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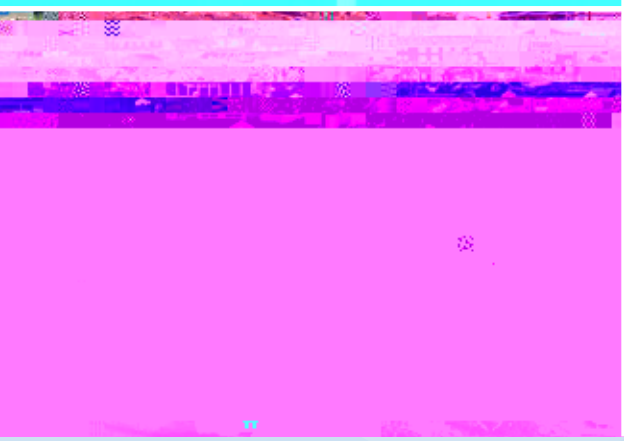
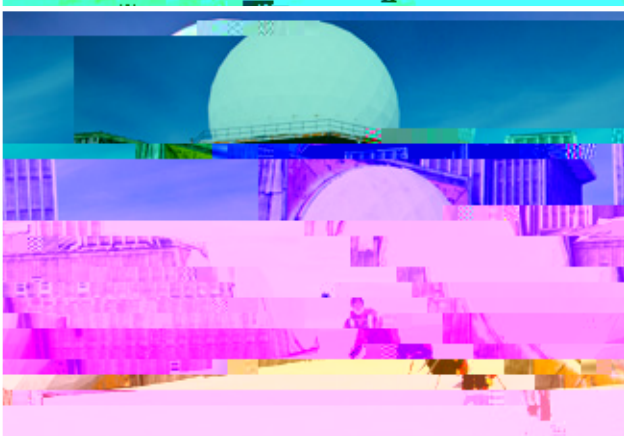
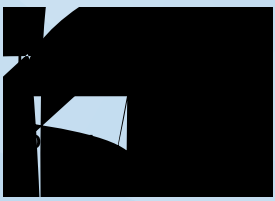






Sweden will continue to be a leading research nation in the climate and environmental fields and will focus on the human impact of climate change.

Sweden's growth and competitiveness stand to benefit from increased free trade and active e orts to counter technical barriers to trade in the Arctic region. Sweden will work to ensure that the anticipated extraction of oil, gas and other natural resources occurs in an environmentally, economically and socially sustainable manner. It is important that the development of regional cross-border cooperation in the area of sea and air rescue continues. More stringent safety requirements must be imposed for maritime transportation and, in various sectors, use must be made of Sweden's environmental technology expertise. The Swedish Trade Council o ces in Denmark, Norway, Finland, Russia, the United States and Canada, and in northern Sweden, should be instructed to build up skills to promote Swedish commercial interests in the Arctic. The tourism sector should be developed, albeit with consideration for the environment and the traditional lifestyles of indigenous peoples. Communications between tourist destinations should be improved in a sustainable manner. Swedish ice-breakers are uniquely qualified to support Arctic research and monitor the vulnerable marine environment.

Sweden will work to bring the human dimension and the gender perspective to the fore in Arctic-related cooperation bodies. Measures will be needed to counteract the negative health and social impacts of climate change, pollutants and the expected increase in the exploitation of Arctic natural resources. The right of indigenous peoples to maintain and develop their identity, culture, knowledge transfer and traditional trades must be upheld. The Sámi languages and other indigenous Arctic languages must be preserved. The Sámi research programme should use Arctic-related cooperation projects to amplify the impact of research activities.

1.1. Why a strategy for the Arctic region?

Arctic issues are receiving an increasing amount of attention in the Arctic countries and in various multilateral cooperation bodies. There are several reasons behind this trend.

Few places in the world have been as dramatically a ected by **climate change** as the Arctic. Global warming gives rise to a number of e ects including reduced ice, snow and permafrost covers. It also a ects biodiversity as it changes the conditions for both flora and fauna. This in turn has a gradual impact on **the living conditions for indigenous populations** in the Arctic,

1.2. Strategies in other Arctic countries

The adoption of this strategy means that all eight member states in the Arctic Council have adopted strategies for the Arctic region.

 In **Norway**, development in the High North, including the Arctic, has been the Government's highest foreign policy priority since 2005. The overarching objective is to gain greater knowledge, create more activity and have an increased presence in the north and to lay the foundations for sustainable economic and social development in the future. The Norwegian Government's High North strategy was established in 2006. It was followed in 2009 by the report "New Building Blocks in the North" which identifies seven priority areas: 1) climate and the environment; 2) monitoring-emergency response-maritime safety in northern waters; 3) sustainable development of o shore petroleum and renewable marine resources; 4) onshore business development; 5) infrastructure; 6) sovereignty and cross-border cooperation; and 7) the culture and livelihoods of indigenous peoples. In the 2011 central government budget, a total of NOK 1.2 billion was set aside for initiatives in the High North, a significant portion of which was earmarked for research. Cooperation with Russia plays an important role in Norway's Arctic policy. Norway is also promoting greater engagement in the Arctic by NATO and the Nordic Council of Ministers. The Norwegian Government intends to present an updated version of its strategy ("Towards the North") shortly.

 Because Greenland and the Faroe Islands are also part of **the Commonwealth of the Realm Denmark**[2] the country has a special position in the Arctic. Denmark's Arctic strategy is based on the aims of supporting and strengthening development in Greenland and maintaining the position of the United Kingdom of Denmark as an important actor in the Arctic. To adapt to the changed conditions in the Arctic and because of its inextricable links with Greenland, Denmark has a special interest in promoting long-term, sustainable regional development within the framework of both Arctic cooperation and the activities of the Nordic Council of Ministers. Special priority has been allocated to the following areas: energy and minerals; trade and tourism; shipping; education and research; and nature and the environment. Denmark intends to develop a new Arctic strategy during 2011.

 **Iceland's** Arctic policy goal is to secure the country's status as a coastal state in the Arctic region and safeguard its influence over develop-

[2] The Faroe Islands and Greenland are part of the Danish delegation in the Arctic Council.

ments and international decision-making based on legal, economic, ecological and geographical arguments. Iceland also wishes to "strengthen the Arctic Council as the main cooperative body on Arctic issues and press for decisions to be made within the Council."[3]. EU membership for Iceland would provide the country with greater scope to assert its interests in Arctic cooperation bodies while giving the Union an even more palpable geographical presence in the region.

Finland's position as an Arctic country in the Nordic region is very similar to Sweden's. Neither country borders on the Arctic Ocean, both are EU Member States and both have indigenous Sámi populations. The Finnish Arctic strategy, established in 2010, defines the objectives for the country's Arctic policy and describes ways of promoting it. The emphasis is on external relations, i.e. Finland's relationship to the Arctic from an international perspective. The strategy deals with the region's security, environment, economy, infrastructure, indigenous peoples, international institutions and the Arctic Policy of the European Union. Proposals for measures include improving transport communications, promoting exports, research and strengthening the Arctic Council. The strategy also proposes that Arctic Council summits be held on a regular basis and also includes proposals on how the Arctic Policy of the EU can be developed (e.g. giving the European Commission observer status in the Arctic Council and establishing the European Arctic Information Centre as part of the Arctic Centre at the University of Lapland in Rovaniemi). The Finnish Government has appointed a delegation for Arctic issues, which has a central role in the future development of the strategy.

Russia attaches considerable importance to the development of the Arctic, especially for security policy and economic reasons. A Russian strategy for the Arctic in 2008 clarifies the fundamental national interests in the Arctic. These are: 1) the Russian part of the Arctic shall serve as a strategic resource base to promote social and economic development, 2) the Arctic shall be an area of peace and cooperation, 3) the region's ecosystem shall be protected, and 4) the Northeast Passage shall serve as a standard Russian shipping route. The strategy describes how these national interests are to be promoted from now until 2020. This includes gathering background information to support Russia's view on how far the Russian continental shelf extends as well as measures to improve and expand the

infrastructure for mining and transport. The Russian Arctic strategy ends by ascertaining that implementation of Russian government policy, as established in the strategy, means that Russia can preserve its role as a leading force in the Arctic.

The Arctic Policy of the **United States** is progressing, albeit from a rather modest starting-point. Until now, the focus has been on research and environmental issues, but now, flaws in the infrastructure are being given more attention, such as the lack of ice-breakers and other facilities, particularly in Alaska. Work is also beginning to take shape on the policy level. At the centre of American interests lie security policy, preservation of the unique environment, the extraction of natural resources and other economic activities conducted in an environmentally sustainable manner as well as more in-depth scientific cooperation. The issue of free shipping without expensive transit costs has also been highlighted. Furthermore, it should be noted that the need to ratify the UN Convention on the Law of the Sea (UNCLOS) is being highlighted in connection with the increased interest in the Arctic Ocean.

After Russia, Canada has the largest land and sea area in the Arctic and attaches considerable importance to the aspect of sovereignty. The Canadian strategy stresses that the Arctic is a key part of Canada's identity. Consideration for Canada's indigenous Arctic people has substantial influence on the Government's position with respect to various Arctic issues. Canada also conducts substantial Arctic research. The country's Arctic strategy is built on four pillars: exercising Canadian sovereignty, promoting economic and social development, protecting the Arctic environment and improving and devolving governance for Canadian Northerners.[4]

The

1.3. What is the Arctic?

There is no uniform definition of what “the Arctic” actually is. The region is made up of an ocean (the Arctic Ocean) surrounded by sovereign states. There is however a fundamental di erence between the Arctic and the Antarctic, with the latter being a continent surrounded by an ocean. In connection with the establishment of the Arctic Council, the various members adopted a common political definition. According to this definition,

harbour there would be the nodal point not only for transport on Russian rivers to Europe but also for trade with China. In 1879, Nordenskiöld was also the first to sail through the Northeast Passage and went on his first expedition to Spitsbergen in 1864.

During the nineteenth century, Spitsbergen was considered internationally as no man's land. But the discovery of large coal

The expedition can be said to be the start of modern Swedish Arctic research. The Swedish Polar Research Committee was formed the following year and the Swedish Polar Research Secretariat was established in 1984. Since then, the Secretariat has arranged several Swedish expeditions to the Arctic. In 1991, the Swedish ice-breaker Oden together with the German ice-breaker Polarstern became the first non-atomic vessels to reach the North Pole.

2.2. Security policy ties

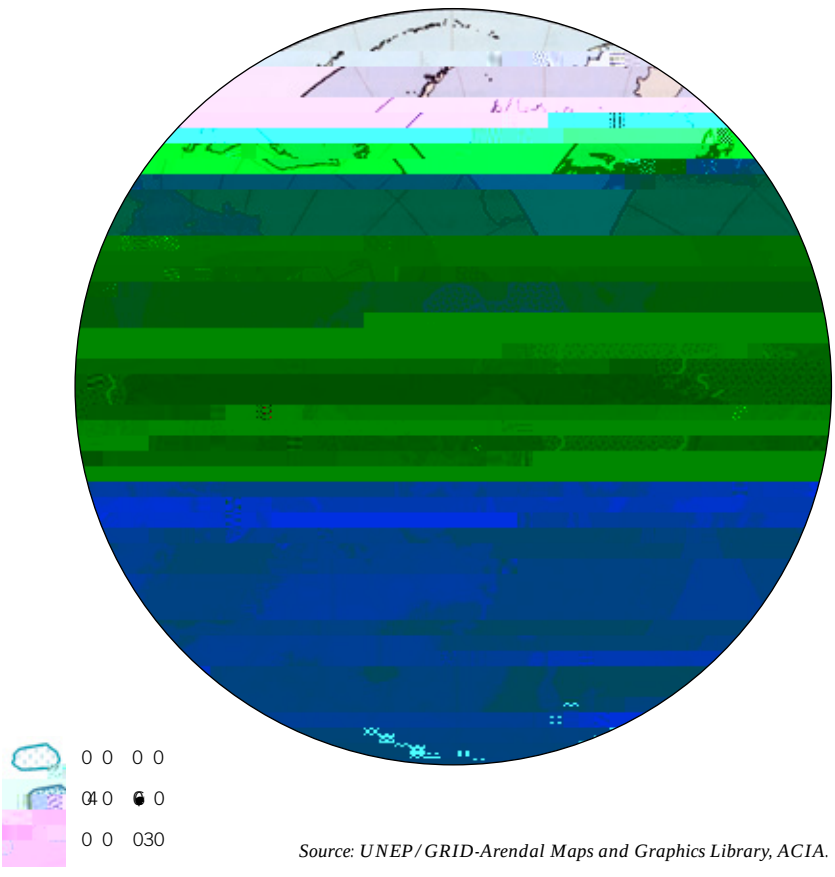
Sweden's security has long since been influenced by developments in the Arctic. During the Cold War, Arctic Sweden lay between the two spheres of interest of NATO and the Warsaw Pact. Nowadays, the overall security policy climate in the Arctic is very much dependent on the relationship between Russia and the United States. In recent years, dialogue and cooperation have improved as a result of the US-Russian Reset Initiative, a joint attempt to build a new agenda. The current security policy challenges in the Arctic are not of a military nature. Activities within the framework of the Arctic Council also indicate that its members have a common interest in cooperation and consensus. As a result of the Ilulissat Declaration of 28 May 2008, the five coastal states also agreed to solve outstanding issues in accordance with current international law. The 2010 border agreement in the Barents Sea between Russia and Norway is seen as a prime example of this spirit of mutual understanding. At the same time, the Arctic has considerable economic potential and fresh transport routes have opened the door for new types of strategic and security policy opportunities and challenges. As a result of climate change, security may well become more of a question of public crisis

influence Swedish security policy. The recently adopted Nordic Declaration of Solidarity[6], reinforcing and enhancing the solidarity declaration adopted in 2009, has led to Sweden's security policy becoming even more closely interwoven with the political priorities of the other Nordic countries. Sweden's unilateral declaration of solidarity[7] and a stronger Nordic declaration of solidarity may hence involve new areas of responsibility and higher expecta-

2.4. Climate and environmental ties

In recent decades, an increase in average global temperatures has been noted, causing the world's glaciers and sea-ice to melt at an accelerated pace. This trend is expected to continue. Sweden's climate and environment are a part of the Arctic and as a result both a ect and are a ected by it. One challenge will be to deal with the increase in precipitation caused by global warming, which may lead to greater water flows and changes in soil conditions. This in turn may a ect our societies and their infrastructure. The Sámi culture and industries traditionally have strong links to the surrounding natural environment and the weather conditions, leaving them particularly vulnerable.

MELTING OF SEA ICE AND FORECAST



Source: UNEP/GRID-Arendal Maps and Graphics Library, ACIA.

2.5. Research ties

Swedish Arctic research is world-class and is conducted not only in the fields of engineering and natural science but also in social science and the humanities. For more than 150 years, Swedish institutions and organisations

3.

Arctic Council Ministerial Meeting, 12 May 2011, Nuuk, Greenland.
Photo: Joakim Larsson, Ministry for Foreign A airs.

- Sweden will endeavour to ensure that the Arctic remains an area of low political tension.
- Sweden will also strive to strengthen the Arctic Council in its role as the central multilateral forum for Arctic–related issues, as well as the role of Barents cooperation bodies in issues of particular relevance to the Barents region. A more common policy and concrete projects should be developed in Arctic–related cooperation forums for the benefit of the region.
- Sweden will actively contribute to the development of an EU Arctic policy. Sweden wishes to promote the EU as a relevant cooperation partner in the High North within relevant policy areas.
- Cooperation projects and synergies between the Arctic Council and the Barents Cooperation will be utilised, as will the EU's various cooperation programmes and the funds they supply.
- In the Nordic Council of Ministers, Sweden will work to sharpen the focus of Arctic–related project activities that have a clear supplementary value for the Arctic Council.
- Swedish activities and cooperation projects in the Arctic will be in accordance with international law, including UN conventions and other international treaties.

The combination of, on the one hand, national interests in shipping and energy extraction and, on the other, climate change and potential environmental disasters in the Arctic, has led to alarmist stories in the media. It is important to emphasise however that, despite significant challenges, Arctic cooperation is characterised by a low level of conflict and broad consensus. The challenges facing the Arctic are far too multifaceted and broad for any single individual state to successfully deal with them on its own. **E cient, multilateral cooperation on the Arctic is a main priority for Sweden.** Dialogue, transparency, confidence-building measures and cooperation in line with international law form the starting-point for Sweden's approach to security concerning the Arctic.

3.1. The Arctic Council[8]

The main multilateral arena for Arctic-specific issues is the Arctic Council. The Council is unique among international cooperation bodies in that representatives for six di erent indigenous peoples' organisations (including the Sámi Council) sit round the table. Despite the Arctic Council not being founded on a legally binding agreement, cooperation works in a similar way to an international organisation. The Council's activities have focused mainly on environmental and climate issues as well as on research and development. The membership circle of the Arctic Council, coupled with its vast array of expertise, provides clear added value compared to other organisations and cooperation forums as regards Arctic issues. The Council could however be further energised if its mandate were broadened to include other important strategic issues such as joint security, infrastructure and social and economic development. More concrete projects and clear political initiatives should supplement the Council's existing work. Sweden therefore wishes to strengthen the Council both institutionally and politically.

3.2. The European Union

In December 2009, during the Swedish EU Presidency, European foreign a airs ministers welcomed the gradual development of an EU policy on Arctic issues. The ministers also expressed support for the European Commission's proposed objectives for the policy, which are: protecting and preserving the Arctic in unison with its population; promoting sustainable use of resources; and contributing to enhanced Arctic multilateral

[8] The appendix to this report provides some key facts on the Arctic Council.

governance. Sweden fully agrees with these objectives and intends to drive them forward. The EU participates in Arctic cooperation as a partner, along with Iceland, Norway and Russia, in the Northern Dimension[9], in which the Arctic is included as a top-priority area of cooperation. Sweden supports the European Commission's application for permanent observer status in the Arctic Council.

3.3. Nordic cooperation

The Nordic region is an important part of the Arctic and it is also important that there is a forum for discussion on how the Nordic countries can jointly contribute to its development. In the Nordic Council of Ministers, Sweden will work to sharpen the focus of Arctic-related project activities and ensure that projects have a clear supplementary value for the Arctic Council and the Barents Euro-Arctic Council.

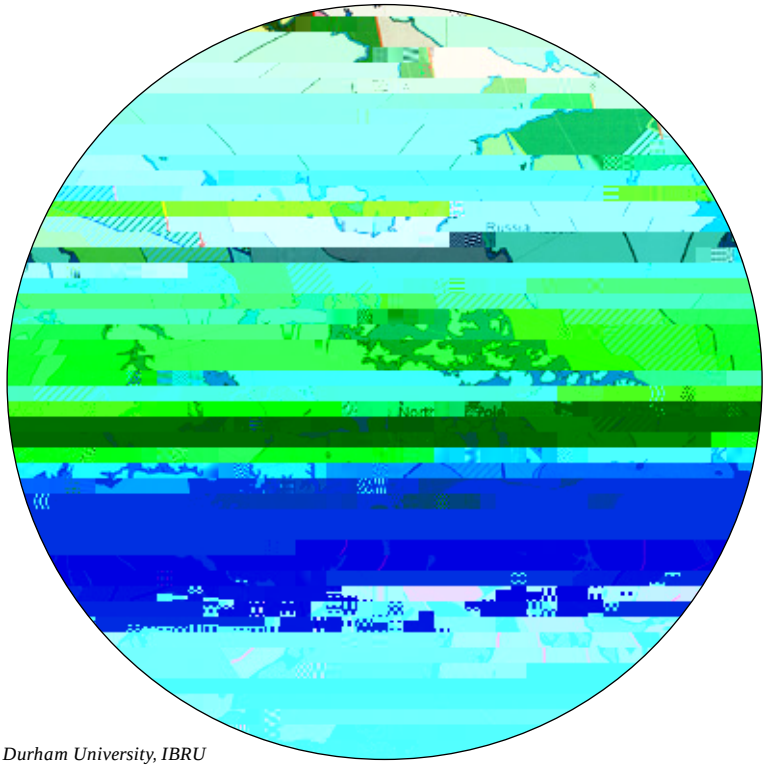
3.4. Barents cooperation[10]

Sweden shall also pursue the relevant parts of its Arctic policy within the context of Barents cooperation. The members of the Barents Euro-Arctic Council (BEAC) are the five Nordic countries, Russia and the European Commission. The members of the Barents Regional Council (BRC) are 13 counties in northern Finland, Norway and Sweden and in north-west Russia. The smaller circle of the Barents cooperation forums and their partly common working procedures on the national and regional level, at which regional interests can be safeguarded, give this cooperation clear added value. The European Commission's full membership of the Barents Euro-Arctic Council is also an asset.

3.5. The United Nations

[9] The appendix provides additional key facts on the Northern Dimension.
[10] The appendix provides some key facts on the Barents Euro-Arctic Council.

REGIONAL ISSUES: BOUNDARIES AND CLAIMS IN THE ARCTIC



Source: Durham University, IBRU

work Convention on Climate Change (UNFCCC), the United Nations Convention on Biodiversity (CBD) and the United Nations Declaration on the Rights of Indigenous Peoples are also important international agreements directly a ecting the Arctic. The United Nations Development Programme (UNDP) and United Nations Environmental Programme (UNEP) are also among UN bodies involved in the Arctic as are the World Health Organization's European Region (WHO Europe) and Region of the Americas (WHO PAHO). It is important to intensify the cooperation with

4.

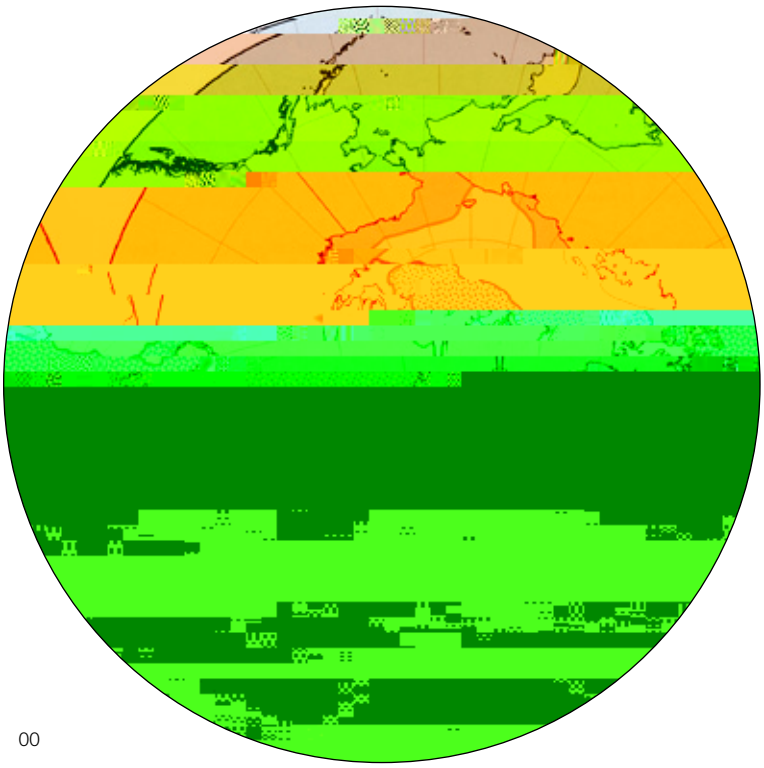
The Arctic is an area of low political tension in which the changed climate presents new opportunities and challenges. Issues concerning the security of flows and resource extraction are coming more to the fore. Sweden has a natural interest in the favourable current situation being consolidated and the entire Arctic region being driven by a positive political, economic and ecological dynamic. In bilateral and multilateral contexts, Sweden should stress the importance of an approach based on security in its broadest sense and that the use of civil instruments is preferable to military means. Ever since the Arctic Council was founded in 1996, there has been strong consensus on the view that economic, environmental and social development must be seen as a single concept to create long-term sustainable development in the region. Continued Swedish research and education initiatives are essential if progress is to be made. The priorities below are to be seen in ¥xy¤0s ~¥u©¥J00Õ0S|y}q¥u0q~t0¥xu0u~§y£ ~}u~¥00Õ0Us ~ }ys0tu§u| ¡ }u~¥ Õ0dxu0x¦ }q~0ty}u~¤y ~›

4.1. Climate and the environment

- Sweden will work for substantially reduced global emissions of greenhouse gases and short–lived climate forcers.
- In cooperation with other Arctic countries, Sweden will contribute to proposals for knowledge–building and action to strengthen the capacity for adaptation to and recovery from the e ects of climate change.
- Sweden will work to ensure that climate change in the Arctic and its global impact is highlighted in international climate negotiations.
- Sweden will work for an ambitious and e ective international agreement on minimising and eventually eliminating the use, emissions and spread of mercury to sensitive areas including those around the Arctic.
- Sweden will work to reduce emissions of persistent organic pollutants with bioaccumulative properties[11] by making active e orts within the framework of the Stockholm Convention and the UN Convention on Long–Range Transboundary Air Pollution (LRTAP).
- Sweden will work for the conservation and sustainable use of biodiversity in the Arctic, taking indigenous Arctic peoples into consideration.
- Sweden will work to prevent and limit the negative environmental impact potentially caused by the opening–up of new shipping routes and sea areas in the Arctic.
- Sweden will work to ensure that environmental impact assessments are used to a greater extent in the Arctic.
- Sweden will contribute to ecosystem–based marine management/spatial planning.
- Sweden will work for international management plans to be drawn up for species a ected by hunting and fishing and by a changed climate.
- Sweden will work for the establishment of a network of protected areas for flora and fauna and to strengthen the e orts to combat environmental degradation in the Barents region and elsewhere.
- Sweden will continue to be a leading nation as regards climate and environmental research, focusing also on the impact of climate change on humans.

[11] Substances with bioaccumulative properties accumulate in the tissue of organisms.

MELTING OF SEA ICE AND FORECAST



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Source: UNEP/GRID-Arendal Maps and Graphics Library/ National Snow and Ice Data Center

4.1.1. Climate

Global climate change has made the Arctic one of the world's most vulnerable areas. The average temperature in the region has increased twice as much as the global average temperature over the last 100 years. This rapid rise in temperature increases the likelihood of dramatic e ects on Arctic ecosystems and can reduce their resilience. This can in the long-term lead to losses in valuable ecosystem services, i.e. services that are supplied by nature and are irreplaceable for humans, which in turn a ects people's ability to sustain viable livelihoods from, for example, hunting and fishing. Increasingly, research points to a greater risk of critical thresholds in the climate system being exceeded, for example as a result of melting ice-caps during the summer months and thawing permafrost. When the permafrost thaws, large amounts of greenhouse gases are released, adding to the uncertainty surrounding existing and planned infrastructure and buildings. There are

plenty of research findings concerning di erent aspects of environmental impact in the Arctic but only limited findings regarding how di erent factors

the International Arctic Science Committee (IASC) and the Arctic Council's Sustaining Arctic Observing Networks (SAON). Disseminating knowledge on soot particles and the role played by other short-lived climate forcers and proposing suitable measures are also very important for initiatives taken in other parts of the world. A global climate agreement with requirements for ambitious measures to reduce emissions of greenhouse gases is of substantial importance for the Arctic.

Photo: Walter Allgoewer

4.1.2. Environmental protection

Sweden needs to actively pursue issues relating to reduced emissions and the spread of oil, chemicals, waste, non-native organisms and other air pollutants. Despite there being few local sources of emissions in the Arctic, the spread of pollutants in and via the Arctic is a major problem both for the Arctic population and its fauna. Most pollutants are transported there via air or water currents. As a result of atmospheric conditions, the Arctic is particularly vulnerable to mercury deposition and the exposure is so serious that mercury-related health effects have been discovered in the Arctic population. Organic pollutants accumulating in fat tissues is another problem that can for example impair reproductive capacity.

Greater resource extraction in the Arctic significantly increases the risk of local emissions directly impacting the local environment and joint efforts are required to increase protection of the unique Arctic environment and the living environment for the Arctic population. The current state of knowledge needs to be improved as regards the effects of increased exploitation and as regards the measures needed to provide long-term sustainable protection. Especially sensitive areas must be protected from exploitation and the reports produced by the Arctic Council should focus on increasing the level of protection. Sweden will also promote greater use of environmental impact assessments in the Arctic, for example in the mining industry, shipping and oil extraction. An agreement on stronger rules of consideration and tougher restrictions on oil discharges and regarding the risks associated with oil transportation is also needed. Cooperation with the Barents Euro-Arctic Council on measures to combat what are known as hotspots should be strengthened.

4.1.3. Biodiversity

Changes in climatic conditions and the global spread of chemicals can have a serious impact on biodiversity in the Arctic. Shrinking sea ice leads to problems for species that live on or close to the ice. More open water causes increased indirect threats. Species composition is changing as a result of southern species starting to outcompete high-arctic species. Greater opportunities to extract fossil fuels in sensitive areas increase the risk of disturbances and accidents.

Knowledge about the occurrence of species and ecosystems needs to be strengthened as does knowledge about how biodiversity can be conserved and used in a sustainable manner so that ecosystem services can be safe-guarded by increasing the resilience of ecosystems.

4.2. Economic development

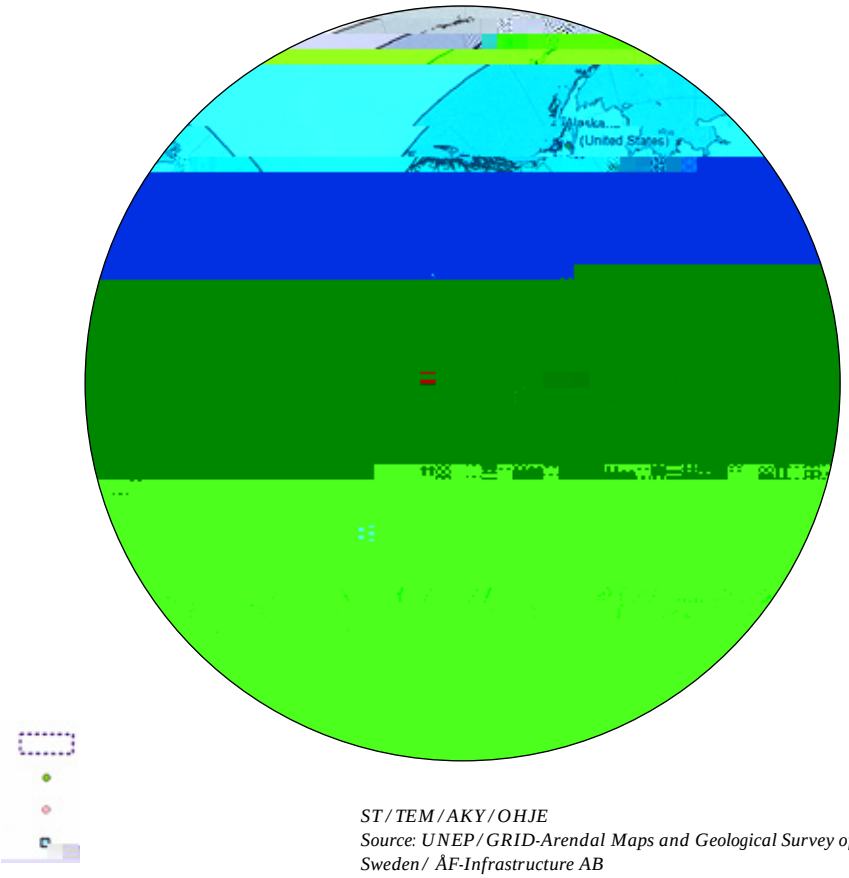
- Sweden will promote economically, socially and environmentally sustainable development in the entire Arctic region.
- Sweden's growth and competitiveness can be promoted by means of greater free trade and proactive e orts to combat technical trade barriers in the Arctic region.
- Sweden will work to ensure that the anticipated future extraction of natural resources (oil, gas and other minerals) and the use of renewable resources (including forest material) take place in a sustainable manner, environmentally, economically and socially. Improvement of the transport infrastructure is crucial. Activities shall be pursued using the safest available methods and technologies.
- Sweden will highlight the importance of respecting international law when extracting the energy resources of the Arctic.
- It is important to continue development of regional cross–border cooperation in the field of sea and air rescue and to tighten the safety requirements for sea transport in several sectors.
- Sweden will promote the use of Swedish expertise in the field of environmental technology.
- Swedish Trade Council o ce sta in Denmark, Norway, Finland, Russia, the United States and Canada, as well as in northern Sweden, should be given the task of building up their expertise in order to promote Sweden's commercial interests in the Arctic.
- The tourism sector should be developed in a sustainable manner and communications between tourist destinations should be improved.
- Sweden will contribute to the international e orts in the IMO aimed at limiting emissions of greenhouse gases from ships. Sweden will work for the adoption and entry into force of the IMO's Polar Code.
- Sweden should work to support Arctic research and to monitor the vulnerable marine environment.
- Sweden should work for the improvement of and cooperation between the research resources that exist in the region in order to contribute to the region's sustainable management and development.

The basic prerequisites for the people living in the Arctic are: a long-term optimism; opportunities for them to earn a livelihood; good communications and social care. In order not to undermine the social or natural environment for people living in the region, its economic developments must be sustainable in the long term.

cooperate closely on trade issues within the EU/EEA and in the Nordic Council of Ministers, and Sweden is working in the Council of Ministers to promote the free movement of people, goods, services and capital.

4.2.2. I

POTENTIAL AND KNOWN ARCTIC OIL AND GAS DEPOSITS AND MINES



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Source: UNEP/GRID-Arendal Maps and Geological Survey of Sweden/ ÅF-Infrastructure AB

ted prior to forest being harvested in year-round reindeer-grazing grounds inside the Arctic area. Sustainable forestry will be the aim all across the Arctic region.

La d ,a , a d f,a , c ,e

Raw material extraction in the Arctic also generates the need for long-term sustainable land transport. The cold climate places tough demands on both the permanent infrastructure and vehicles. Sweden is currently a world-leading supplier of vehicle-tests in the Arctic environment. Swedish haulage companies also have comparative advantages as a result of their expertise and research on how all types of vehicles should be adapted for extreme winter climates. The increasing demand can also be expected to intensify calls for investment in infrastructure, such as new or upgraded

harbours, railways, roads and airports.[14] To promote sustainable development in the raw material extraction and energy sector in the Arctic, Sweden should work for long-term and relevant transport solutions in the Barents region. The planning of such solutions will demand a close dialogue with Sweden's neighbouring countries and Russia.

Ma, e ec , a d ee , e a ac f

Shipping is the most energy- and cost-e ective way of transporting goods. Melting glaciers and ice-caps are gradually creating possibilities to navigate along new routes, even if it will take time before the conditions will allow regular commercial shipping on a large scale. Goods transported across the Arctic Ocean travel significantly shorter distances leading to energy savings, less emissions, trade development and less pressure on transcontinental routes. On the down-side, the large land and sea areas of the Arctic constitute a very vulnerable part of the world's natural environment and climate system. Care of the marine environment, both at sea and in coastal areas, is of crucial importance to Sweden. Sweden is of the opinion that a common sea and air surveillance that creates the

operating in the area have several thousand passengers on board. Swedish resources may be needed should a major accident occur o the coast of Norway or Arctic Russia. Better surveillance of shipping tra c, preventive measures and improved regional cross-border cooperation on air and sea rescue are all important components. The Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic agreement negotiated between the members of the Arctic Council will enable more flexible use of existing resources and make it possible to find cost-e ective solutions.

Ice-b, ea

E cient ice-breaking operations are required to promote maritime safety and improve accessibility in frozen waters. Sweden possesses leading expertise as regards shipping in Arctic conditions. Swedish ice-breakers may be able to support increasing commercial shipping in the Arctic as well as help with both the monitoring of the vulnerable marine environment and Arctic research. This includes standardisation work for e cient winter shipping, such as generally accepted Swedish-Finnish ice class rules. The development of technology and communications that facilitate ice-breaking operations are important from a Swedish perspective. The Swedish Maritime Administration's ice-breaking resources are well suited to Arctic and sub-Arctic waters at times when the vessels are not needed in regular activities.

Photo: Daisy Gilardini

E e,

The increasing interest in the Arctic in terms of energy depends on several concurrent factors. The region has large quantities of fossil fuels that can probably be extracted when climate change results in a reduced ice-cover. The region may have particularly large natural gas assets, possibly as much as a third of the world's undiscovered reserves. Furthermore, technological development has made it possible to exploit previously unextractable

reserves. A third factor that has contributed to the trend in recent years is the high oil prices caused by, among other things, unrest and uncertainty in North Africa and the Middle East.

It should be stressed, however, that extraction under Arctic conditions already takes place on a large scale, not least in Russia. The development alluded to here has however led to the focus shifting further and further northwards and towards the inner Arctic Ocean. The public debate sometimes gives the impression that this is a kind of "gold rush", a fight over resources that inevitably leads to a higher level of conflict in the region. This picture is incorrect. The area is characterised by a high level of cooperation and a low level of conflict. Overlapping claims must be dealt with according to international law.

In contrast to the five coastal states, Sweden has no direct national energy interest in the Arctic and does not take part in energy policy cooperation initiatives in the area. Swedish industry does however play a role in industries that support the energy sector, not least in the fields of ice-breaking, sea transport and consultancy based on knowledge of business activities in the Arctic climate. Sweden is indirectly a ected, as is the rest of the EU, if deposits in the Arctic are extracted since botse-bafrthtle io,dd t r innrc

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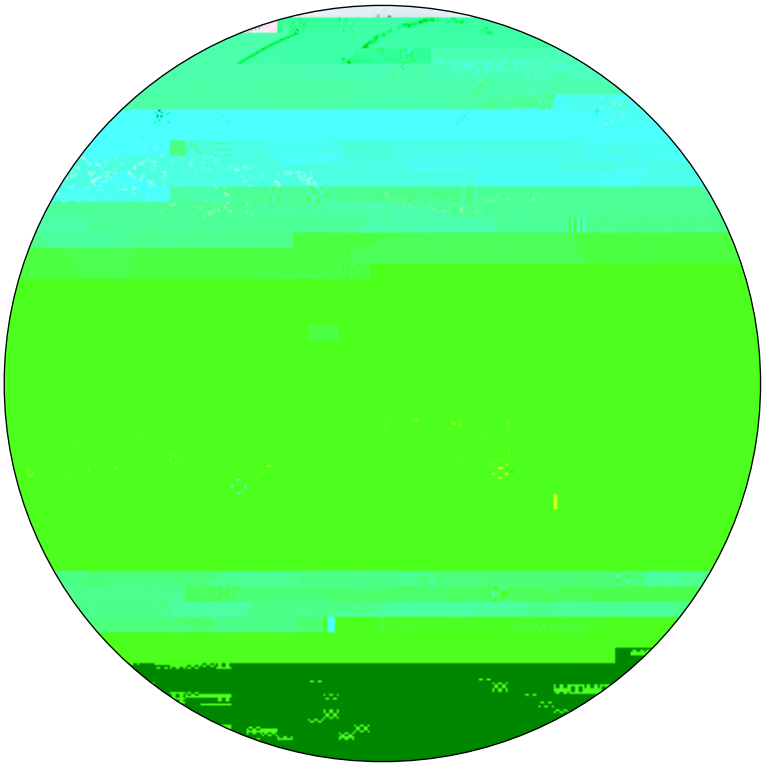

4.3.1. Geographical conditions in the Arctic affect health

The most important health indicators are average life expectancy at birth, maternal mortality and infant mortality. In most of the Arctic countries, those living in the Arctic area have a slightly lower average life expectancy than the population as a whole. Infant mortality is also slightly higher than for the rest of the country in general.

Most of the Arctic is characterised by widely scattered, small population centres. Long distance can lead to physical and social isolation and associated morbidity. But the relatively high degree of urbanisation in the Arctic limits the size of this risk category. The distances from traditional centres of power also provide greater scope for self-determination in everyday life, a form of practical Arctic empowerment. Long summer days and limited daylight during the winter can a ect people's circadian rhythm. Longlasting and severe cold is a risk factor for cardio-vascular disease. In the Nordic region, however, it is stressed that external physical conditions play only a limited role in health problems. Health determinants are mostly made up of factors relating to the exter-

noted, including tick-borne encephalitis (TBE)/meningitis. Other indirect e ects include a greater risk of contaminated drinking water caused by changes in the permafrost that a ect water sources.

High levels of organic pollutants, such as polychlorinated biphenyls (PCB) and other dioxins and certain heavy metals (mainly mercury), increase the risk of long-term health e ects. Significant emissions of pollutants, both into the air and water, occur in a large number of industrial areas in the Russian Arctic, leading to increased morbidity. The food supply chain is also a ected by the occurrence of pollutants. Sweden should therefore work to ensure that such point-source emissions are minimised as far as possible. This can be achieved by implementing a number of demonstration projects in the Russian Arctic. Barents cooperation can also play a major role in reducing local emissions and in remediating contaminated areas. Sweden is cooperating with other Arctic states to combat ongoing climate change and meet the ongoing social and health-related challenges. Focus on even stronger environmental cooperation in the Arctic also reduces the risk of emissions of compounds that could pose hazard to man and environment.

4.3.3. Impact on indigenous cultures and their industries

The report “Sweden facing climate
change” (SOU 2007:60) ailTJTf “Sain(h)hatTf changelanp)-5(-base(n np)-5(p)-5s)1TJ/20
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grazing pressure if current reindeer stocks are maintained. According to the various climate scenarios, the winters will not only be shorter but also warmer and wetter, increasing the risk of severe snow conditions with ice and frozen ground that the reindeer find very di cult to penetrate. Supplying the reindeer with extra food is costly and is not a viable alternative for reindeer husbandry, which, in terms of design and economics, is very much based on natural grazing.

Photo: Anders Ryman

If we then add socioeconomic development, in terms of intensified forestry activities, expanded infrastructure and more tourism to the equation, the risk of conflicts of interest between reindeer herding and other land use becomes even greater. The Arctic peoples' ability to preserve their culture, identity and way of life will come under pressure. This is why Sweden is taking a clear stance in favour of socially and culturally sustainable development for Arctic indigenous peoples with technological development to ensure ethically and biologically sustainable resource use. The Sámi culture has been given greater legal protection as a result of Sweden ratifying the UNESCO[15] Convention on the Safeguarding of Intangible Cultural Heritage. This is in line with the idea of long-term sustainable development and protection of Sámi cultural heritage.

Between 2008 and 2010, the Swedish Government has targeted special measures at increasing the participation of Sámi women in political processes and the Sámi Parliament has been working actively on the issue. Within the framework of the gender equality measures, the Sámi Parliament has also begun an exchange of experience with Finland, Norway and Russia on gender equality, men's violence against women, sexual harassment and abuse.

4.3.4. The survival of Sámi languages

Many indigenous languages are small and spoken only by a limited number of people. Indigenous languages often have a low status in society, and there

[15] *United Nations Educational Scientific* and *Cultural Organization.*

are not always education systems in place to give children the chance to learn them. Both teachers and teaching materials can be in short supply. The possibilities for passing on the language and culture to younger generations are exacerbated by the migration of younger people away from traditional settlement areas in order to acquire an education or work elsewhere.

Sweden has recently taken a number of measures to give Sámi populations

1. Arctic Council

The Arctic Council was established in Ottawa in 1996 on the basis of a system of cooperation between Arctic environment ministers – the Rovaniemi Process – that started in 1991. The Council is an intergovernmental forum devoted to shared regional challenges facing the States and people concerned. Its main activities concern the protection of the Arctic environment and sustainable development as a means of improving the economic, social and cultural well-being of the inhabitants of the Arctic.

The Arctic Council consists of the eight Arctic States: Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, Russia, Sweden and the United States. Six international organisations representing indigenous Arctic peoples have permanent participant status:

Aleut International Association (the islands in the Bering Sea between the United States and Russia)
Arctic Athabaskan Council (Canada and the United States)
Gwich'in Council International (Canada and the United States)
Inuit Circumpolar Conference (Greenland, Canada, the United States and Russia)
Saami Council (Norway, Sweden, Finland and Russia)
Russian Association of Indigenous Peoples of the North (representing around fifty indigenous peoples in Russia).

The Chairmanship rotates between the eight Arctic States every two years. In between the ministerial meetings, which conclude each Chairmanship, the work of the Council is led by a committee of o cials consisting of representatives of the eight Arctic States and the six indigenous peoples' organisations (*Senior Arctic*

2. The Barents Euro-Arctic Council

Barents cooperation is being implemented on the national level in the *Barents Euro-Arctic Council, BEAC* and on the regional level in the *Barents Regional Council, BRC*. The BEAC and BRC have a small joint international secretariat in Kirkenes in Norway.

The members of the BEAC are Denmark, Finland, Iceland, Norway, Russia, Sweden and the European Commission. Its chairmanship rotates every other year between Finland, Norway, Russia and Sweden, and each country's foreign a airs minister acts as chairperson. Canada, France, Germany, Italy, Japan, the Netherlands, Poland, the United Kingdom and the United States all have observer status.

The members of the BRC are 13 counties across northern Finland, Norway and Sweden and in north-west Russia. They are represented by their respective county governors. Chairmanship rotates among these 13 counties every other year in the same way as the chairmanship of the BEAC. The Swedish members of the BRC are the counties of Norrbotten and Västerbotten.