climate change
- Developing knowledge and sharing experience in order to reduce the concentration of ultrafine particles in the urban environment.

There is a need for international measures that focus on emissions that transcend borders and their effects, as well as the economic consequences associated with fine and ultrafine particles.

2.3. Short-lived climate forcers

● Objective:

To reduce emissions of soot, methane and the formation of tropospheric ozone.

Rising air temperatures and reduced sea ice in summer are two indicators that the climate in the Arctic is changing faster than in other regions. The most important reason for temperature increase, both in the Arctic and globally, is emissions of long-lived greenhouse gases, first and foremost CO₂. However, short-lived climate-forcers (SLCFs) such as soot, methane and tropospheric ozone, have so far caused 30–40% of warming in the Arctic. Since SLCFs have a much shorter atmospheric lifetime than CO₂, reducing these emissions could have a quicker effect than reducing emissions of greenhouse gases that have long atmospheric lifetimes.

In addition to the positive greenhouse effect, a reduction in emissions and the formation of SLCFs will also have positive effects on human health.

The climate effect of soot emissions depends on how the particles are released. The probability of deposits on white surfaces in the Arctic is greatest for emissions at northern latitudes, for instance, the Nordic Region. It is therefore important that the Nordic countries focus closely on how to

reduce emissions at national and regional level. It is expected that it will be possible to halt rapid warming of the Arctic if the Nordic Region and other countries adopt measures to reduce emissions of soot. However, there is still a need for more knowledge in this field. As part of work to limit global warming to less than 2°C, the Nordic countries will focus on working with SLCFs as a complement to efforts to limit emissions of long-lived greenhouse gases such as CO₂.

SLCFs such as soot and ozone are pollutants that can cause harm to human health. The Nordic countries will cooperate with the UNEP, the Arctic Council and other countries and international organisations on measures to reduce the incidence of SLCFs, i.e. emissions of soot, methane and precursors to the formation of tropospheric ozone. Reducing these emissions can produce relatively rapid effects on both climate and human health. On the basis of the Ministerial Declaration on Svalbard in March 2012, the Nordic countries will work together to develop and strengthen national emissions inventories, reduce emissions of SLCFs, and support relevant international initiatives.

It is expected that it will be possible to halt rapid warming of the Arctic if the Nordic Region and other countries adopt measures to reduce emissions of soot.

▼ **Priorities:**

- Better knowledge of the effects of SLCFs on climate, human health and ecosystems
- Supporting international efforts on SLCFs, including the Arctic Council and the Convention on Long-range Transboundary Air Pollution
- Following up on the implementation of the UNEP's global action plan and various global initiatives, such as the *Climate and Clean Air Coalition to Reduce Short Lived Climate Pollutants*
- Developing and strengthening national emission inventories and national and regional action plans, and taking steps to reduce emissions of SLCFs
- Implementing coordinated cost-effective projects through the Nordic Environment Finance Corporation NEFCO



3. BIOLOGICAL DIVERSITY AND ECOSYSTEMS

● Objective:

To halt the loss of biodiversity so as to ensure robust ecosystems and continue providing necessary ecosystem services for welfare and value generation.

The Nordic natural environment – both species and habitats, on land and in the sea – remains under pressure. The main threats relate to changing land use, industrial development, raw material extraction, climate change, alien species, pollution and the unsustainable exploitation of living resources. Many sectors of society exert a great impact on nature and landscape, including transport, energy, agriculture, forestry and fisheries.

People are dependent on nature's values and services, what are termed ecosystem services, both for survival and for welfare. The TEEB reports (The Economics of Ecosystems and Biodiversity) evaluate how natural capital can be better integrated into national accounts and national wealth. This has provided new tools and led to better understanding of the importance of ecosystems.

Biodiversity is defined both as total variation among all living organisms, at genetic, species and population levels, and as the variety of ecosystems and habitats. A decrease in diversity may affect the

availability of food and genetic resources. Biodiversity is an important precondition for maintaining productivity, structures and functions in ecosystems. Maintenance and support of biodiversity can take the form of ecosystem-based management.

Ecosystem-based management is designed to ensure the conservation and sustainable use of biological diversity. It should be knowledge-based and take into account human use and its impact upon ecosystems. Ecosystem integrity and diversity, as well as the production of ecosystem services, must be maintained in the long term.

Landscape values, cultural environments and opportunities for outdoor activities are important for human well-being. Important, too, are the various measures designed to reduce greenhouse-gas emissions and that adaptation to climate change takes into account ecosystems and natural and cultural environments in a proper manner.

With a changing climate it is important that the management of the seas, forests and wetlands in particular takes into account the function of ecosystems as carbon sinks.

The Nordic natural environment – both species and habitats, on land and in the sea – remains under pressure.



Managing nature and the landscape is a joint Nordic challenge. It is important that natural and cultural environmental assets are safeguarded for the benefit of future generations.

The Nordic countries work together on implementing and developing international agreements such as the Convention on Biological Diversity (CBD), and the Ramsar and World Heritage conventions, often taking on board the Baltic countries, as well. Particularly in the field of genetically modified organisms, the Nordic and Baltic regions work closely to provide input for EU directives. In connection with alien species, Nordic cooperation has a vital role to play in further developing EU and CBD specifications on how environmental targets can be reached.

▼ Important examples of how this will be done:

- The Convention on Biological Diversity, following up on the strategic plan and its 20 sub-targets towards 2020
- Environmental conventions and agreements, cooperation on the Arctic Council, the Barents Euro-Arctic Council and in the EU
- A global nature panel (Intergovernmental Panel on Biodiversity and Ecosystem Services – IPBES)
- The Nagoya Protocol on genetic resources
- TEEB reports and corresponding instruments in the Nordic Region
- Specific projects to improve national implementation of policy areas

The Nordic countries work together on implementing and developing international agreements such as the Convention on Biological Diversity (CBD), and the Ramsar and World Heritage conventions, often taking on board the Baltic countries, as well.

3.1 Land-based ecosystems

● Objective:

To ensure that Nordic land-based ecosystems are in good environmental condition, and to guarantee a balance between conservation and sustainable use of ecosystems.

Development shows that it is possible to reverse negative trends if the right preventive measures are implemented. It is important to increase efforts to achieve environmental goals and address environmental concerns in agriculture, forestry and other land use. Habitat fragmentation is a growing challenge, not least as a barrier to the exchange of genetic material.

Evaluating ecosystem services is a key method of raising their visibility, which would also contribute towards their sustainable use. In addition, the restoration of nature can lead to re-establishing of ecosystem services, for example in wetlands. Together the Nordic Region can contribute input and knowledge sharing at international environmental conventions and other forms of international cooperation.

Natural diversity in Nordic mountain areas and in the Arctic is vulnerable. Climate change has a major impact on habitats such as the Arctic tundra, which involves an increased risk of thawing permafrost. Alien

species pose a major threat to biodiversity in the Nordic Region, especially in combination with climate change.

The Nordic Region will cooperate on implementing CBD targets, to suitably adapt the EU biodiversity strategy until 2020 to Nordic circumstances. The Nordic Region also works together closely on the implementation and development of the Ramsar, World Heritage and European Landscape conventions. Regional projects provide important input and act as good examples of technical work implemented under these conventions.

▼ Priorities:

- Helping to map and make visible the values of biodiversity and land-based ecosystem services, nationally and locally, as well as providing input to international processes and the EU, including following up on the TEEB reports
- Further developing instruments to stimulate conservation and the sustainable use of biological diversity
- Working for closer cooperation and exchanges of information about protected areas, and helping to develop green corridors between natural areas to preserve biodiversity
- Continuing cooperation to limit the spread of alien and dangerous species
- Exchanging information and cooperation on the possible restoration of damaged ecosystems.

3.2 Outdoor recreation, landscape and cultural environment

● Objective:

To make the Nordic landscape and the Nordic cultural and urban environments resources for the welfare, well-being and outdoor activities of the region's entire population.



Access to nature, cultural environments and recreation areas close to urban centres are important for public health and welfare in Nordic societies.

A lifestyle that offers rich experiences in the natural and cultural landscape also increases environmental consciousness and promotes understanding of sustainable management of natural and cultural resources. Nevertheless, outdoor recreation is inhibited by physical barriers and attempts to limit public right of access. New initiatives are needed to enable more people to enjoy a rich outdoor life.

The Nordic Region's natural and cultural heritage should be managed for the welfare and benefit of present and future generations. As a region, the Nordic countries must cooperate on the implementation of the World Heritage Convention and the European Landscape Convention, focusing on natural and cultural landscapes.

It is important to recognise that the landscape, the cultural environment and outdoor activities are resources for the

people of the Nordic region. The Nordic countries must work together and exchange experiences regarding landscape, and on the importance of cultural and urban environments to resource efficiency, climate, welfare, etc.

▼ Priorities:

- Promoting and enhancing outdoor recreation as beneficial to health, well-being and environmentally friendly activities in local communities and countryside
- Helping to generate value based on natural and cultural heritage
- Making visible the importance of the cultural environment in work with ecosystem services



3.3. Biological diversity and climate change

● Objective:

To ensure that the UN Framework Convention on Climate Change contributes to achieving the objectives of the Convention on Biological Diversity, and vice versa.



The Convention on Biological Diversity (CBD) specifies how work with biodiversity and climate can reinforce their respective objectives. In Nagoya the CBD parties approved a target that, by 2020, more resilient ecosystems will be secured to help increase carbon storage capacity. This will be achieved through the conservation and restoration of ecosystems, which in turn will help to mitigate climate change, improve climate adaptation and halt desertification.

Decisions on climate and biodiversity in CBD cover both ecosystem contribution to preventing climate change and to minimising the effects of climate change through adaptation. The Nordic Region must be a pioneer in evaluating challenges associated with the links between climate and biodiversity, by identifying and implementing climate-change measures and generating synergy effects. Other nature conventions with clear links to the Climate Change Convention and CBD, such as the Ramsar Convention, must also be evaluated in this context.

▼ Priorities:

- Improving synergies between the UNFCCC and the Convention on Biological Diversity
- Developing on the contribution of nature conventions to the prevention of climate change and mitigating its effects
- Improving knowledge of the role of ecosystems as carbon sinks in order to limit temperature rises and climate change.

3.4 Marine environment

● Objective:

To use ecosystem-based management to ensure that the Nordic seas are in a good environmental condition, and that they are used in a resource-efficient and sustainable manner.

Marine ecosystems are of great social importance to life and welfare, although challenges vary. The Baltic Sea has been exposed to eutrophication and rapidly increasing oil transportation, which entails an associated risk of accidents. In northern and western marine areas, limited infrastructure and harsh climatic conditions provide challenges related to increased shipping traffic and petroleum activity, entailing a higher risk of oil spills and major accidents. There is a need to adapt emergency-response provisions accordingly. The Copenhagen Accord's provisions for combating marine pollution by oil and other hazardous substances, as well as international agreements reached by the Arctic Council, are important in this context. Increasing numbers of alien species caused by intensive shipping traffic and climate change also pose a threat to ecological balance in the marine environment.

Challenges related to the use of the oceans suggest the need for a holistic and ecosystem-based management based on inter-sectoral planning. Valuation of marine ecosystem services and marine spatial planning are important tools for ensuring long-term and



sustainable management of marine resources and the maintenance of biological diversity. Nordic cooperation is desirable on exchange of experience and on developing common principles for marine spatial planning as a tool for integrated ecosystem-based marine management. Protecting vulnerable areas is a precondition for preserving biological diversity. There is also a need to improve evaluations of the cumulative effects and uncertainties resulting from human activities, such as eutrophication, pollution, climate change and ocean acidification.

Marine waste is a significant problem, both locally and globally. At present, we have insufficient knowledge of the extent of marine pollution, its sources and its impact on the marine environment. There is therefore a need for more information and the development of instruments that will help reduce marine pollution.

In accordance with the EU Marine Strategy Framework Directive, the Nordic EU states are obliged to produce comprehensive strategies for their marine waters by 2015 so as to achieve a favourable environmental status by 2020. Likewise, Norway has made considerable progress in developing integrated management plans for its own waters. These management plans largely correspond to marine strategies

to be developed in accordance with the Directive. Iceland is working to protect its own waters as part of international and regional cooperation.

The regional marine environment conventions OSPAR and HELCOM will serve as joint platforms for ecosystem-based management of marine areas, and will contribute to the implementation of the EU Marine Strategy. In addition, it is still important to reduce the supply of nutrients to the Baltic Sea. The Baltic Sea Action Plan and NEFCO's work will contribute here.

In line with the EU Water Framework Directive, the Nordic countries will develop management plans for coastal and inland waters.

▼ **Priorities:**

- Supporting work with a regionally coordinated, inter-sectoral and ecosystem-based approach to management of the seas and the marine environment, including spatial planning
- Through international cooperation, reducing the risk of environmental damage and preventing the introduction and spread of alien species
- Strengthening development work on evaluation of marine ecosystem services
- Increasing knowledge about the causes and effects of marine waste in order to reduce it
- Supporting the Baltic Sea Action Plan and NEFCO's efforts to reduce the influx of nutrients into the Baltic Sea.

3.5 Ocean acidification

● Objective:

To develop and improve knowledge of the effects of ocean acidification on ecosystems and biological resources.

The seas act as a buffer in the global carbon cycle by absorbing carbon dioxide. This limits the amount of carbon dioxide in the atmosphere, which reduces the rate of global warming. Increased uptake of carbon dioxide leads to ocean acidification and changes its chemical and biological processes. Calcium-bearing organisms will struggle to form limestone skeletons. Cold water absorbs more carbon dioxide than warm water, and therefore it is presumed that the consequences of acidification will be greater in colder waters. In the long term structural changes in the marine food chain are expected.

Ocean acidification is a major threat to marine ecosystems. Research is ongoing on this issue, both globally and regionally, including under the auspices of the Arctic Council. There is a need for more information of the effects on an ecosystem's resilience and the socio-economic consequences of marine acidification.

There is a need for more information of the effects on an ecosystem's resilience and the socio-economic consequences of marine acidification.



▼ Priorities:

- Improving knowledge of the effects of ocean acidification on the marine environment, for example the structure and functions of the food chain and the impact on key species
- Helping develop indicators and modelling instruments with which to carry out environmental impact assessments of ocean acidification
- Promoting the development of socio-economic impact assessments of ocean acidification



4. CHEMICALS WITH ADVERSE IMPACT ON HUMAN HEALTH AND THE ENVIRONMENT

● Objective:

To minimise adverse impact on human health and the environment of chemicals in products, emissions and waste.

Exposure to chemicals can damage both the environment and human health. Substances can accumulate through the food chain and consequently have an impact on health.

One major challenge is to broaden knowledge of dangerous properties in substances, their incidence in the environment and sources of emissions. Emissions of hazardous substances from production, products and waste treatment must be limited. Transboundary pollution and the accumulation of hazardous substances in marine food chains also pose problems for public health.

We lack sufficient knowledge of just how dangerous many chemical substances are to human health and the environment. This knowledge needs to be built up, especially regarding nanomaterials, substitutable substances, hormone disrupters and the overall effect of exposure to multiple chemicals, known as combination effects.

The EU REACH regulation increases the requirements for knowledge in these areas. Closer cooperation on monitoring work is necessary in order to follow up on

these and other requirements regarding chemicals. Nordic cooperation must also contribute to better access to information on chemicals. In the Nordic Region it is important to promote cooperation between environmental, consumer and business organisations. Nordic chemical cooperation must contribute to ensuring that chemicals proven injurious to human health and the environment are regulated in accordance with EU/EEA chemicals legislation, including REACH, biocide and pesticide regulations, and in regional and global agreements. The experience and contribution of Nordic countries to international chemical cooperation constitute a sound basis for further development of existing chemicals conventions, UN global chemicals strategy (SAICM) and the development of a global agreement on mercury. The Nordic countries should also help to produce an improved international mechanism for regulating substances not covered by these agreements.

Knowledge of hazardous substances in the Arctic and cooperation with the Arctic Council are strategically important. Much research and project work on the impact of pollutants in the Arctic Region is undertaken under the auspices of the Arctic Council. The Nordic Council of Ministers actively supports these efforts.

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To ensure green and sustainable social development, efforts are being made to encourage the private sector to substitute hazardous substances. This includes achieving a better understanding of the need for alternative substances, including their properties, production methods and associated environmental technology.

▼ Priorities

- Preventing and reducing transboundary emissions of hazardous substances such as mercury and persistent organic pollutants (POPs) in cooperation with the Arctic Council
- Identifying new chemicals proven hazardous to human health and the environment through systematic screening programmes, including in northern areas and the Arctic
- Helping to finalise, implement and follow-up on the global agreement to reduce the use of mercury
- Further developing conventions on

chemicals and waste, and helping to improve international mechanisms for the regulation of substances not covered by existing conventions

- Influencing the development of and cooperation on the implementation of EU/EEA chemicals legislation, including REACH, classification and labelling (CLP), biocides and pesticides, as well as monitoring efforts
- Influencing work on hormone disrupters in the EU and OECD
- Helping to improve the protection offered against risks connected with the use of nanomaterials
- Developing and disseminating knowledge about the use of and exposure to hazardous substances, and working towards rules that help generate more information about hazardous substances in products and goods
- Encouraging an evaluation of combination effects in the assessment of risks associated with chemicals
- Continuing to map and develop indicators for hazardous substances in the Nordic seas
- Contributing to the development of internationally harmonised test methods

To ensure green and sustainable social development, efforts are being made to encourage the private sector to substitute hazardous substances.



IMPLEMENTATION AND RESPONSIBILITY

The Nordic Council of Ministers for the Environment (MR-M) has overall policy responsibility for Nordic environmental cooperation. The Committee of Senior Officials for the Environment (EK-M) is constituted under the MR-M and is responsible for the implementation of this Environmental Action Plan. The Nordic Council of Ministers Secretariat (NMRS) coordinates cooperation with the country currently holding the Chairmanship of the Nordic Council of Ministers, as well as with the other Nordic countries, the Faroe Islands, Greenland and Åland.

Environmental cooperation in the region is based on a solid Nordic network of experts, official agencies, research institutions, companies and politicians.

The implementation of this Environmental Action Plan consists primarily of projects run by working groups, taking the form of analyses, studies, seminars and workshops with contributions from Nordic experts. It is mandatory that at least three countries participate in each project, and that such

cooperation adds value and generates Nordic synergy.

Experts in the various environmental working groups speak for national viewpoints. Each working group has a coordinator and a chairperson, with an office in one of the various Nordic environmental authorities. Each working group is responsible to ensure targeted communication and results visibility of its project work.

The working groups engage in inter-sectoral activities capable of promoting the integration of environmental considerations into efforts undertaken by other sectors, and when and wherever strategic synergies, Nordic synergy and added value can be achieved.

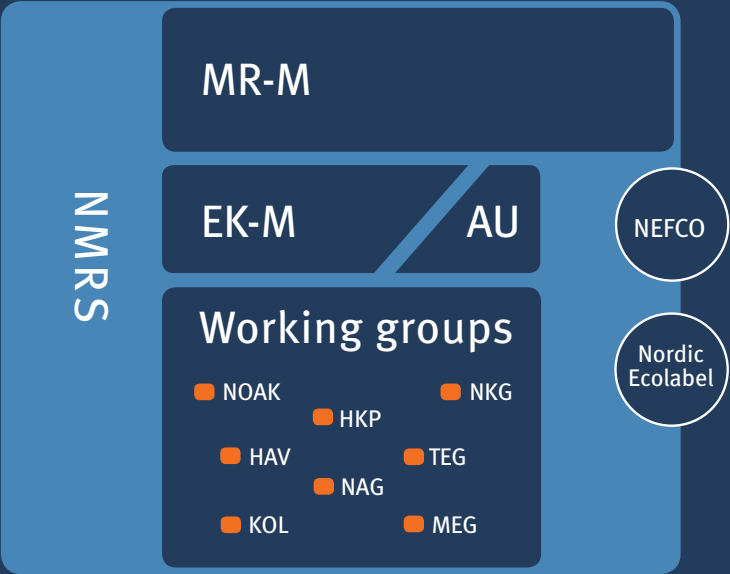
Budget changes could possibly impact the implementation of this Environmental Action Plan, which is scheduled for evaluation after a three-year period when any adjustments deemed necessary will be made.



LIST OF ABBREVIATIONS

BAT	Best Available Techniques
CBD	Convention on Biological Diversity
CLP	Classification, labelling and packaging of substances and mixtures
CSR	Corporate Social Responsibility
EcoAP	Eco-innovation Action Plan
ETAP	Environmental Technologies Action Plan
EU/EEA	European Union/European Economic Area
HAV	Nordic Marine Environment Group (MR-M)
HELCOM	Helsinki Commission
HKP	Working Group for Sustainable Consumption and Production (MR-M)
ICAO	International Civil Aviation Organization
IED	Industrial Emissions Directive
IMO	International Maritime Organization
KoL	Climate and Air Quality Group (MR-M)
LRTAP	Long-Range Transboundary Air Pollution
MEG	Working Group on Environment and Economy (MR-M)
NAG	Nordic Waste Group (MR-M)
NEFCO	Nordic Environment Finance Cooperation
NIB	Nordic Investment Bank
NKG	Nordic Chemical Group (MR-M)
NOAK	Nordic Working Group for Global Climate Negotiations (MR-M)
OECD	Organization for Economic Cooperation and Development
OSPAR	Oslo Paris Convention
POPs	Persistent Organic Pollutants
RAMSAR	The Convention on Wetlands of International Importance
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
SAICM	Strategic Approach to International Chemicals Management
SWIPA	Snow, Water, Ice and Permafrost in the Arctic
TEEB	The Economics of Ecosystems and Biodiversity
TEG	Terrestrial Ecosystem Group (MR-M)
UN	The United Nations
UNEP	United Nations Environment Programme
WHO	World Health Organization
MR-M	Nordic Council of Ministers for the Environment
EK-M	Committee of Senior Officials for the Environment
AU	Working group under EK-M

ORGANISATIONAL CHART



AU	Working group under EK-M
EK-M	Committee of Senior Officials for the Environment
HAV	Nordic Marine Environment Group (MR-M)
HKP	Working Group for Sustainable Consumption and Production (MR-M)
KoL	Climate and Air Quality Group (MR-M)
MEG	Working Group on Environment and Economy (MR-M)
MR-M	Nordic Council of Ministers for the Environment
NAG	Nordic Waste Group (MR-M)
NEFCO	Nordic Environment Finance Cooperation
NKG	Nordic Chemical Group (MR-M)
NMRS	Nordic Council of Ministers Secretariat
NOAK	Nordic Working Group for Global Climate Negotiations (MR-M)
Nordic Ecolabel	The official Nordic ecolabel
TEG	Terrestrial Ecosystem Group (MR-M)



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Nordic Environmental Action Plan 2013–2018

Over the past forty years, the Nordic countries have achieved significant results by working together on the environment, combining economic growth and welfare development with an ambitious environmental policy, and actively contributing to environmental improvements in the Nordic Region and beyond.

Promoting sustainable production and consumption, environmentally friendly technology and green economic growth in collaboration with other sectors, including the corporate sector, and international organisations, are important challenges facing Nordic cooperation. Follow-up to the UN Conference on Sustainable Development in Rio 2012 will play a key role in future Nordic cooperation.

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