PROGRAMMING DOCUMENT

FOR THE SUSTAINABLE DEVELOPMENT OF GREENLAND 2014-2020

(2014/137/EU)

SIGNATURE OF THE PROGRAMMING DOCUMENT FOR THE SUSTAINABLE DEVELOPMENT OF GREENLAND

The European Commission and the Government of Greenland hereby agree as follows:

(1) The European Commission and the Government of Greenland held discussions in 2013 and 2014 with a view to determining the general orientations for cooperation for the sustainable development of Greenland from 2014 to 2020.

In the course of these discussions, the Programming Document for the Sustainable Development of Greenland was drawn up in accordance with Council Decision 2014/137/EU of 14 March 2014 and Regulation (EU) 236/2014 of the European Parliament and the Council of the 11 March 2014 laying down the rules and procedures for the implementation of the Union's instruments for financing external action.

(2) The agreement of the European Commission and the Government of Greenland on the Programming Document for the Sustainable Development of Greenland completes the programming process referred to in Article 4 of Council Decision 2014/137/EU of 14 March 2014.

Done at Brussels, on 28 October 2014, in three originals in the English language, two for the European Commission and one for the Government of Greenland.

FOR THE EUROPEAN COMMISSION

Andris PIEBALGS
Commissioner for Development

FOR THE GOVERNMENT OF GREENLAND

Kim KIELSEN
Prime Minister a.i., Minister of Nature and Environment, Minister of Housing

Executive summary

Greenland is a self-governing territory in the Kingdom of Denmark ruled by the Government of Greenland, Naalakkersuisut (hereinafter "the Government"). The 21st of June 2009 the Act of Greenland Self-Government entered into force replacing the Greenland Home Rule Act of 1979. This changed the constitutional status of Greenland within the Kingdom of Denmark and inter alia defined the natural resources of Greenland as being the property of the Greenlandic people.

Being a part of the European Community since 1973, through Danish Membership, Greenland formally withdrew from the European Community in 1985. Subsequently, a Treaty on Greenland's withdrawal from the Community was made declaring Greenland as a "special case", following which Greenland became associated to the Community as an Overseas Country[1].

Greenland is a territory remote from the EU, with a small population of 56,370 (2013) on the world's largest island facing challenging climatic conditions and a particular social and economic situation, as well as a cultural mix resulting from its past and present relationship with Denmark.

Greenland's economy is characterised by a very large and predominant public sector. Fisheries and fishing industries dominate export, and there is a developing private sector which includes international mining- and oil companies. The public finances are highly dependent on the block grant allocated by Denmark as well as the association of Greenland with the EU.

Following general elections in March 2013, a new government coalition was inaugurated in April 2013. Subsequently, the plan for the sustainable development of the economy and society along with specific sectoral strategies for the different underlying economic sectors are currently under revision by the Government.

The Government has presented its Political Economic Report at the spring session of the Parliament in 2014. The long term economic policy is to have a self-sustained economy and to phase out the annual block grant from Denmark. This presupposes fiscal sustainability, diversification of the economy and real economic growth.

There is broad political consensus that education and training is fundamental in achieving these long term sustainable economic developmental goals. From 2007 to 2013 the Government and the EU have gained valuable knowledge on the education and training sector, which was the focal sector for financial

[1] At that time, the association was in accordance with Part IV of the Treaty Establishing the European Economic Community. Currently the legislative basis is Part IV of the Treaty on the Functioning of the European Union.

cooperation on the basis of the Programming Document for the Sustainable Development of Greenland, agreed upon between the EU, Greenland and Denmark.

The Government has focused on education and training since 2004, which has been reflected in an increase in the budget for education and training from 14.8% of the Government budget in 2005 to 18.2% of the Government budget in 2013. Moreover, the Parliament in 2006 adopted the Greenland Education Programme which contained an overall education and training strategy covering the period until 2020.

In 2013 a revised education strategy was adopted by the Government. The Education Strategy and the Education Plan II comprising the Greenland Education Programme phase 2 will be handed out at the spring session of the Parliament in 2014. There is a broad political consensus on the vital importance of education as being the most relevant growth parameter for any future prosperity in the societal development of the country.

In general there is a need for an educated Greenlandic workforce in every economic sector. The focus on human capital is predominant and both the public and the private sector are devoting much attention to developing and maintaining its human resource capital.

In view of the above, education and training is selected as the focal sector for financial cooperation between the EU and Greenland outside fisheries. According to the Council Decision on relations between the EU on the one hand and Greenland and the Kingdom of Denmark on the other (2014/137/EU)[2], EU financial assistance should be provided mainly through budget support, taking into account Greenland's sound macroeconomic policy and public finance management.

In the first phase of the Greenland Education Programme (2007-2013), emphasis was put on vocational training, the acquisition of real qualifications for jobs requiring skilled persons and real competence courses for unskilled persons. In the second phase (2014-2020) emphasis will be put on the pre-school and elementary school system besides a continuation of the support for vocational education and training and the post-elementary school system in general.

[2] OJ L 76, 15.03.2014, p.1

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PART A. COOPERATION STRATEGY

1. EU cooperation objectives

Following, the withdrawal of Greenland from the EU in 1985, Greenland has been associated with the EU as an Overseas Country and Territory (OCT). The association is determined in Article 198 of the Treaty on the Functioning of the European Union (TFEU), which defines that the purpose of the association between the European Union and the OCTs shall be *'to promote the economic and social development of the countries and territories and to establish close economic relations between them and the Union as a whole'*. These objectives have been confirmed and further developed in the Council Decision on the association of the Overseas Countries and Territories with the European Union ('Overseas Association Decision - OAD)[3] (2013/755/EU).

Furthermore, there is a specific Council Decision on relations between the European Union on the one hand, and Greenland and the Kingdom of Denmark on the other (2014/137/EU). This Council Decision defines the rules and procedures for cooperation between the EU and Greenland outside of fisheries. The objectives of the Council Decision are:

1. To support and cooperate with Greenland in addressing its major challenges in particular the sustainable diversification of the economy, the need to increase the skills of its labour force, including scientists, and the need to improve the Greenlandic information systems in the field of Information and Communication Technologies.
2. To contribute to the capacity of the Greenlandic administration to formulating and implementing national policies in particular in new areas of mutual interest as identified in this document.

According to the Council Decision (Article 9), the EU's financial assistance to Greenland is to be provided mainly through budget support. Greenland fulfils all the necessary eligibility conditions for budget support, namely:

1. The existence of a territorial development plan which has been adopted and is in the course of implementation;
2. A stable macro-economic framework;
3. A credible programme of public finance management[4]; and
4. A high degree of openness and transparency in government operations.

The national strategies for the long-term economic development of Greenland are currently being scrutinised in order to be defined, debated and decided upon according to the procedures for such

[3] OJ L 314, 19.12.2013, p. 1.

[4] Fuller details and justification are provided below, and in Chapter 6 of this report

strategies. The 10-year sectoral strategies will contain fixed objectives, targets and baselines for the sustainable development of Greenland. Furthermore, the education strategy of Greenland is intended to ensure the further social and economic development of Greenland in light of the emerging global interest towards Greenland and the Arctic. As noted above, these areas fall within the scope of what can legitimately be supported according to the terms of the TFEU, the OAD and the Council Decision on relations between the EU, Greenland and Denmark.

2. Policy agenda of the Government

2.1. Overall policy

Greenland faces several particular challenges, linked not least to its remoteness from markets, Arctic climatic conditions and a small and widespread population on the world's largest island. Only about 15% of Greenland's land area is free of ice. The rest is covered by the world's second-largest ice cap. Greenland is the world's largest island, which easily covers four times the size of France, but very scarcely populated with its 56,370 inhabitants (2013). This small population is scattered widely over the country: 13 of the 17 towns have a population of between 1000 and 6000 citizens, and the capital Nuuk has a population of only 16,454 (2013). The towns account for about 85% of the population, whereas the rest of the inhabitants live in the 57 settlements, about half of which have a population of fewer than 100. Greenland's vastness, the small size of its towns and the harsh climate and fragile environment also entail specific challenges in terms of infrastructure, given that the towns are not connected by roads and are accessible only by boat or plane.

The increasing globalisation of trade and business also constitutes a serious challenge for large parts of principal business, in both the fisheries and other sectors. Compared to its competitors on the world market, the cost of living is high (salary, transport, etc.), while at the same time the productivity and educational level is low.

Greenland is further facing demographic challenges resulting from an ageing population. Population projections foresee a much larger group of elderly people and at the same time a decline in working age population. The result will, if political action is not taken, be an escalating deterioration in public finances.

The Government is addressing these issues through development of 10-year sectoral plans that shall support the overall long term political goals toward economic self-sufficiency. This goal requires sustainable and inclusive economic growth, increased productivity, diversification of the economy to include more economic pillars to support the sustainable development, and to address the long term challenges of an ageing population. The sectoral plans are currently being developed by the Government

and an overall long term strategy for sustainable and balanced development will be published before the end of 2014.

2.2. Arctic issues

Greenland, Denmark and Faroe Islands have a collective Arctic Strategy covering the period from 2011-2020, which is addressed as Kingdom of Denmark's strategy for the Arctic.

It is the Kingdom of Denmark's common objective that the Arctic and its current potential must be developed to promote sustainable growth and social sustainability. This development must take place firstly to the benefit of the inhabitants of the Arctic and go hand in hand in safeguarding the Arctic's environment.

Decisions in the Arctic have to respect the rule of law and shall safeguard agreed international principles of law to ensure a peaceful, secure and collaborative Arctic. The purpose of the strategy is to reinforce the foundation for appropriate cooperation on the many new opportunities and challenges that the Arctic is facing.

It is a central goal that decisions regarding management and utilisation of resources and protection of the environment are taken in accordance with international obligations and that they are based on the best scientific advice that supports healthy, productive and self-sustaining communities. Based on good collaboration within the Kingdom, policies and mechanisms must be organised in close cooperation with other Arctic nations and other stakeholders with an interest in the Arctic.

The Kingdom's approach to security policy in the Arctic is based on an overall goal of preventing conflicts and avoiding the militarisation of the Arctic, and actively helping to preserve the Arctic as a region characterized by trust, cooperation and mutually beneficial partnerships.

Responsibility for ship traffic including cruise tourism and the necessary Search and Rescue (SAR) capabilities is a joint responsibility between Greenland and Denmark. The SAR capabilities are organised through the Joint Arctic Command under the Danish Defence which is the responsible authority for the military defence of Greenland, surveillance, upholding of sovereignty, inspection of fisheries, environmental surveillance, pollution control, maritime survey and support assignments for the civil society.

Regarding maritime safety and due to the increasing number (and size) of cruise passenger vessels sailing into Arctic waters, a dialogue (which could include voyage planning, with coordinated sailing, and avoiding navigation in uncharted waters at all times) will be sought with the cruise ship industry with the purpose of minimising risks from a maritime safety perspective.

2.3. Fisheries

On January 1, 2007 the new Fisheries Partnership Agreement[5] between EU on the one hand, and the Government of Denmark and the Government of Greenland, on the other came into force. The main objective of the Fisheries Partnership Agreement is to strengthen the relationship in fisheries between the EU and Greenland.

While the Fisheries Partnership Agreement is the overall framework for cooperation in fisheries, the Protocol and its Annex lay down the conditions for EU vessels carrying out fishing activities in Greenland. This entails that EU vessels can fish in Greenlandic waters for shrimp, cod, capelin, Greenland Halibut and redfish, among others, within certain limits (quotas) and subject to technical measures and conditions. The Protocol[6] provides for payments for fishing opportunities in Greenland and for supporting the Greenlandic fisheries sector through a multi-annual Sectoral Policy Program. The Protocol is renegotiated with intervals in order to reflect the development in the fish stocks and cooperation between the two parties. The current Fisheries Protocol covers a period of 3 years (2013-2015).

As, the EU supports the development of Greenland's fisheries policy, management and administration through a sectoral policy program, this entails EU support for e.g. training of officials, digitalisation, control of offshore and inshore fisheries, biological surveys and the development of management plans. The Administration of the protocol and budget support is handled by the Greenlandic Ministry of Fisheries, Hunting and Agriculture. In the frame of the Joint Committee under the Agreement, the EU and Greenland review on an annual basis expenditure and outcomes in the areas covered by the Sectoral Policy Support.

The Government's main objective in fisheries policy is that fisheries will continue to be the main export contributor and be a factor for a sound economic development. Fisheries shall therefore continue to develop, subject to scientific advice on stock status. The Greenlandic industry must be provided with the best framework possible for keeping up profitable fisheries that benefit as many people in Greenland as possible. This shall be achieved by utilising the resources sustainably, e.g. Greenland aspires to certify more of its established fisheries, in accordance with the Marine Stewardship Council (MSC), as well as developing and modernising the fisheries and continuing to upgrade and develop the scientific research. Consequently, by investing in human capital, the EU funding for education and vocational training contributes towards sustainable management and exploitation of fisheries resources, in addition to the fisheries sector-specific support provided through the Fisheries Partnership Agreement.

[5] Council Regulation (EU) No 927/2012 (OJ L293, 23.10.2012)
[6] Council Decision 2012/653/EU (OJ L293, 23.10.2012)

2.4. Social sector

Several reforms are planned within the social sector targeted areas such as old age pension, early retirement, housing benefits and social security benefits. At present a reform is underway on the legislation of assistance to children and young people. Legislation on these matters is expected to be passed by parliament in the spring session of the Parliament of 2014[7]. The aim of the Government policy in this area is to strengthen the rights of the child and improve the means of addressing the needs of children, who are experiencing neglect of care. The legislation will further secure that all activities relating to children will be based on the UN Convention on the Rights of the Child.

With these reforms and initiatives the Government wishes that as many people as possible shall be self-sustaining and that the system should provide the necessary incentives for people to enter education and subsequently the labour market. Many employees in the social sector are only partly qualified to their positions. Better education of the population thus has both direct and indirect positive effects on the social sector.

In a long term perspective a strengthened social sector further contributes to breaking negative social inheritance and thus prevents perpetuation of social problems, lack of education and unemployment.

2.5. Labour Market

A revision of the Employment Plan has been prepared by the Government. The Employment Plan 2014-2017 focuses on initiatives to decrease unemployment among target groups who are particularly susceptible to unemployment: youngsters under 29 years, people with no formal education, inhabitants in settlements and remote districts and finally the part of the population who are not ready for the labour market.

The labour market is characterised by a discrepancy between the demand and supply of qualified labour. This results in concurrent unemployment and import of labour primarily from Denmark. The structural challenges creating this situation were identified as being lack of education and lack of workforce mobility in the Political Economic Report 2013. The Government is addressing the lack of workforce mobility through relocation subsidies, travel subsidies for seasonal workers and assignment of accommodation when recruiting new personnel.

Another challenge is a lack of qualified personnel in the labour market institutions. These challenges are sought addressed by the Government through the high priority given to education and through initiatives focusing on regional development and competence development of the local workforce in the different

regions. Initiatives comprise both competence development and re-education within future growth sectors, commercial development projects and profitability studies on new potential commercial developments.

The Government initiated a competency gap assessment in 2013 which will be continued in the coming year. The assessment is organised by a steering committee composed of representatives from the Ministry of Finance and Domestic Affairs, the four municipal managers and the manager of the Municipalities' Association. The competency gab assessment will result in a plan for providing the necessary upgrading of qualifications within the public administration. The assessment and the resulting plan are scheduled to be reported to the steering committee at the beginning of 2015.

To reinforce the capacity of the Government the administration emphasises the well-being and competence building of the civil servants. To this end the Governmental unit for human resources carries out assessments of the working environment. This includes personal development consultations with each employee's immediate management on an annual basis on all levels of the organisation. The Government further allocates resources to training and to language courses for the civil servants. The overall objective is to achieve long term employment of highly qualified civil servants[8].

2.6. Mineral Resources

The Governments mineral resource and hydrocarbon strategy covers a 5 year period. The strategy has been revised for the period 2014-2018 and will be distributed at the spring session of the Parliament 2014. In the coming period the strategic focus will be maintained on promotion of the mineral potential and focus will be increased on socio-economic impacts and sustainable development. The successful promotion effort of the mineral potential during the previous years has contributed to the current level of activities in exploration and potential exploitation projects. The high activity level and thereof increasing socio-economic impact on local communities has resulted in increasing focus on socio-economic challenges.

The responsibility for mineral resources is divided between three governmental agencies: The Mineral License and Safety Authority under the Ministry of Industry and Mineral Resources is responsible for license administration and technical inspections. Authority of political, geological, legal and socio-economic issues along with marketing of mineral potential is administratively placed within the Ministry of Industry and Mineral Resources. The responsibility of environmental issues related to mineral

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[7] Point No. FM 2014/137 at the spring session. Scheduled readings: 1st : 18-03-2014, 2nd : 08-04-2014, 3rd : 23-04-2014

[8] Long-term resident" is defined as at least 5 years of residence (2008-2012). Short-term residents (<5 years of residence 2008-2012) that are born in Greenland not included (87.2% if these persons are included). See Annex 2.

resource projects is placed in the Environmental Agency for Mineral Resource Activities under the Ministry of Nature and Environment.

Social impact assessments, environmental impact assessments and impact benefit agreements are prepared in connection with application for a mineral resource project. The impact benefit agreements are trilateral agreements involving the relevant company, the municipality/municipalities and the Government and can include targets for e.g. Greenlandic labour, local companies, tender and procurement and educational initiatives. Public hearings are organised as local meetings and relevant material can be found on the internet.

The sector for exploration and exploitation of mineral resources is a potential growth sector in the economy. Geological surveys and the results of interesting prospects have been marketed, as they are the main parameters besides the institutional framework of legislation, fiscal policy and political stability to attract international oil companies and mineral companies to Greenland. In the event of mineral exploitation activities the demand for a qualified labour force will be further increased. This is the case for both the direct labour demand of the mining activities and the indirect labour demand from the secondary activities (e.g. logistics and catering). In the event of exploitation of oil or radioactive materials further specialized personnel is required, as these activities will necessitate increasing institutional capacity for inspection and supervision.

2.7. Tourism

The current Tourism Strategy covers the period 2012-2015 and emphasises short term growth in the tourism sector. Growth in the short term is necessary to develop the professionalism, branding, legal framework and statistical documentation needed for long term development of the sector. In a long term perspective growth in the tourism sector will imply other developmental investments in infrastructure and accessibility. The strategy focuses on three main goals:

1. A growth in the number of tourists in Greenland on 5 % from cruise tourism and 10 % on land based tourism,
2. A growth in the number of people employed in the tourism sector on 5 % and
3. A growth in the tourism corresponding to an increase in earnings of 5 %.

In order to achieve these goals the Government has prepared a benchmark analysis of the tax and duty structure on cruise tourism passenger fees and airport duties in order to assess the competitiveness of the tourism sector. The competitiveness was compared to Iceland and Svalbard which offer comparable tourism experiences. The conclusion of the analysis is that the level of taxes and duties is a barrier for development of the tourism sector. Based on the conclusions of the report a task group consisting of representatives the Ministry of Finance and Domestic Affairs, the Ministry of Industry and Mineral

Resources, and the Ministry of Health and Infrastructure will propose a reform of the tax and duty structure in order to improve the competitiveness of the sector.

In 2012 the Parliament passed a law[9] which provides improved incentives to develop and invest in tourism activities, facilities, and infrastructure through exclusive rights of activities in delimited areas[10]. These rights are conditional on investment and development obligations assumed by the investors. The first concessions are expected to be granted in 2014.

The Government is working to improve the tourism statistics in order to facilitate better monitoring and planning within the Government and for targeting promotion activities to countries and market segments.

The Government has allocated EUR 4.17 million to development subsidies for land based businesses and the tourism industry. Among other initiatives under this heading, the national tourism council (Visit Greenland) has a service contract with the Government of EUR 2.1 million for promotion, concept development and analyses within the sector.

The above described strategic initiatives (benchmark analysis, adjustment of the legal framework and development of statistics) are milestones in the Tourism Strategy which have been wholly or partly fulfilled at present. The growth targets and the milestones are continuously monitored by the Government using statistics on tourism from Statistics Greenland, but no mid-term evaluation is scheduled to take place.

The sector needs qualified staff, administrators and improved language capabilities (particularly in English) among the people employed in the sector in order to accommodate future increased tourism demand.

The infrastructure presents a challenge for future development of the tourism sector. The towns are not connected by roads and all transportation between towns thus takes place via air or ship traffic. As mentioned above the Government is currently working on a proposition for a reform of the tax and duty structure on ship and air traffic.

2.8. Climate and Energy

In 2011 the Government launched an initiative aimed at mainstreaming climate adaptation efforts in the management and development of various sectors. As an initial step, a series of sector based assessments are produced in order to facilitate an overview of regional and local climate effects on the specific

[9] Act. No. 19 of December 2012 'Concerning concessions for tourist activities in selected areas'

[10] There is no private property right on land in Greenland. For this reason incentives for investment have to be created through concessions and exclusive rights.

sectors. The assessments are developed in close cooperation with the relevant stakeholders and contain accounts and recommendations on climate adaptation measures within the various sectors.

An active climate policy is pursued by the Government. Around 70 % of the publicly produced electricity comes from renewable energy sources and the Government allocates funding for investigations into possible new sites for hydroelectric plants. The largest source of CO_2-emissions in the energy sector is heating, and investigations are conducted on how to advance geothermal heating projects. Further resources are allocated to research and development of renewable energy resources and energy efficiency. Research and development including operation of energy facilities requires technical expertise and skills training in order to supply the sector with a domestically based workforce. The Government is addressing this issue by including the development of study programmes within natural sciences in the Greenland Education Programme. The study programmes will be established at the Greenland Institute of Natural Resources in collaboration with the faculties of natural science at Aarhus University in Denmark and the University of Manitoba in Canada. Further consolidation and development of the engineering educations in Greenland at the Artic Technology Centre are also priorities of the Government in this context and therefore included in the programme.

A motion for a resolution requesting Denmark to make a territorial reservation for Greenland's emission reduction commitments in the second period of the Kyoto Protocol has been passed by the Parliament. The relatively sparse industrial development of Greenland compared to the industrialised countries taking part in the agreement is the rationale for the reservation[11]. If a reservation for Greenland is not made, Greenland will be included in the commitments assumed by Denmark. This means that the mitigation commitments of an industrialised country will be imposed on a territory labouring to develop and diversify its economy.

The Government has the intention of taking part in a 2015 global agreement on climate change under the United Nations Framework Convention on Climate Change (UNFCCC) with broad participation provided that the new agreement will take into consideration national circumstance and the conditions of countries with industrial and economic development needs.

[11] In the event of mineral resource projects, industrialisation will take place in some sectors which will significantly increase the emissions of greenhouse gasses in the second commitment period of the Kyoto Protocol and beyond. This will render ambitious emission reduction commitments relative to a 1990-baseline impossible without the allocation of a large number of emission allowances. Emission reduction commitments will negatively impact the willingness of investors to invest in Greenland and thus hamper economic diversification and development as investors will incur costs for CO_2-quotas.

2.9. Environment

The Arctic environment is very sensitive to environmental impacts. Basic issues such as disposal of waste are still to some extent unresolved challenges in the environmental administration.[12] Data on waste management in Greenland as a whole does not exist at present. The data which does exist is primarily from larger towns with relatively well-functioning waste management compared to the standards in Greenland. This data is therefore not valid and representative for the country as whole.

As is true for most sectors in Greenland, the environmental management is challenged by the very low population density and the fact that there are no roads between the towns. This complicates utilisation of modern waste processing facilities. Even the most modern waste processing facilities in Greenland would be considered outdated in most of the industrialised world. Recruitment of skilled operators presents a further challenge particularly in the smaller towns and settlements.

A formal education for waste management workers is being prepared within Tech College Greenland as a part of the Greenland Education Programme. This initiative will ensure a better handling of waste-type fractions and correct treatment of filtered hazardous waste.

A new environment profile for OCT's, including Greenland and climate change aspects, is under preparation. Results of this environment profile will be considered and addressed (if and when relevant) in the context of the implementation of this Programme for the Sustainable Development of Greenland[13].

2.10. Biodiversity

Management of living resources is systematically organised within the Government. The responsibility is divided between the Ministry of Nature and Environment and the Ministry Fishery, Hunting and Agriculture. The Ministry of Nature and Environment is responsible for the overall international agreements and conventions regarding biodiversity and overall nature conservation, conservation of habitats and protected areas (among others The National Park, The World Heritage Site and the Ramsar[14] sites). The Ministry of Fishery, Hunting and Agriculture is responsible for the management of species of fish, birds and terrestrial and marine mammals. Further the Government allocates an amount of EUR

[12] An environmental profile for Greenland can be found in annex 5.

[13] In line with Article 3.2 of the Council Decision and as described in the last paragraphs of Chapter 5.2 of this document.

14 The Convention on Wetlands of International Importance, called the Ramsar Convention, is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources

6.8million (Finance Act 2013) to the Greenland Institute of Natural Resources who is responsible for biological counselling to the Government. Management plans for living resources are being updated continuously with counselling from the Institute and advice from the Hunting and Fishery Board. These plans include quotas for the fishing industry and professional hunters as well as quotas in some species for recreational hunting. Further areas of special interest are appointed where species can live without being subject to hunting of any kind.

2.11. Food safety

Greenland has a production of meat from wild, semi domesticate and domesticated animals for the domestic market which could be expanded to an export sector in the future. Fish products are currently the main export of Greenland. The focus of the Government regarding food safety issues is a gradual strengthening of the effort until it is possible to assume full responsibility of the administrative area which is currently implemented in collaboration with Denmark. There is a continuous communication and development on this issue with the Danish authorities. A cooperation agreement with Denmark has been established which encompasses a peer-to-peer training programme for personnel of border inspection posts. A similar agreement will be made regarding veterinarians at the inspection posts and slaughterhouses. Furthermore Greenland will be connected to the EU system TRACES. These developments are considered a stepping stone towards enhanced food safety and increased export opportunities.

At present no local inspection assistants are available to fill out the positions and as a consequence personnel are recruited from Denmark. In the near future personnel must be recruited to the coming border inspection posts as well as technical staff to fill the positions as veterinarians, food safety technicians and teachers in food safety and hygiene.

The EU-Greenland relations emphasise strong relations between the partners and the ability to respond to the global challenges, allowing for the development of a proactive agenda and the pursuit of mutual interests e.g. regarding food safety, a council decision, 2011/408/EC regulates the rules and procedures on sanitary controls for the import of fisheries products from Greenland into the EU.

2.12. Sustainable Development

The Government has adopted a policy aimed at contributing to a higher standard of living and quality of life and at ensuring continuous and sustainable economic progress in the increasingly globalised world economy, through provision of a critical mass of qualified, flexible and competitive workforce.

The Government states in the Political Economic Report 2014 that structural changes are needed in order to address the challenges faced by Greenland in the long run. This includes a higher level of competences, education and geographical mobility. Future projects in the mineral resource sector can contribute to sustained economic growth and thus contribute to sustainable development and increased welfare. However, this will require investments from foreign companies, and a high level of education and expertise in both the private sector and the public administration.

An important criterion with regard to the formulation of the policies of the Government is sustainability in developmental and fiscal matters. It is of high priority to maintain the current level of welfare and to

conduct a fiscal policy that is sustainable in the long run. The increasing number of elderly people in the population creates new challenges for the Government since this group has a low labour force participation rate and puts more pressure on the public finances through pensions and health care. Simultaneously there are relatively fewer people in the working age population to carry the expenses. The effects of this demographic development is illustrated in Figure 1: Dependency ratio and forecast" which shows that each individual of working age must provide for relatively more people in the coming years.

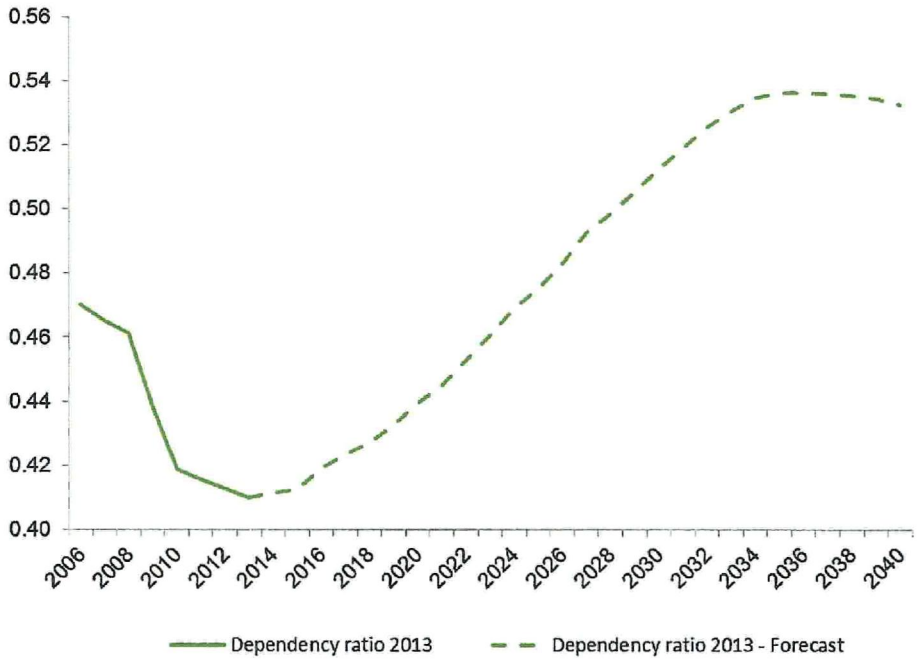

Figure 1: Dependency ratio and forecast[15]

To address this development the Government is planning an extensive reform programme. The reform programme has the following overall objectives[16]:

- economic growth,
- sustainable public finances,
- increased employment,
- increased completion of qualifying education,

[15] Source: The Ministry of Finance and Domestic Affairs

[16] Political Economic Report 2014, The Ministry of Finance and Domestic Affairs. (http://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Finanser-og-Indenrigsanliggender/Politisk-Oekonomisk-Beretning) currently available only in Greenlandic and Danish

- a well-functioning welfare system targeted towards those who need it the most and ensuring that the weakest groups can maintain a foothold in the labour market,
- simplification and adjustment of the public sector.

It is of vital importance that the revenue base of the Government is expanded and diversified. This demands initiatives within the mineral resource sector, the tourism sector and the fisheries sector and underlines the necessity to improve the productivity of the workforce through education.

Reforms will be proposed on taxes, welfare and pensions. Further, analysis and reform proposals regarding the housing sector are being prepared.

2.13. Education

Since 2006 the Greenland Education Programme has been the central focal point of the education policy. The programme, which was adopted by Parliament in March 2006, comprises two phases, phase 1 running from 2006 to 2013 and phase 2 from 2014 to 2024. The programme is a part of a long-term strategy to contribute to Greenland's development into a more self-sustaining economy in which a well-educated and well-trained population is paramount. The Greenland Education Programme phase 2 has been expanded to accommodate the 10-year planning horizon of the Government and will thus run from 2014 to 2024. The Greenland Education Programme phase 2 comprises the Education Strategy 2014 and the Education Plan II.

Education is a central parameter in achieving the long-term goals of the Government; both in terms of providing the population with the necessary means to take up positions as skilled labour and further in order to secure the administrative and institutional capacity to provide counselling and implement the administrative and practical consequences of reforms.

Education will enable more people to be self-sustaining and thus take pressure off the public sector. Further, it will strengthen the capacity of the public institutions to accommodate those who are not self-sustaining or are experiencing social problems.

The Government has maintained a clear and concrete focus on education and training since 2002. A reform of the basic elementary education sector took place in 2003. This progressed to the formulation of a new policy and action plan covering post-elementary education and training. In 2009 a reform of the high school system was initiated and this reform was fully implemented in 2012.

It is paramount to break the negative social inheritance and secure the inclusion of children into the education system. By increasing the focus on the early stages of the education system, inclusion can be achieved at earlier stages in the children's development.

Therefore, the focus on elementary school leavers who drop out of the educational system after graduation will be maintained in the second phase of the programme. In 2012 12% of the elementary school leavers continued directly to a youth education and 56% have completed a post-elementary education at the age of 35. Efforts to respond to the challenge of drop out are taking place at several stages in the system as focus on preventive effort in the early stages will decrease the future need for remedial efforts at later stages. For this reason strengthening of the pre-school and elementary school is a priority for the Government as these stages of the education system should equip the pupils with the necessary qualifications to take up further education. The Government will also put increased focus on the current young people outside the education system and seek to reintegrate them in the education system.

Moreover, the Government proposes directing a strategic initiative at the sectors that can yield future economic growth or where demand for specialised manpower is high, like tourism, construction, mineral resources, health, social science and education.

On a general level phase 2 of the Greenland Education Programme, which covers the period 2014-2024, will represent a more holistic approach based on the experience gained through the first phase of the programme.[17] Increased focus will be put on the pre-school and elementary school system and on youth educations, particularly vocational education and training. Focus will also be on the transition from elementary school to youth educations and on increased use of ICT in the education system.

In the Greenland Education Programme phase 2 the pre-school and elementary school, which are administratively placed under the jurisdiction of the municipalities, will be included as focal areas of the programme. The Government has committed resources to initiatives within these areas but the responsibility of the development of these parts of the education system remains with the four municipalities. For this reason most of the initiatives in these areas will be implemented within municipal auspices and the municipal budgets. The Government will facilitate initiatives in these areas through changes in legislation and framework conditions, policy dialogue, teacher training and facilities. An overview of initiatives and financial commitments is included in chapter 6 of this document.

The Greenland Education Programme phase 2 is a revision and refocusing of the existing extraordinary education effort of the Government under the Greenland Education Programme phase 1. The Government has committed EUR 68 million to the Greenland Education Programme in 2014. Some activities and initiatives from phase 1 will be maintained and kept in operation while others

[17] A description of the Greenland Education Programme phase 2 is provided in Part B of this document.

will be reformed and refocused based on the lessons learned during phase 1 described in chapter 4 of this document. Within the appropriation of the programme refocusing of initiatives will take place. The initiatives that constitute the reform of the programme and the corresponding financial commitments of EUR 21.45 million in 2014 are described in chapter 6.

The Government will distribute the revised overall education and training policy to the Parliament at the spring session of 2014. The preparation of the Greenland Education Programme phase 2 also involves stakeholders across the country, including boards and committees on the educational institutions as well as student organisations, non-coalition political parties, labour- and employer unions and other relevant stakeholders. These parties are and will be included in the preparatory workshops leading up to the final formulation of the programme.

Language teaching is highly prioritised in the teaching plans for the elementary school. Greenlandic and Danish is taught at all grades and English is introduced from the 4th grade. It is the intention of the teaching that the pupils become functionally bilingual (Greenlandic and Danish) and able read, write, speak and understand English[18]. At elementary school, vocational education and training, and high school the Government policy is aiming at a fully bilingual education system. However, the policy regarding vocational education and training also includes provision of courses from a monolingual Greenlandic perspective in order to accommodate students who do not speak Danish. At university level many educations are not available in Greenland. University level studies will generally require proficiency in English as well given the international nature of the academic environment and the fact that many educations are not available purely in Greenlandic or Danish.

The Government has further prepared a language strategy for distribution at the spring session 2014. The strategy aims to ensure that the whole population will be able to use Greenlandic in their everyday life. The Ministry of Education, Church, Culture and Gender Equality will prepare a report and an action plan on the subject. The action plane is expected to be ready for publication at the autumn session 2014. This will enable the Government to take into account the conclusions and initiatives in the action plan during the preparation of the Finance Act for 2015.

In charge of implementing the Greenland Education Programme is the Ministry of Education, Church, Culture and Gender Equality in close collaboration with other ministries and stakeholders. The Ministry of Finance and Domestic Affairs is involved in all the stages of programme implementation and close links and mechanisms are already in place to ensure coordination with all the implementing government departments from the present programme period.

[18] Teaching plans for the elementary school can be found at: http://www.inerisaavik.gl/publikationer/laereplanerne/ (only available in Greenlandic and Danish

Greenland applies a multi-annual budgeting system with three-year projections covering all budget chapters. A budget including municipal areas of jurisdiction is included in Part B in this document.

3. Assessment of the political, economic and social situation

3.1. Political situation

Greenland is a country with a special constitutional link to Denmark and has – since the entry into force of the Greenland Treaty on 1 February 1985 – been one of the Overseas Countries and Territories (OCTs) associated with the EU in accordance with Part IV of the Treaty on the Functioning of the European Union (TFEU). This followed a consultative referendum in Greenland in February 1982 in which 52% of the voters were in favour of altering Greenland's status vis-à-vis the EU. Greenland's internal status in relation to Denmark changed on the 12th of June 2009 Greenland's when the Act on Greenland Self-Government came into force and Greenland is now a self-governing part of the Kingdom of Denmark.

The Government consists of the Premier and eight ministers, who are each responsible for a ministry. The current Government was elected in March 2013 and the next general elections will take place in March 2017 at the latest. The Government's policy is supported by a coalition of two parties (Siumut and Atassut). There is a broad and general political consensus in Parliament about the high priority given to education and training in addressing the long term challenges.

Greenland's governance structure is decentralised with a central Government in the capital Nuuk and 4 local municipalities across the country each covering a number of towns and smaller settlements. The local municipalities have authority and responsibility regarding a number of tasks, among other concerning the education and training system, most notably the pre-school and elementary school area. However, the Government defines the framework conditions for these areas and assists with consultative, supporting and monitoring tasks. Further the Government has a supervising responsibility for the public schools.

With the self-governance act of 21 June 2009 the natural resources of Greenland were defined as being the property of the Greenlandic people, which along with the right of Greenland to enter into international agreements[19], has defined the right of the Government of Greenland to enter into agreements concerning exploration and exploitation activities.

[19] Act No. 577 of 24 June 2005 'Concerning the conclusion of agreements under international law by the Government of Greenland'

3.2. Economic situation

Greenland has rapidly become a modern society inspired by the Danish welfare model. However, the strength of its economy remains dependent on external transfers. Exports account for 20 % of GDP, to which fisheries contribute about 90 %. Greenland's overall budget for 2014 totals approximately EUR 900 million. Of this amount, EUR 486 million is funded by the block grant from Denmark, almost EUR 273 million by tax revenues and EUR 104[20] million by other revenues. Denmark's support of the budget accounts for 54% of the national expenditure budget. The support is expected to be continued in the medium term.

Furthermore, the financial support from the EU allocated through the Council Decision on relations between the EU, Greenland and Denmark and the Fisheries Partnership Agreement including its protocols covered EUR 25.9 million and EUR 17.8 million respectively in 2013.

The objectives of a more independent and self-sustained economy based on its own resources and greater integration into the world economy are mutual interests of Greenland and the EU as defined in Article 5 of the Overseas Association Decision (2013/755/EU). The extreme arctic climatic and remote geographical conditions combined with a sparsely populated island and its lack of a well educated population and not least its current dependence on a limited number of natural resources make this goal challenging.

Greenland's economy is marked by a very large and predominant public sector and a developing private sector. Greenland's exports are very dependent on the fisheries sector. The commercial fisheries are highly productive while smaller scale inshore fishing does not achieve the same high productivity. The sector is vulnerable to external shocks and a high wage level that weakens competitiveness.

Greenland's GDP per capita (EUR 32,400 current prices in 2012[21]) is below that of Denmark but above the EU average[22]. The price level in Greenland is about 18% higher than in Denmark[23] and can thus be

[20] Source: Finance Act for 2014, exchange rate: 7.5 DKK/EUR

[21] Source: Statistics Greenland, Table: (NRE10) "Trends in GDP by unit, account and time" (http://bank.stat.gl/Dialog/varval.asp?ma=NRE10&ti=Trends+in+GDP+by+unit%2C+account+and+time&path=../Database/Greenland/National%20accounts/&lang=1) , exchange rate 7.5 EUR/DKK

[22] Denmark 43,900 EUR/cap., European Union (28 countries) 25,500 EUR/cap. (source: Eurostat – GDP and main components [nama_gdp_c] accessed on 20th of March , 2014)

[23] Statistics Greenland: Undersøgelser fra Grønlands Statistik "Prissammenligning mellem Grønland og Danmark 1994" 1994:2. The Ministry of Finance and Domestic Affairs considers this estimate to be valid still.

estimated to be about 61% higher than the EU average[24]. The Ministry of Finance and Domestic affairs has estimated the GDP per capita adjusted for the price level to be EUR 24,400.

Exploitation of mineral resources could have considerable economic potential in the longer term, but no large scale exploitation activities have taken place yet. Even if large scale projects do occur in the future the effect on employment and incomes might be quite modest depending on the activities.

Tourism is another sector with great potential, but development of this sector will have a low starting point. For this reason the Government is currently setting short term goals for the sector in order to secure the necessary increase in capacity, and create the basis for long term development.

The business sector includes several international mining and oil companies who have exploration and prospecting licenses and carry out activities within the country.

The remainder of the business sector is almost exclusively directed at the domestic market. This emphasises the need for development and sustainable diversification of the Greenlandic economy.

The Political and Economic Report 2013 of the Government pointed out that there has been economic growth in Greenland until 2011. In 2012 a fall in economic activity was observed. The fisheries sector made a positive contribution to GDP due to higher export prices on shrimp and halibut. The exploration activities in the mineral resource sector have also contributed positively to GDP. Further the continued shortage of housing and needs for renovation and redevelopment have caused high activity in the construction sector. Most of the construction activities are driven by public investment.

There are currently no estimates of GDP for 2013. The Economic Council expects a slight drop in overall economic activity for 2013 due to a further fall in exploration activity and a slight decrease in fisheries. Declines in shrimp catches are to a certain degree expected to be compensated for by high catches of other species. In recent years the fishing industry has been favoured by increasing prices for most species. Export prices are generally around 30% higher than in 2010. However, there is some uncertainty regarding future price developments.

For the economy as a whole, the Chairmanship of the Economic Council estimates that prospects for 2014 are zero growth; an improvement on 2013. The assumptions behind this estimate include a small growth in mineral exploration and a lower drop in building and construction investment than in 2013[25].

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[24] Price level indices (EU28=100), Denmark 136.5 (source: Eurostat – Purchasing power parities (PPPs), price level indices and real expenditures for ESA95 aggregates [prc_ppp_ind] accessed on 20th of March, 2014): ((1.18x1,365)-1)x100=61,07%

[25] The Economy of Greenland 2013, The Economic Council

According to the Political Economic Report 2014 the Government might deem it necessary to advance public investments in order to increase the activity in the construction sector.

The Government is fully committed to maintaining economic stability in the future and to continuing its commitment to economic reform programmes. Efforts are being made to increase productivity and competitiveness and diversify the economy into exploitation of mineral resources, tourism and the creation of small and medium-sized enterprises.

3.3. Social situation

The extreme climatic and geographical conditions in Greenland, its low population density and the economy's dependence on the fisheries and the public sector, presents specific challenges for the social situation of Greenland. Many small societies in the settlements and smaller towns have limited school and healthcare facilities and a limited business community apart from subsistence professions in fishing and hunting. The population in these communities, as well as some in the larger communities, often do not have the necessary education and personal resources to obtain permanent employment.

Greenland is experiencing some further social issues. The suicide rate was 0.83 per 1000 inhabitants in 2011which is very high in an international context[26]. Substance abuse is dominated by alcohol and hash. Hash is an illegal substance in Greenland and alcohol is heavily taxed (approximately EUR 58 per litre of pure alcohol[27]).

Existing statistics on abusers are limited. According to the National Pharmaceutical Institution between 23,100 and 53,000 defined daily doses of medicine against alcohol dependency per year were prescribed in the period 2007 to 2013. This corresponds to 190 to 412 persons in treatment assuming an average treatment period of 4 months per person. In 2005 to 2007 1.1% of the population were drinking alcohol daily and 11.6% were large-scale consumers[28]. A potentially harmful consumption of alcohol was found for 36% of men and 25% of women[29]. The health system is presently developing their data gathering practices in order to obtain statistics for analysis and planning purposes.

The Government is addressing these issues through the public health programme Inuuneritta II which includes the following focal areas: alcohol and hash, smoking, diet, physical activity, suicide prevention and pregnancy.

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[26] European Union (28 countries): 0.12 suicides per 1000 inhabitants (source: Eurostat - Causes of death - standardised death rate per 100 000 inhabitants [hlth_cd_asdr])

[27] Act. No. 19 of October 1992 'Concerning import duties'

[28] Defined as exceeding 14 units of alcohol for women and 21 units for men

[29] Estimated by screening using a CAGE-questionnaire

Municipal family centres have been established in 11 towns. At these centres it is possible to receive family counselling, crisis counselling and family development courses. Further extraordinary resources have been set aside by the Government for efforts directed at socially disadvantaged children and young people as well as victims of abuse. Municipal courses of treatment are available to abusers of drugs and alcohol.

The unemployment rate was 9.8% on average of the permanent residents aged 18-64 in 2012 which was a small increase from 9.4% in 2011. Unemployment statistics for 2013 is not yet available from Statistics Greenland. Unemployment in Greenland is subject to large seasonal variations due to the seasonal nature of the fishery and the associated fish processing.

Integration between social and educational initiatives is prioritised by the Government. The Greenland Education Programme phase 2 will show an increased emphasis on the pre- and elementary schools which are instrumental in uncovering and addressing social problems at an early stage. Providing the best possible conditions for children from socially disadvantaged backgrounds to achieve an education is recognised as an important means to break the negative social inheritance and avoid perpetuation of social problems.

The education sector comprises 24 elementary schools in the cities, 62 elementary schools in the settlements, 1 special school at elementary school level, 12 vocational schools, 4 upper secondary schools (high schools) and 3 higher educational institutions. There is also a specific institution responsible for developing teaching materials, methods, techniques and courses (Inerisaavik, The Institute of Arctic Education). To satisfy the need for increased capacity resulting from the implementation of the Greenland Education Programme, funding is continuously allocated to expand schools and build additional student residences. These activities are being monitored and planned within the Government. The education budget of the Government for 2014 is about EUR 175 million, which corresponds to 19.4% of the total budget.[30]

Local guidance and introduction centres called "Piareersarfiit" are situated in all 17 towns and in 1 settlement. The centres serve as local points of access for guidance on education, training and apprenticeship programmes, job placement for the unemployed and the development of individual action plans.

[30] The table attached in Annex 2 shows allocations to the various educational sectors in 2012 and 2013, which cover all education and training sectors, including public schools, upper secondary schools, vocational training programmes and higher educational programmes.

3.4. Environmental situation

The impact of climate change is both of local and global interest. With the world's second- largest ice cap, Greenland plays a crucial role in relation to global warming. The melting of the ice cap, which has already thinned visibly around its southern and eastern margins, would entail a significant rise in sea level worldwide. Moreover, the freshwater from the ice cap may also affect the thermohaline circulation in the oceans and by doing so cause further disruptive effects for the climate, ecosystems and marine life.

Projections of future climate evolution using global and regional climate models for Greenland towards the end of the century compared with 1961-1990 show general temperature increases of 7-8 °C which is significantly above the increase in mean global temperature[31]. This will directly affect the fisheries and hunting sector in Greenland, and traditional ways of fishing and hunting are already challenged due to the increasingly unpredictable weather patterns and the loss of sea ice cover. Climate change also potentially presents new economic opportunities for the shipping and agricultural sectors as well as increased access to mineral and oil resources.

Trans-boundary pollution is brought to the Arctic region and Greenland by airstreams and rivers. Moreover, the very low population density and the fact that there are no roads between the towns complicate the management of waste using modern facilities. Even though the level of contamination – mostly from trans-boundary pollution – is relatively low, persistent organic pollutants and heavy metals are of particular concern, as they are bio-accumulating in the food chain and may represent a risk in particular to animals near the top of the food chain (such as marine mammals, birds and polar bears) and to the people that consume these animals.

As far as the sustainable use of natural resources is concerned, the Government has recognised that a number of marine mammals and birds whose populations have been declining need greater protection. Hunting and fishing activities are in many cases regulated by quotas for both the commercial- and private sector.

3.5. Public finance management

In general, public finance management in Greenland is inspired by and based on principles adopted from the Danish system and is transparent, comprehensive and accountable. The Government's budget structure is largely built on the Danish Government's budget model and applies the same modern budgetary principles and discipline as the most advanced European countries. Main chapters are broken down by Ministry, which are again subdivided into main areas of actions showing in each case a full

[31] Denmark's Sixth National Communication on Climate Change under the UNFCCC, December 2013.

breakdown of salaries/wages, other recurrent expenditures and revenues. Activity tables for all recurrent expenditures within the budget highlight expected activity levels. The capital budget is found in a separate chapter but carries a clear reference to corresponding recurrent expenditures (e.g. expenditures for maintenance).

The Government is obliged by law to present the Treasury's audited accounts for the previous fiscal year (from 1 January to 31 December) to Parliament, no later than the autumn session. The accounts are audited by a firm of state-authorised public accountants selected by Parliament, supported by the Government's internal audit service. The Government subsequently prepares a written report with comments on recommendations and remarks.

The accounts are presented to Parliament by the Minister of Finance and Domestic Affairs and are then submitted to the Treasury Audit Committee. The Committee assesses the soundness of public finance management, comments on the external audit report and any criticism raised and may suggest improvements to the Treasury accounting system. The Committee reports back to the Parliament no later than the autumn session. Treasury Audit Committee recommendations ensure compliance with the Finance Act, with expenditures reflecting political priorities and monitoring and control of expenditure. Discretionary expenditures within the Greenland budget are kept to a minimum and the release of these funds is subject to strict approval procedures by the Ministry of Finance and Domestic Affairs and the Parliament.

The Government thus maintains a transparent, well-monitored and structured budget management[32].

A new PEFA assessment will be prepared in 2014 under Technical Assistance provided by the EU. This assessment will evaluate progress made and possible areas of public finance management to be addressed in the coming period.

4. Lessons Learned

4.1. Financial cooperation 2007-2013

The support from the EU has been coupled with increased domestic funding to increase the activity in numerous different parts of the education sector. Progress has been made regarding buildings, staffing, monitoring and developmental projects. During the first phase of the Greenland Education Programme attendance has increased 43 % (from 2700 in 2005 to 3861 in 2012) on average over all levels of post-elementary education. This increase has resulted in an increase in graduates of 64 % (from 581 in 2005 to 951 in 2012) which is contributing to a general increase in the education level of the population. Of the

[32] A detailed description of Greenland's budget and accounting system is attached in Annex 4

year group that turned 35[33] in 2012 56 % have completed an education above elementary level. The capacity of the system has been increased which has improved general access to the education system. However, the drop-out rates have not decreased during the programme and the completion rate is only approximately 50 % on the youth educations[34]. Since the attendance has increased the schools are now recruiting from a broader part of the population which partly explains this lack in progress in the field of drop-out. In a situation where scarce resources have to be allocated to produce the largest possible effect on the education level of the population this trend is, however, not sustainable. When capacity constraints (e.g. dormitories, class rooms) in the education sector are binding there are two options for increasing the number of graduates: Increasing the capacity of the system in order to be able to accommodate more students or making more efficient use of the existing capacity. The Government acknowledges that an intensive effort is needed to break the long term trend of the drop-out rates in order to make more efficient use of capacity. In the Education Strategy 2014 reduction of drop-out is a major focus area for the Government. However, increasing the capacity of the system will also be necessary in cases where insufficient capacity is restricting the access to education.

Despite the progress made over the previous years and the first phase of the Greenland Education Programme, the skills level of Greenland's workforce remains relatively low. Of the potential workforce of 33,329 persons aged 15-64, only 37.2 %[35] have a qualifying education and approximately 87 %[36] of unemployed workers are unskilled. The new vision of the Government concerning VET aims thus to prepare the students to take up positions as skilled labour, but also secure that the students have a basis for professional growth. The introduction of boards of directors for the vocational colleges in 2011 ensured a stronger connection between the vocational colleges and the labour market. These boards of directors consist of members from the industry, trade organisations etc. The educational system needs a sustained effort to progress from this situation and continue the positive development. At present lack of education still deprives many citizens of the ability to sustain themselves, and hampers sound and sustainable economic development.

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[33] 35 is currently an appropriate age for measuring the education level of a cohort as people in general will have attained their secondary and tertiary education levels at this point. As stated in the objectives of the Education Strategy 2014 the Government emphasises bringing down the age at completion. However, at present measuring the education level of a cohort at a lower age will leave out some people who are still in the education system (cf. the average age of completion at vocational education (29.1 years in 2012) and training and higher education (32.4 for M.Sc. in 2012) in the Education Strategy).

[34] Completion rate calculated on the basis of cohorts: The share of enrolled students completing the education in question. A completion rate of 50 % thus implies that the drop-out rate is 50 %.

[35] 2013 numbers, source: Statistics Greenland, contract regarding education statistical indicators, project no. 6001. For people born in Greenland (excluding immigration) shares are 28.8 % (01.01.2009, baseline) and 34.0 % (01.01.2014) respectively.

[36] Source: "Uddannelse of arbejdsmarked i Grønland i nutid og fremtid", report prepared by Epinion, november 2013 for the Government

From focusing on specific areas of the education sector, the general approach of the Government has changed to a more inclusive vision of the education system. The links and transitions between the different levels within the system are acknowledged as important to the overall performance of the system. A substantial part of the young people who drop out of the education system do not drop out during a formal education but during transition periods in the system. Particularly, only 12 % (86 persons) of the graduates from elementary school continued directly to a youth education in 2012[37]. For this reason increased focus on the transition periods is important to secure the coherence and inclusiveness of the system. Further, the pre-school and elementary school are acknowledged as important focus areas as these institutions are the foundations of the further progress through the education system. For these reasons emphasis will be put on the pre- and elementary school levels and the transitions in the education system. Reintegration of young people outside the education system is also a major priority for the Government and this area will also be emphasised. Providing the people in this group with education is paramount which results in an increased focus on vocational education and training and the general inclusiveness of the education system.

During the first phase of the Greenland Education Programme local guidance and introduction centres called "Piareersarfiit" were established. The centres work on the basis of service contracts between the local municipalities and the Government and have a supporting role to the Greenland Education Programme's goals as they provide guidance and counselling on education, training and apprenticeship programmes. The areas of responsibility of the Piareersarfiit will be evaluated and adjusted.

Six areas that call for particular action in the future education policy have been identified by the Government and the EU:

1. Early school leavers that do not enrol in education beyond the mandatory elementary school
2. Efficient use of existing resources, school buildings and apprenticeships
3. The construction cost of new infrastructure
4. The level and duration of student grants and the incentives resulting from the system
5. Language barriers in post-elementary education
6. Cost efficiency of the education, including dropout and efficient use of existing capacity

The Government has included these areas in the formulation of the Greenland Education Programme phase 2 and has developed appropriate policy responses.

During the programming period of Greenland Education Programme phase 1 resources were made available by the EU to technical assistance to the Government. The studies undertaken and reports

[37] 45 % went to continuation schools.

produced under technical assistance have contributed with tools, knowledge and administrative capacity. The Government would like to maintain the possibility of capacity building and technical assistance in the coming programming period.

The studies financed through the EU financial support have for the years following 2007, among other focused on:

2008. An assessment of the Public Finance Management (PFM) system.
2009. The Mid-Term Review assessment of the EU-Greenland cooperation strategy and its programming.
2010. Development of planning, monitoring and forecasting mechanism for Greenland education sector.
2011. Study to update the definition "drop-out" and to establish a student tracking system.
2012. Both an evaluation of the performance of higher (Tertiary) education in Greenland and an evaluation of performance indicators used to monitor the GEP 2006-2013.
2013. A Public Expenditure and Financial Accountability (PEFA) study.

Moreover, the financial cooperation with the EU has put increased focus on public finance management in Greenland. Based on the study financed in 2008 three critical areas of public finance management were identified: Tax audits, tax collection and arrears and public procurement. Significant progress has been experienced in all areas.

The number of executed tax audits has increased from 47 in 2007 to 600 in 2012. The Tax Audit Division of the Tax Agency is fully staffed with 15 positions filled and 2 trainees. Further the Tax Agency has initiated collaboration with the Danish tax authorities on a staff training programme focusing on transfers, reimbursements and risk management.

Efficiency in recovery of arrears measured by the share of arrears collected relative to total arrears has increased from 26.7% to 62.9%. In 2008 tax collection was centralised and the Tax Agency has implemented a deduction system where arrears are withheld before payment of any public transfers which has improved the efficiency of collection. Some arrears are still not collected due to individual taxpayers not having the ability to pay.

The Central Procurement Function has experienced understaffing during 2012 which has delayed some activities and developments. The Central Procurement Function has now been upgraded and comprises three employees in order to ensure more stability. The Central Procurement Function has made several framework agreements on, among other hotels, conference facilities, car hire, airline travel, travel agencies, office furniture, office supplies and printers and copy machines including service contracts.

Due to insufficiency of data it is not possible to provide a precise estimate of the total amount saved. The Central Procurement Function is, however, continuously working on improving the data material.

Revision of the Procurement Circular is in progress and is expected to be finalised during 2014. A Procurement Strategy and a Procurement Plan have been prepared and are awaiting political approval.

4.2. Risks

Language presents a challenge in the education system as some pupils speak either Greenlandic or Danish but are not fully bilingual. In the elementary school system teaching is to a large extent conducted in Greenlandic. However, teaching is to a much larger extent conducted in Danish in the post-elementary school system. As noted below this is a consequence of the challenge involved in recruitment of Greenlandic speaking teachers at post-elementary level.

The majority of Greenland's population is Inuit, but there is also a large Danish minority (approximately 6,300 out of the total population of 56,370 were born outside Greenland). The Greenlandic language, Kalaallisut, is a polysynthetic language not similar to the Danish language. Greenlandic is the main language, but a large share of the population speaks Danish and some also English. Some speak only Greenlandic or only Danish. There are currently no statistics available on the share of the population speaking only Greenlandic or Danish. The Danish-speaking population is composed of both immigrants from Denmark and people born and raised in Greenland. Some immigrants are only short-term residents in Greenland.

A lack of foreign language skills is, however, a substantial barrier today for young people in the education system and for the workforce's in-service training opportunities. Both Danish and English are compulsory school subjects and participation in the post-elementary educational system today generally requires an overall fluency in Danish, because instructors are often Danish-speaking only and educational material is mainly available in Danish and only to a lesser extent in Greenlandic. The share of educational material available in Greenlandic has, however, increased during the Greenland Education Programme. The Agricultural School, the Design School, the decentralised Social Education and the basic training on the Skippers School and School for Hunting and Fisheries can be completed entirely in Greenlandic. On some higher educations up to 30 % of curriculum is in Greenlandic (Teacher Training). A significant effort to preserve and develop the Greenlandic language and the Inuit culture is a priority of the Government. This position is reflected in the education system as well and it is a priority for the Government to provide education in Greenlandic. Particularly vocational education and training is a focus area for this effort as it is feasible to attract Greenlandic-speaking teachers to these educations. This will provide better possibilities and more alternatives for students speaking only Greenlandic. Attracting Greenlandic-speaking teachers is more challenging at high school and higher educations than at the level of vocational education and training.

Language teaching is highly prioritised in the teaching plans for the elementary school. Greenlandic and Danish is taught at all grades and English is introduced from the 4th grade. It is the intention of the teaching that the pupils become functionally bilingual (Greenlandic and Danish) and able read, write, speak and understand English.

As Greenland has a small population and few media, knowledge about national strategies is easily spread and discussed among citizens. Citizens concerned and involved with education and training are aware of the programme formulation, and participate in the debate. Greenland's politicians and citizens alike share a common belief in the Greenland Education Programme as the general answer and solution to the country's most urgent goal of becoming a self-sustaining country through continuous and sustainable economic development.

4.3. Donor coordination

In the period 2007-2012 Greenlandic based projects have gained EUR 1.08 million from the Northern Dimension Policy programmes compared to access to EU horizontal programmes of a value of EUR 1 million. The total amount of EUR 2.08 million against an accumulated administrative amount in the spend accounting for EUR 0.77 million.

5. EU response strategy

Through the Greenland Education Programme phase 1 the Government has developed the education sector and provided increased access to education for a larger part of the population. The development of the education sector, however, is not complete. Access to education of high quality for even more people and the general inclusiveness of the education system must be secured. Furthermore the EU and the Government have identified six areas that call for particular attention and further effort, as mentioned under chapter 4.

In order to create sustainable and inclusive growth a larger part of the population needs to obtain a qualifying education in order to contribute to, and have a share in, future growth. Given the situation defined above, the following elements are the principal factors for consideration in the EU response strategy:

- The special relationship between Greenland, Denmark and the EU.
- The Government's policy to pursue sustainability in developmental and fiscal policy and its acknowledgement of the structural challenges facing Greenland.
- The increased geostrategic importance of Greenland and the Arctic Region for the EU and its climate induced increased accessibility as well as the structural weaknesses of Greenland justifies the continuation of a specific Programming Document focusing on addressing these developments.

- The EU's financial support should focus on one area of cooperation allowing for the partnership to maximise the impact.
- The importance of education and training for the sustainable diversification of the Greenlandic economy
- The Government's adjustment of the medium-term strategy adopted by Parliament to strengthen the entire educational and training sector in order to increase the percentage of the workforce with a qualifying education and to improve workforce mobility.

5.1. Focal sector

Taking into account the initiatives being funded by the Government in connection with Greenland's most pressing needs and in view of the Greenland Education Programme, EU financial assistance for the sustainable development of Greenland, covering the period 2014-2020, is to be used to support the implementation of the Greenland Education Programme phase 2, with a particular focus on the education and training actions aimed at children and young people outside the education system.

5.2. Consistency with EU policy objectives

Article 3(1) in the Council Decision (2014/137/EU), which is the legal reference for the sustained partnership cooperation, defines the objectives of the partnership as being:

1. To support and cooperate with Greenland in addressing its major challenges in particular the sustainable diversification of the economy, the need to increase the skills of its labour force, including scientists, and the need to improve the Greenlandic information systems in the field of Information and Communication Technologies.
2. To contribute to the capacity of the Greenlandic administration to formulating and implementing national policies in particular in new areas of mutual interest as identified in this document

On the basis of these objectives, supporting the reform of the education and training sector can be considered consistent with the relevant EU policy objectives.

Moreover, the Joint Declaration signed between the EU, Greenland and Denmark [XX/XX/2014] on relations between the European Union and Greenland confirms the intention of the Union and Greenland to further strengthen their relations to contribute towards the sustainable development of Greenland's economy.

It is emphasised in the EU's Agenda for Change that inclusive and sustainable economic growth is crucial to long-term poverty reduction. Further, it is stated that inclusive growth, characterised by people's ability to participate in, and benefit from, wealth and job creation should be

encouraged[38]. The Government shares these opinions and considers the further development of the education sector paramount to create inclusive growth. The Government emphasises that provision of qualifying education to a larger part of the population will enable them to contribute and have a share in the growth. Education will further facilitate development and population participation in emerging economic sectors.

This point is also recognised by the EU in the Agenda for Change where it is stated that the EU should enhance its support for quality education to give young people the knowledge and skills to be active members of an evolving society. Through capacity-building and exchange of knowledge, the EU should support vocational training for employability and capacity to carry out and use the results of research[39]. Quality education is thus recognised by both the EU and the Government to be an important factor of inclusive and sustainable growth. Education is recognised as one of the sectors which build the foundations for growth and help ensure that it is inclusive.

The Government as well as the EU aims at creating smart growth through investments in education and research, and inclusive growth through provision of qualifying education to a larger part of the population. Helping people acquire new skills and adapt to a changing labour market is of high importance in order to secure jobs, reduce poverty and create a sustainable basis for economic growth.

Moreover the EU and the OCTs recognise the importance of education and vocational training as a lever for the OCTs' sustainable development as emphasised in recital 15 of the OAD[40].

Building on the Agenda for Change and the Staff Working Document "More and Better Education in Developing Countries"[41] the EU aims to pursue a balanced approach in the education sector. Central to this approach is the need to improve the equity and quality of education next to improving the access. The objectives of improved access to education, reduced inequalities in education, and strengthening and further development of the education system are shared between the Government and the EU and are central parameters in the Greenland Education Programme.

Although EU financial assistance for the sustainable development of Greenland for 2014-2020 focuses on education and training, the other areas of cooperation covered by the comprehensive partnership between the EU and Greenland (Article 3.2 of the Council Decision) are not neglected.[42]

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[38] Increasing the impact of EU Development Policy: an Agenda for Change, COM(2011) 637 final, p.7

[39] Ibid., p. 8

[40] OJ L 314, 19.12.2013, p. 2.

[41] SEC(2010) 121 final

[42] The main areas of cooperation of the partnership shall include: (a) education and training, tourism and culture; (b) natural resources, including raw materials; (c) energy, climate, environment and biodiversity; (d) Arctic issues; (e)

Firstly, it is the intention of the Commission, Greenland and Denmark, independently of the choice of a focal sector(s) for financial cooperation, to engage in policy dialogue at the appropriate political and technical levels in the areas for cooperation foreseen in Council Decision. This policy dialogue will take place when relevant as a parallel event to the biannual workshops on the implementation of the financial support, mentioned under point 8.1.4.

Secondly, cooperation in the fisheries sector is not covered by the policy dialogue mentioned above, as it is dealt with under a specific Fisheries Partnership Agreement, with the relevant mechanisms for dialogue between Greenland and the EU.

Thirdly, Greenland is as an OCT covered by the Overseas Association Decision, participating actively in the EU-OCT partnership and dialogue, and shall be eligible for participation in and funding from Union programmes (Article 94 of the OAD), subject to their rules and procedures. Moreover, Greenland will be eligible to the regional thematic envelope under the OCT-11th European Development Fund. The choice of the sector of a regional thematic cooperation will be agreed upon by the relevant parties in due time.

5.3. Funds available

The Multi-annual Financial Framework of the European Union for the period 2014-2020 has defined an indicative amount of up to EUR 217.8 million (current prices) for financial cooperation with Greenland. This amount, to be granted by means of budget support, allows the EU to make an essential contribution to the extraordinary effort to reform the education and training sector in Greenland, alongside the Government's efforts.

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the social sector, mobility of the workforce, social protection systems, food safety and food security issues; and (f) research and innovation in areas such as energy, climate change, disaster resilience, natural resources, including raw materials, and sustainable use of living resources.

Moreover, Article 2.2 provides for broad cooperation and dialogue in inter alia maritime transport.

Finally, with regard to rough diamonds, on 20 February 2014 the Council of the European Union laid down the rules and procedures for the inclusion of Greenland in the Kimberley Process Certification scheme. This will enable the participation of Greenland in the certification scheme on rough diamonds through its cooperation with the Union.

6. Indicative programme

6.1. The overall line for the EU response

6.1.1. Strategic objectives of the EU's relationship with the partner country

To support and cooperate with Greenland in addressing its major challenges in particular the sustainable diversification of the economy, the need to increase the skills of its labour force, including scientists, and the need to improve the Greenlandic information systems in the field of Information and Communication Technologies.

To contribute to the capacity of the Greenlandic administration to formulate and implement national policies in particular in new areas of mutual interest as identified in the PDSD referred to in Article 3(1) in the Council Decision (2014/137/EU)

6.2. Choice of sectors

The Government is pursuing policy aimed at contributing to a higher standard of living and quality of life and at ensuring continuous and sustainable economic progress in the increasingly globalised world economy, through provision of a critical mass of qualified, flexible and competitive workforce.

The education level of the population is a challenge that has to be addressed in connection to all the sectoral policies on the areas of cooperation according to the Council Decision (2014/137/EU)

Education is paramount in creating the necessary diversification of the economy and the Government considers education to be the most important factor for creating progress in the society. Increasing the education level of the population will have a positive impact in all sectors as there is a general need for educated personnel.

On this basis, the Government has prepared the Greenland Education Programme phase 2 based on the lessons learned through the past cooperation during the first phase of the programme. The Greenland Education Programme phase 2 will provide a coherent framework for sustained cooperation between the EU and the Government which is consistent with the overall purpose, scope, objectives, principles and policies of the EU as described in chapter 5 of this document.

The Government has committed EUR 68 million to the Greenland Education Programme in 2014 and the total Government budget for education is EUR 175.14 million. This level of commitment is foreseen to continue throughout the programme period. Within the Greenland Education Programme budget the initiatives in the Education Plan II, which defines the refocusing of the programme, represents financial commitments of EUR 21.45 million. During the Greenland Education Programme phase 1 it has been the policy of the Government to allocate extraordinary revenues from e.g. mineral exploration activities to

construction projects in the education sector. This practice is foreseen to continue in phase 2 of the programme.

The preparation of the Greenland Education Programme phase 2 involved stakeholders across the country, including boards and committees on the educational institutions as well as student organisations, non-coalition political parties, labour- and employer unions and other relevant stakeholders. These parties were included in the preparatory workshops leading up to the final formulation of the programme.

In charge of implementing the Greenland Education Programme is the Ministry of Education, Church, Culture and Gender Equality in close collaboration with other ministries and stakeholders. The Ministry of Finance and Domestic Affairs is involved in all the stages of programme implementation and close links and mechanisms are already in place to ensure coordination with all the implementing government departments from the present programme period.

The Greenland Education Programme has been adopted and implementation is presently in progress. The programme will be assessed annually by the Government through review of the results attained and the Parliament will receive two annual reports on the progress of the programme. Adjustments of the programme will be subject to discussion in the annual readings and adoption of the Finance Act.

The Ministry of Education, Church, Culture and Gender Equality has prepared an implementation plan which outlines the steps needed for implementation of the programme and thus the realisation of the objectives of the Government. Several different instruments for implementation are being used by the Government. Many initiatives are implemented through the annual Finance Act which determines the economic framework conditions for the education sector. The Government will facilitate initiatives in the areas under municipal auspices through changes in legislation and executive orders, framework conditions, and policy dialogue. Further, the Government will provide needed inputs to the municipal areas through e.g. teacher training and facilities. The Government has an inspection obligation in connection with all parts of the education system.

6.3. Financial overview

Table 1 shows the EU financial support for the EU-Greenland partnership. The overall budget for 2014-2020 is EUR 217.8 million where EUR 215.996 million is foreseen for focal sector 1: Greenland education sector and EUR 1.804 million is foreseen for technical assistance.

Table 1: The EU budget 2014-2020 (EUR million)

		2014	2015	2016	2017	2018	2019	2020	Total 2014-2020
Focal Sector 1	Cooperation with Greenland Education Sector	24.569	30.699	31.130	31.631	32.111	32.635	33.220	215.996

	Technical Assistance, Studies, etc	0.249	0.244	0.249	0.254	0.276	0.263	0.269	1.804
The EU-Greenland partnership		24.818	30.943	31.379	31.885	32.387	32.898	33.489	217.800

7. EU support per sector

7.1. Education; EUR 217.8 million (100% of the allocation)

7.1.1. The following overall and specific objectives will be pursued:

The overall objective of the programme for the sustainable development of Greenland for 2014-2020 is to contribute to a higher standard of living and quality of life along with sustainable diversification of the economy through improved education, skills and knowledge. The Government therefore seeks to develop an inclusive and coherent education system from pre-school to higher education.

Specific objectives

The Government has formulated objectives from an overall perception that education is a paramount factor in improving productivity, sustainable economic development and self-sufficiency both on the personal level and the national level. Further, the importance of the inclusiveness of the education system is emphasised by the Government. Inclusive growth must necessarily be rooted in an inclusive education system as education gives people the means to contribute to, and have a share in, the growth.

The following specific objectives will be pursued in order to achieve the overall objective of the Government:

1. reduced inequality in education by ensuring a well-functioning pre-school and elementary school system, no matter where the children live. The elementary school system shall provide elementary school-leavers with the skills needed for them to pursue further education,
2. increased quality of the education system with special emphasis on pre-school and elementary school and increased share of educated personnel in the system,
3. increased efficiency in the education system through reduced drop-out between stages in the system, increased completion in the post-elementary education system and a decrease in the time spent in the education system before graduation.

7.1.2. For each of the specific objectives the main expected results are:

Objective 1: reduced inequality in education by ensuring a well-functioning pre-school and elementary school system, no matter where the children live. The elementary school system shall provide elementary school-leavers with the skills needed for them to pursue further education.

Expected results:

- Increased share of children attending pre-school resulting from providing pre-school facilities and personnel to a larger part of the population.
- Increased transition rate to further education as more pupils have access to elementary school of high quality.
- Improved literacy rate after elementary school.
- Decreased share of young people (16-18 years) outside the education system.
- In the medium term, increased completion in post elementary education as a result of better elementary education to a larger part of the population.

Objective 2: increased quality of the education system with special emphasis on pre-school and elementary school and increased share of educated personnel in the system.

Expected results:

- To provide a better quality in the pre-school system through increased share of educated personnel in the system.
- Increased share of educated teachers in the elementary schools.
- Improved literacy after elementary school.
- Increased transition rate from elementary school to further education.
- Decreased share of young people (16-18 years) outside the education system.

Objective 3: increased efficiency in the education system through reduced drop-out between stages in the system, increased completion in the post-elementary education system and a decrease in the time spent in the education system before graduation.

Expected results:

- Increased transition rate from elementary school to further education.
- Increased transition rate from high school to further education.
- Decreased share of young people (16-18 years) outside the education system.
- Decreased age at completion of post elementary education.

- Increased completion at all levels of post-elementary education.
- Decreased excess study time beyond standard time limits at higher educations
- Increased completion rate at higher educations.
- Increased number of graduates from higher educations.
- Increased supply of apprenticeship places through school apprenticeships, incentives to businesses and introductory courses at vocational education and training.

7.1.3. The indicators

The main indicators for measuring the aforementioned results are contained in the sector intervention framework attached in Annex 4.

7.1.4.Donor coordination and policy dialogue are:

Policy dialogue on the implementation of the EU financial support has been an important part of the previous financial cooperation and the Government foresees a continuation of the bi-annual workshops in connection with the implementation of the new Programming Document.

7.1.5.The Government's financial and policy commitments are:

Table 2 shows the municipal and governmental education budgets. It is important to notice that the budget for pre-school is fully municipal and for elementary school mainly municipal whereas post primary education budgets are governmental. The overall education budget for 2014 is EUR million 309.11.

The financial commitments of the Greenland Education Programme phase 2 are presented in Table 3. The plans for construction projects are not yet allocated for the years 2016 and 2017 which is the reason for the apparent decrease in Government financial commitments in these years.

Table 2: Municipal and Government budgets (EUR million) [43]

	Municipalities	Government F.A. 2014	Total
Pre-school	39.40	0.00	39.40
Elementary School	89.24	5.75	94.99
High School	0.00	9.51	9.51
Vocational Education and Training	0.00	30.94	30.94
Higher Education	0.00	25.03	25.03
Skills and Competence Courses	0.00	18.75	18.75

[43] Exchange rate DKK/EUR: 7.5,
For budget projections for 2015-2017 please see annex 2

Dormitories	5.33	3.07	8.40
Buildings[44]	0.00	30.06	30.06
Student grants	0.00	36.48	36.48
Joint Expenses	0.00	15.55	15.55
Education budget	133.97	175.14	309.11

Government budget	900.88
Government education budget in % of Government total budget	19.4%

Table 3: Financial and policy commitments of the Government 2014-2014 (EUR million) [45]

	F.A. 2014	B.P. 2015	B.P.2016	B.P. 2017
Pre-school	**3.81**	**7.81**	**2.48**	**2.40**
Elementary School	**0.27**	**0.00**	**0.00**	**0.00**
Youth outside the education system	**1.12**	**1.07**	**1.07**	**1.07**
High School	**11.33**	**5.56**	**2.89**	**2.89**
Vocational Education and Training	**0.56**	**3.08**	**0.41**	**0.41**
Higher Education	**0.28**	**0.23**	**0.23**	**0.23**
Joint Expenses/Cross-cutting initiatives	**4.09**	**3.89**	**3.89**	**3.86**
Greenland Education Programme II, Government commitments	**21.45**	**21.64**	**10.97**	**10.87**

7.1.6. The overall risk assessment of the sector intervention

The education sector as well as the Greenlandic society as a whole has a demand for qualified personnel. Due to retirements and people working within other trades than their original profession this situation is not likely to change in the short term. Recruiting the needed personnel presents a challenge and a potential risk for the programme. Recruitment might be a challenge when it comes to educators, psychologists and counsellors. This risk is even more pronounced in the case of Greenlandic speaking personnel. In elementary school it is possible to recruit Greenlandic speaking teachers, but for post elementary education, the teachers are primarily Danish speaking. This presents a challenge to the young people when they proceed in the education system, and makes a barrier for some. Increasing the share of educated personnel might therefore be a challenge. Efforts are being made to strengthen the language capabilities of the population with specific focus on the pupils in the pre-school and elementary school

[44] It is assumed that most building activity under the GEP replaces old school buildings and especially old dormitories and that the new buildings are 50% more energy efficient. This will also lead to a reduction of greenhouse-gas emissions. Information concerning the replacement or refurbishment of old school buildings and dormitories will be provided regularly by the Government of Greenland in the implementation of the education policy (in line with Article 7.3 of the Council Decision 2014/137/EU).

[45] Source: Finance Act 2014

With regards to the elementary school there is a challenge to overcome children with social problems and the school's obligation to teach all children, regardless of the social problems they might have. This might affect the possibilities for the children further on in the education system and is a risk for the programme in increasing the transition rate from elementary school and the number of graduates. There is focus on this challenge both from the Government, Inerisaavik (Institute of Arctic Education), the municipalities, the teachers and the different associations protecting children's rights. There is awareness of the need for counsellors and courses for parents, so that they may be able to better provide for their children's basic needs and thus enable them to go to school and get the full benefit of the offered teaching. The Greenland Education Programme phase 2 takes into account these challenges. Parental responsibility courses are a part of the holistic early effort planned. Further the development of pre-school capacity and screenings in pre-school will seek to address this challenge in the medium term.

Lack of apprenticeships is currently a limiting factor in the vocational education and training system. Initiatives in the Greenland Education Programme II seek to increase the number of apprenticeships, but the effect depends on the financial situation and development in Greenland. The risk is that the increase of workplace apprenticeships might not happen due to factors outside the Governments control.

Implementation of new initiatives and reforms requires administrative capacity. This can potentially be a challenge due to staff-turnover and large geographical distances between the reform formulating authority and the institutions that has to implement the reform. The Government is aware of this challenge and will ensure full implementation of reforms through the supervising entities within the Ministry of Education, Church, Culture and Gender Equality. To reinforce the capacity of the Government the administration emphasises the well-being, retention and competence building of the civil servants. To this end the Governmental human resource office carries out assessments of the working environment. This includes personal development consultations with the management on an annual basis on all levels of the organisation. The Government further allocates resources to training and language courses for the civil servants. The overall objective is to achieve long term employment of highly qualified civil servants.

Centrally managed databases are generally valid, but data management in smaller institutions and units is not in all cases consistent. This makes the process of data collection and analysis more complicated and time consuming. The Government is continuously working to expand and improve the data collection and the validity of the data material.

Annexes

1. Summary data on Greenland
2. Complementary indicators
3. Greenland's education sector budget
4. Table of indicators from the education strategy
5. Organisational Chart of the Government
6. Overview of Greenland's budget and accounting system
7. Environmental profile of Greenland

Annex 1: Summary Data on Greenland

Parameter	Value	Comments	Source
Area (km2)	2,166,086	81 % is covered by ice	Greenland in Figures 2013, Statistics Greenland
Geographic region	North Atlantic Ocean: 72°N, 40°W	Geographical centre	Greenland in Figures 2013, Statistics Greenland
Population, total	56,370	Janurary 2013	Greenland in Figures 2013, Statistics Greenland
Population growth rate	-0.67%	2013	Greenland in Figures 2013, Statistics Greenland
Life expectancy	Women 72.8, men 67.8	2006/2010	Greenland in Figures 2013, Statistics Greenland
Fertility rate	2.26 per woman	Women aged 15-49 years, 2010	Greenland in Figures 2013, Statistics Greenland
Infant mortality rate	9.6 deaths per 1000 live births	2008	Greenland in Figures 2013, Statistics Greenland
Elementary education enrollment (% of relevant age group)	100%	Compulsory elementary education system in more than 100 years. 2013: minimum 10 years	
Secondary education enrollment (% of relevant age group)	24.1%	Relevant age group 15-19	Study Grant Administration - Ministry of Education, Church, Culture and Gender Equality
Unemployment rate (% of workforce)	9.4%	On average per month, age 18-64	Greenland in Figures 2013, Statistics Greenland
Main natural resources	Zinc, lead, iron ore, coal, molybdenum, gold, platinum, uranium, fish, shrimp, seals, whales, hydro power and possibly gas and oil		Greenland in Figures 2013, Statistics Greenland
GDP	11,590 DKKm	Provisional figure for 2011 in 2005 prices	Statistics Greenland, Table NRD10 accessed on 8-8-2013
GDP per capita	204,700 DKK	Provisional figure for 2011 in 2005 prices	Statistics Greenland, Table NRD10 accessed on 8-8-2013
Real GDP growth (avg. % 2007-2011)	1.5%	Provisional figure for 2011 in 2005 prices	
Overall government budget balance (% of GDP)	3.99%	463 DKKm (2011)	Statistics Greenland: "Offentlige finanser 2011" Greenlands public finances 2007-2011, Figure 2
Imports	5,182 DKKm	2011	Greenland in Figures 2013, Statistics Greenland
Exports	2,540.5 DKKm	2011	Greenland in Figures 2013, Statistics Greenland
Block grant from Denmark	3555 DKKm	2011	Greenland in Figures 2013, Statistics Greenland
Landline and mobile phones (per 1000 inhabitants)	334 (landline), 1054 (mobile)	Total: 18,840 (landline), 59,399 (mobile)	Greenland in Figures 2013, Statistics Greenland
Internet connections (per 1000 inhabitants)	195	Total: 11,004 (2012)	Greenland in Figures 2013, Statistics Greenland
Internet suppliers	1		Greenland in Figures 2013, Statistics Greenland

Annex 2: Complementary indicators

Parameter	Value	Comments	Source
Percentage of trade balance in GDP	-16.1 %	2012,GDP in current prices	Statistics Greenland, table: Handelsbalance efter tid, art og måned (IEDBALMND) and table: Udvikling i BNP efter enhed, kontonavn og tid (NRD10) , acccessed on 27-3-2014
Percentage of fisheries sector in total exports	89.8 %	2013	Statistics Greenland, table: Værdi af eksport efter SITC og tid (IED2SITC)
Percentage of civil servants that are long-term residents in Greenland	81.8 %	4th quarter of 2012, "Long-term resident" is defined as at least 5 years of residence (2008-2012). Short-term residents (<5 years of residence 2008-2012) that are born in Greenland not included (87.2% if these persons are included).	Statistics Greenland. Payrolls for the Municipal and Government administration.
Number of administrative staff completing training	N/A	Not yet developed. A register for training does not exist. Alternatives are being identified.	

Annex 3: Yearly municipal and Government budget allocations and projections 2014-2017 (EUR million)

	2014			2015			2016			2017	
	Municipalities	Government F.A. 2014	Total	Municipalities	Government B.P. 2015	Total	Municipalities	Government B.P. 2016	Total	Municipalities	Government B.P. 2017
Pre-school	39.40	0.00	39.40	39.40	0.00	39.40	39.40	0.00	39.40	39.40	0.00
Elementary School	89.24	5.75	94.99	89.24	5.75	94.99	89.24	5.75	94.99	89.24	5.75
High School	0.00	9.51	9.51	0.00	9.51	9.51	0.00	9.51	9.51	0.00	9.51
Vocational Education and Training	0.00	30.94	30.94	0.00	31.67	31.67	0.00	31.61	31.61	0.00	32.43
Higher Education	0.00	25.03	25.03	0.00	25.03	25.03	0.00	24.20	24.20	0.00	24.20
Skills and Competence Courses	0.00	18.75	18.75	0.00	18.73	18.73	0.00	18.72	18.72	0.00	18.71
Dormitories	5.33	3.07	8.40	5.33	6.00	11.33	5.33	0.00	5.33	5.33	0.00
Buildings	0.00	30.06	30.06	0.00	22.79	22.79	0.00	21.41	21.41	0.00	16.43
Student grants	0.00	36.48	36.48	0.00	38.24	38.24	0.00	41.72	41.72	0.00	41.70
Joint Expenses	0.00	15.55	15.55	0.00	10.87	10.87	0.00	10.91	10.91	0.00	10.91
Education budget	133.97	175.14	309.11	133.97	168.60	302.57	133.97	163.84	297.81	133.97	159.64
Government budget		900.88			879.96			865.53			861.06
Government education budget in % of Government total budget		19.4%			19.2%			18.9%			18.5%

Annex 4 - Table of indicators from the education strategy (Based on the Greenlandic Performance Assessment Framework)

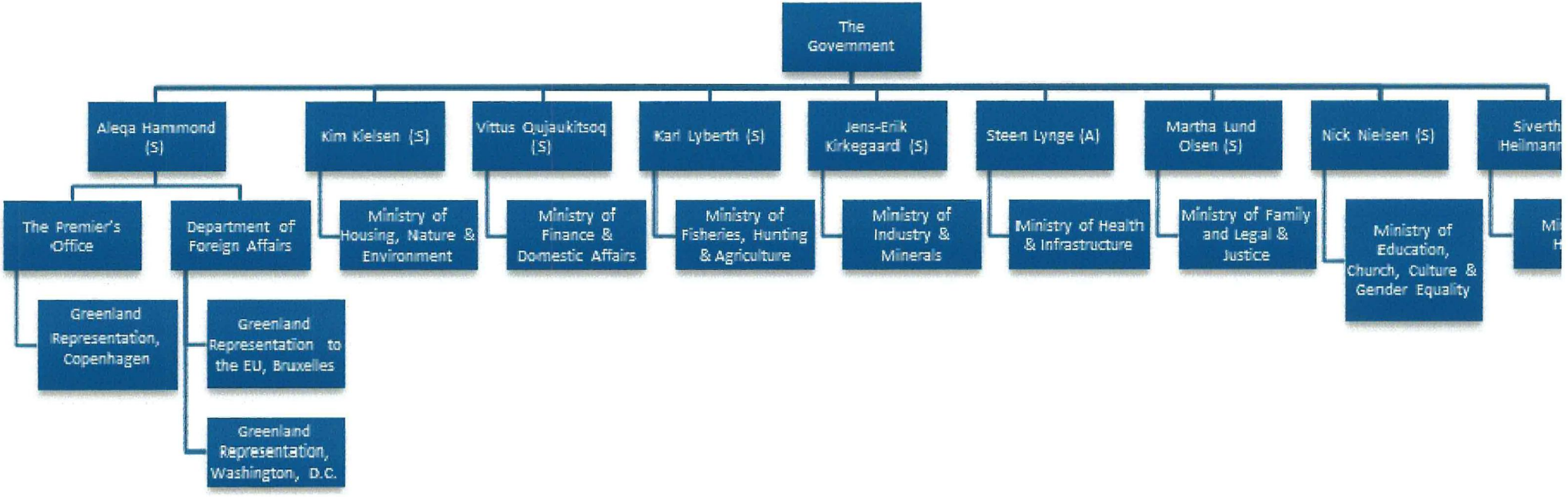
The results, indicators and means of verification specified in the present annex may need to evolve to take into account changes intervening during the programming period.

Specific objective 1: Reduced inequality in education by ensuring a well-functioning pre-school and elementary school system, no matter where the children live. The elementary school system shall provide elementary school-leavers with the skills needed for them to pursue further education.		
Expected Results	**Indicators**	**Means of verification**
a) Increased share of children attending pre-school resulting from providing pre-school facilities and personnel to a larger part of the population.	Share of children in pre-school (Oc 1.1)	Government reports and statistics
b) Increased transition rate to further education as more pupils have access to elementary school of high quality.	Transition rate from elementary school (Oc 2.1)	Government reports and statistics
c) Improved literacy rate after elementary school.	7th grade test (Op 2.1)	Government reports and statistics
d) Decreased share of young people (16-18 years) outside the education system.	Share of age group outside education system (Oc 3.1)	Government reports and statistics
e) In the medium term, increased completion in post elementary education as a result of better elementary education to a larger part of the population.	1. Completion rate at High School (Oc 4.2) 2. Completion rate at Vocational Education and Training (Oc 5.2) 3. Completion rate at Higher	Government reports and statistics

	Education (Oc 6.2)	
Specific objective 2: Increased quality of the education system with special emphasis on pre-school and elementary school and increased share of educated personnel in the system.		
Expected Results	**Indicators**	**Means of verification**
a) To provide a better quality in the pre-school system through increased share of educated personnel in the system.	Share of professionals (Oc 1.2)	Government reports and statistics
b) Increased share of educated teachers in the elementary schools.	Share of professionals in elementary school (Oc 2.2)	Government reports and statistics
c) Improved literacy after elementary school.	7th grade test (Op 2.1)	Government reports and statistics
d) Increased transition rate from elementary school to further education.	Transition rate from elementary school (Oc 2.1)	Government reports and statistics
e) Decreased share of young people (16-18 years) outside the education system.	Share of age group outside education system (Oc 3.1)	Government reports and statistics
Specific objective 3: Increased efficiency in the education system through reduced drop-out between stages in the system, increased completion in the post-elementary education system and a decrease in the time spent in the education system before graduation.		
Expected Results	**Indicators**	**Means of verification**
a) Increased transition rate from elementary school to further education.	Transition rate from elementary school (Oc 2.1)	Government reports and statistics
b) Increased transition rate from high school to further education.	Transition rate (2 years after completion) (Oc 4.4)	Government reports and statistics

c) Decreased share of young people (16-18 years) outside the education system.	Share of age group outside education system (Oc 3.1)	Government reports and statistics
d) Decreased age at completion of post elementary education.	1. Average age at completion at High School (Oc 4.3) 2. Average age at completion at Vocational Education and Training (Oc 5.3) 3. Average age at completion at Higher Education (Oc 6.3)	Government reports and statistics
e) Increased completion at all levels of post-elementary education.	Completion rate at High School (Oc 4.2) Completion rate at Vocational Education and Training (Oc 5.2)	Government reports and statistics
f) Decreased excess study time beyond standard time limits at higher educations	Average excess study time beyond the standard time limits. (Oc 6.4)	Government reports and statistics
g) Increased completion rate at higher educations.	Completion rate at Higher Education (Oc 6.2)	Government reports and statistics
h) Increased number of graduates from higher educations.	Number of completions (Oc 6.1)	Government reports and statistics
i) Increased supply of apprenticeship places through school apprenticeships, incentives to businesses and introductory courses at vocational education and training.	Number of apprenticeships (Oc 5.4)	Government reports and statistics

Annex 5: Organisational chart of the Government



Annex 6: Overview of Greenland's Budget and Accounting System

The foundation of the Greenlandic public finance management is the annual finance act which constitutes the budget of the Government in the coming year. The finance act includes all revenues and expenditures, and each minister in the Government is responsible for the management of the appropriation on their jurisdiction.

The purpose of the public finance management is to secure long term balance between revenues and expenditures. The finance act is adopted on an annual basis. As the political focus is often multi-annual the Government has decided that there can be a budget deficit in the individual year. However, over a 4-year period the budget shall be balanced. This decision is not formalised in a legal requirement but is based on political decisions about the government budgeting.

In budgeting, the economic developments are also taken into consideration. An increased population of elderly people and a decrease in the working age population imposes an increasing strain on the public finances. This strain is alleviated by incorporating budget cuts and efficiency gains in the public sector. At the same time resources are allocated to initiatives and reforms that are deemed to lead to new revenues or further efficiency gains.

The finance act does not only describe the budget allocation but also specifies how the resources can be utilised. The finance act thus constitutes a framework for the amount of resources at a ministry's disposition and how these resources can be spent.

The principles of public finance management are formalised in the budget law of 1999 and the budget regulation of 2002. In these instruments the regulations for the budgeting, appropriation types and the utilisation of the appropriations are specified and stringent principles for the management and control of budget expenditure are established, giving each minister the responsibility for sound financial management. The central principle is that the finance act reflects the overall fiscal priorities of the Parliament. For this reason, the individual members of the Government cannot re-allocate their resources or utilise them for other means than the finance act prescribes. The Finance Committee can, however, approve new appropriations during the year for "substantial and unforeseen" purposes. These additional appropriations are formally approved by the Parliament by the approval of the additional appropriation act at the spring session on the following year.

The process of formulating the finance act for the following year is initiated in the beginning of the year when the Government produces its Political Economic Report. The report accounts for the economic situation and the focus areas that the Government wishes to prioritise in the coming finance act.

Simultaneously the Ministry of Finance and Domestic Affairs produces the base budget which serves as the foundation of the preparation of the finance act. The base budget is a projection of the previous finance act adjusted for changes in the price- and salary levels, decisions that have already been approved and estimates of expenditure and tax revenues.

The base budget is presented for the Government at the budget seminar in the spring along with known economic, structural and political challenges and wishes. After this presentation, the Government will discuss adjustments and priorities to be included in the finance act. When an agreement has been reached each ministry is allocated a framework appropriation under which they can prioritise their resources.

Simultaneously with this administrative process, political negotiations take place between the political parties who are represented in the Government. Around the 1st of June the Government receives the complete proposal for a finance act and the Government can either propose concrete changes or endorse the finance act proposal.

In August the finance act proposal is presented to the general public. The Finance Committee scrutinises the proposal and questions the Government on the details. During the autumn session of the Parliament the finance act proposal will be subject to a first, second and third reading. Between the first and the second reading the Finance Committee will present a recommendation endorsing the individual parts of the finance act proposal to either rejection or approval. This report will be based on the Government's answers to the Committee's questions. The Committee can also propose amendments during this process.

The Government will also negotiate with the parties who are not represented in the Government which can lead to amendments for the second reading.

This process leads to the final approval of the finance act at the third reading not later than the 15th of November.

The Budget cycle

The Budget Law was approved by the Home Rule in 1999 and followed by a specific clarified budget regulation in 2002.

The Budget preparation process in Greenland generally follows the same pattern every year. This is illustrated below through a description of the preparation of the Budget for the year 2013. Preparation of

the Budget for 2013 began in early 2012, shortly after November 2011, when Parliament approved the Budget for 2012, and whilst the spending ministries were finalising the fiscal accounts for 2011.

This indicates that, from the first preparations of the Budget proposal, it takes about one year before Parliament decides on the Budget and about two and a half years before the fiscal accounts can be presented to Parliament.

In addition, multi-year Budget estimates for the fiscal year have been presented in the appendixes to the Budgets of the previous three years. The overall schedule is illustrated in the following table:

February	The Ministry of Finance and Domestic Affairs examines the basis for the Budget and proposes overall Budget targets
February-March	The Government's Budget seminar
March	Breakdown of overall Budget targets into ceilings for consumption and income transfers for each ministry
End of May-June	The Government receives the proposals for consideration
Early June	Line ministries hand in their Budget alterations to the Ministry of Finance
15-25 June	The Government discusses the final proposal for approval
Mid-August	Presentation of the Budget Proposal to Parliament, public, etc.
Mid-September	Autumnal equinox begins; the first parliamentary discussion on the Budget Proposal
Early November	Third and final parliamentary discussion on the Budget Proposal
Mid-November	End to political negotiations on the Budget Proposal – adoption of the declaration

Institutions in the Budget process

The central government budget in Greenland is prepared in cooperation between several levels of government. The various authorities play their own special roles: not only in preparing the Budget Proposal, but also in implementing the Budget and controlling the outcome.

This presentation provides an introduction to the various authorities and their role in Greenland's budget and appropriations system.

Parliament

The Parliament (Inatsisartut) is the central appropriations authority. It cannot prepare its own budget proposal, but is entitled to make changes to the Government's Budget Proposal before finally adopting the Budget.

The Parliament's Finance Committee functions as the appropriations authority during the fiscal year. It is also the Finance Committee that discusses the detailed contents of the Government's Budget Proposal. Usually the Parliamentary debate on the Budget Proposal follows a broader perspective on economic policy.

Once the Budget Proposal has been adopted by Parliament and the fiscal year has begun, changes to the appropriations in the Budget can be implemented through applications to the Finance Committee. Such applications must contain a full explanation of why a change is necessary and how it will be financed, e.g. through cuts in other appropriations or reserves. Also, the Ministry of Finance must approve an application before it can be sent to the Finance Committee.

This procedure makes the Greenland appropriations system highly flexible: most applications to the Finance Committee are dealt with within one or two weeks. All applications approved by the Finance Committee during the fiscal year are combined in one supplementary appropriations act at the end of the fiscal year.

Ministry of Finance and Domestic Affairs

The Ministry of Finance and Domestic Affairs coordinates the Budget process. It is the Minister of Finance who presents the Budget Proposal to Parliament on behalf of all Cabinet ministers. Under the Greenlandic system, no Cabinet minister can contact the Parliament or its Finance Committee on appropriation issues without the prior consent of the Minister of Finance.

The functions of the Ministry of Finance and Domestic Affairs in the Budget process can be divided into four main tasks:

- To draw up guidelines and instructions to be used by the spending ministries when drafting the Budget.
- To collect draft budget proposals from the ministries and combine them into the final Government Budget Proposal.

- To follow up on Government revenue and expenditure and make economic forecasts and calculations in preparation for Government decisions on economic policy.
- To check ministry/agency accounting and present the fiscal accounts after the end of the fiscal year.

The first three functions are necessary to ensure that the Minister of Finance has the background to present a coherent economic policy based on actual projections of the fiscal balance for the central government.

Spending ministries

All government administration in Greenland is based on the act laying down the responsibilities of each Cabinet minister. The act determines that each minister is politically responsible for all decisions taken within his/her purview, but it does not prohibit the delegation of decision-making power to lower levels within the ministry. As a result, all appropriations decided by Parliament are given to a minister. From this it also follows that every spending decision by an agency is the relevant minister's responsibility.

Thus the spending ministries have two major functions in the Budget process:

- They must present a draft Budget Proposal for the ministry and all its agencies to the Ministry of Finance.
- They must follow up on the actual Budget and take action if an agency has difficulty remaining within the limits of its appropriations.

If a spending ministry finds it necessary to apply for a change to an appropriation during the Budget follow-up process, the Ministry of Finance must approve the application and funding before it can be submitted to Parliament.

Government accounting, legislative basis

The act on public accounting

The public accounting system is governed by Greenland Parliament Act No 23 of 3 November 1994 on Greenland Home Rule Public Accounts, Etc. This act lays down the general guidelines for public accounting.

The act specifies that accounts must be presented during the Greenland Parliament's autumn session. The accounts must be laid out in a way that is compatible with the Finance Act and the Supplementary Appropriations Act. Furthermore, the accounts must comprise all revenues and expenditures as well as all assets and liabilities.

All ministries and institutions included in the Finance Act must comply with the accounting rules. The Government Cabinet lays down specific rules on public accounting, taking into consideration not only security and public order, but also the need for economic planning, management and control.

All ministries and institutions affected by the act must provide the information needed by the Cabinet to present the Treasury's accounts.

Home Rule executive order

The provisions of the act are explained in greater detail in Home Rule Executive Order No 8 of 27 February 1995.

The order states that public accounting must help ensure effective economic management through the registration of information that can be used in connection with economic planning, management and control of activities on all levels. Accounting must be carried out in such a way that it is possible to prepare interim accounts and annual accounts.

All acts, orders, etc. containing provisions on public accounting must be submitted to the Ministry of Finance and Domestic Affairs for approval. The Ministry manages all the financial assets and liabilities of the Government authorities and is also in charge of raising loans. It is also the Ministry of Finance and Domestic Affairs that decides who can draw funds from central bank accounts and determines the maximum amounts permitted in the bank accounts of individual units.

The Ministry of Finance and Domestic Affairs develops, operates and maintains the central Government accounting system. All public institutions must use this system. In addition, the Ministry of Finance and Domestic Affairs issues regulations and user instructions and provides support to units on accounting matters. Each individual unit must prepare accounting instructions for the organisation of accounts and information about responsibilities and competencies within the unit. These instructions must be approved by the auditors.

Audits

According to Greenland Parliament Act No. 23 of 3 November 1994 on Government Public Accounts, Etc., accounts must be audited by a state-authorised public accountant appointed by the Greenland Parliament.

The Parliament appoints this external auditor for a term of one year. The selection of the accountant is a separate item on the Parliament's session agenda. The auditor must check the correctness of the accounts and make sure that the various transactions covered by the accounts are in keeping with the Finance Act, the Supplementary Appropriations Act and other parliamentary acts and regulations, as well as applicable agreements and common practice.

There are three firms of state-authorised public accountants in Greenland. They are all associated with firms of international standing: KPMG, Grønlands Revisionskontor (PriceWaterhouseCoopers) and Deloitte. In the past thirty years, Parliament has selected Revisionsaktieselskabet Deloitte as its external auditor of public accounts.

The Government authorities also have internal auditors who, on an on-going basis, check all department and institution reconciliations of items on the balance sheet. In addition, the internal auditors audit the institutions by agreement with the external auditor.

The internal and external auditors also agree on audits of the individual departments. The external auditor audits the Government Treasury's consolidated annual accounts and issues an auditor's report. The report has always been clean, i.e. without supplementary remarks or reservations. The external auditor also audits the Government accounting system. This work is performed by specialists from Deloitte.

Accounting System

The Government accounting system covers all accounting needs in the Government system. The accounting system applies to all ministries and public institutions.

For reasons of security, the system is divided so that only the Ministry of Finance and Domestic Affairs can see all accounts and entries. Individual ministries only have access to their own information and information relating to the institutions for which they are responsible. Individual institutions only have access to their own information but may decide to divide the accounts even further so that

accounts are prepared for the individual departments of each institution.

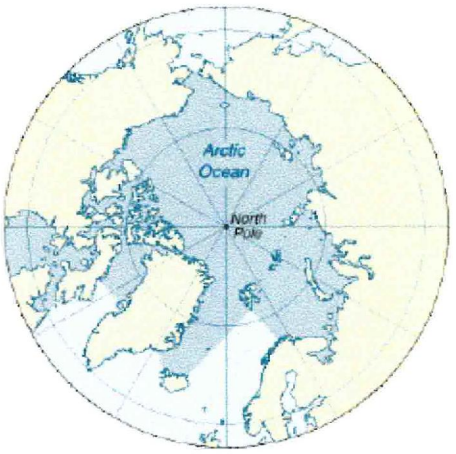
Annex 7: Environmental profile of Greenland

***Notice*:** The environmental profile in this annex is adapted from the previous programming document. The environmental profile is thus subject to update.

0. Summary

Greenland is a self-governing territory of Denmark, the world's largest island with an Arctic clima occupied by a population of 56,000. Most of the island is covered by the world's second largest ice-sh (after Antarctica). The island has a large indigenous population, and the predominant economic activi are fishing and hunting. The interchanges between the global climate and the Arctic system are such t the region is particularly sensitive to the changes which are occurring, and the impact of climate chang already making itself felt. The ice-sheet is already shrinking and calculations suggest that this tendenc likely to accelerate, which in the long-term (centuries) will have a major impact on the world's sea-le However climate change will also have great effects in Greenland, including major changes ecosystems as a result of milder temperatures, greater precipitation, reduction in sea-ice, greater radiation. The melting of the permafrost in some areas may cause problems for the existing infrastructu These factors will in turn impact on people's livelihoods and ways-of-life. Another environmer challenge, also outside Greenland's direct control, is the widespread presence of contaminants particular heavy metals and persistent organic pollutants in the Arctic environment generally a Greenland in particular. Although this contamination is relatively low-level, because of the long fo chains it bio-accumulates in the tissues of birds and the higher mammals such as seals, whales and p bears, and may reach high levels in humans who consume these animals. Little is known, however, ab the effects of these contaminants on humans or animals. There are also concerns about declines certain species of marine mammal and bird, due to or exacerbated by overexploitation.

1. Background information



1.1 Key facts and statistics

Name of Territory	Greenland
Region	North Atlantic
Land area	2,166,000 km^2 (410, 000 sq km ice-free, 1,756,000 sq km ice-covered)
Exclusive economic zone	territorial sea: 3 nm continental shelf: 200 nm or agreed boundaries or median line exclusive fishing zone: 200 nm or agreed boundaries or median line
Population	56,000 (2005 est.), i.e. 0.026 / km^2
GNP/capita	€22600 / capita
Literacy rate	100%
Unemployment rate	10% (2000, est.)
% below poverty line	NA

1.2 Constitution

Greenland has been a self-governing overseas administrative division of Denmark since 1979. The Home Rule Act provides that the Danish government retains responsibility for foreign policy, defence and security policy, the legal and judicial system and monetary policy. Greenland participates actively in international agreements which relate to it. It has a 31-member unicameral parliament (*Landsting*) and a premier and sends two representatives to the Danish *Folketing*. The Home Rule Government is elected by the *Landsting* based on the strength of the parties. Around half of all Greenland´s public expenditure is covered by a block grant of about €370 million from the Danish state. This amount, agreed by the Danish Folketing, is transferred to Greenland Home Rule to be administered by the Greenland government.

Greenland joined the European Community with Denmark in 1972 but withdrew in 1985, when it was given OCT status. Greenland and the EU also negotiated a fisheries agreement which allows the EU fishing quotas in exchange for a fixed payment and allows Greenland duty free access of its fishery products to the EU market so long as the EU has a satisfactory fisheries agreement with Greenland.

1.3 Physical geography

Greenland (Kalaallit Nunaat, Grønland) is the largest island in the world, and is related geologically to North America. Two-thirds of the island lies within the Arctic Circle. It is surrounded by the Arctic Ocean in the north; the Greenland Sea in the east; the Denmark Strait in the southeast; the Atlantic Ocean in the south; and Davis Strait and Baffin Bay in the west.

Most (80%) of the island is covered by the Greenlandic ice sheet: a collection of ice caps and glaciers covering respectively mountains and valleys. In its central part the Greenlandic ice sheet can be 3 km thick. The thickness decreases towards the ocean, and on the fringes it is only a few hundred meters thick. The weight of the ice sheet has depressed the central land area to form a basin, parts of which lie more than 1,000 ft [300 m] below sea level. Two drilling operations on the highest part of the ice sheet in 1992 and 1993 both reached bottom, with the deepest core measuring 3,053 m from surface to bottom. Studies of the composition of the ice cores have permitted new insights into the climatic history of the last 200,000–300,000 years. The ice moves outward from the centre, entering the sea in walls or debouching in glaciers, of which Humboldt Glacier is the largest and Jakobshavn Glacier the most calf-ice productive. These glaciers calve large icebergs, notably into the Davis Strait, through which they frequently reach Atlantic shipping lanes. The thickness of the ice sheet is slightly increasing, but the surface area as a whole is decreasing as the ice is melting at the fringes, with chunks of ice breaking off the sheet.

More than 50% of the ice-free area of Greenland consists of Precambrian rock, mostly granites and gneisses. Mountain chains run along Greenland's east and west coasts, Mt. Gunnbjørn (3700 m) in SE Greenland being the highest peak. The entire coastline of Greenland is deeply indented by fjords. There are many offshore islands, of which Disko, on the west coast, is the largest. The extreme northern peninsula (Peary Land) has no ice sheet but does have local ice caps.

Much of the soil in Greenland is characterised by permafrost, the layer of earth which is perpetually frozen. Only the surface thaws during the summer. This phenomena, found in all of northern Greenland and in parts of South Greenland, can make construction difficult, but the integrity of some infrastructure also depends on the permafrost.

Large parts of the sea around Greenland freeze over for greater or shorter parts of the year. Normally it is only the western coast, between Sisimut and Paamiut, that remains free of ice all year round.

1.4 Flora and fauna

Greenland´s ecosystem is influenced by the Arctic climate: low temperatures, low humidity, long dark winters, light summers and permafrost. Greenland lies north of the tree line. There are no forests in

Greenland; dwarf trees are found in the southern coastal areas. Forest-like brush exists in many places. The sunniest valleys in South Greenland have stands of strong, upright birch trees up to 7 metres in height. Greenlandic ash and various species of willow, evergreen, fern and several species of herbs also grow in South Greenland. Other vegetation includes mosses, lichens, heather, crowberry, grasses and sedge.

Some 500 species of wild plants are found in Greenland. The little plant cultivation that exists is confined to the southwest.

Birds constitute by far the majority of species of fauna, about 210. There are about 125 species of fish. There are 25 species of marine mammal and eight species of land mammal. Sledge dogs and imported mammals are also found.

The polar bear, musk ox, polar wolf, lemming, Arctic hare, and reindeer are the chief land mammals. Marine mammals include walruses, various species of seal and whale.

The Greenland National Park, covering 956,000 km^2 and established in the north and northeast of Greenland in 1974. is the largest National Park in the world and includes a marine component. In addition to the National Park, there are nine other protected areas (marine and terrestrial) in Greenland (Home Rule legislation no. 11 of 12 November 1989), covering about 8100 km^2. Furthermore executive orders for the protection of three more areas are expected to enter into force in 2007.

1.5 Demography, socio-economy

Nearly all Greenlanders live along the fjords in the south-west of the main island, which has a milder climate. About 85% of the people are Inuits, locally born people of European descent or mixed; the balance are mainly Danish. The population is currently estimated to be declining slightly, partly as a result of a net outward migration (8.4/1000 in 2005). Social change has been rapid, and there has been a considerable exodus from small communities into towns.

Fishing is the mainstay of the Greenlandic economy, and accounts for 94% of all exports. Arctic fisheries are among the most productive in the world. It is estimated that about 2,500 people are employed directly in fishing with a further 3,000 employed in the fish processing industry, in addition to part-time workers and those employed in derivative businesses. The most important fishery resource is now shrimp, and the once important cod has now virtually disappeared.. Some of the world's largest shrimp beds are in Disko Bay. Shrimp fishing seems to have peaked with an annual haul of just over 70,000 tonnes. Halibut stocks have been more stable and are now an important resource. Salmon and redfish are also important. Of the varieties of shellfish found, shrimps, crabs and scallops are also harvested.

Many processing plants have been constructed in the southern and south-western areas. Royal Greenland Ltd. is both the largest company involved in fishing and fish processing in Greenland and the country's largest company with over 3,000 employees.

The fisheries for prawns and Greenland halibut are regulated by quota and license regulations decided on by the Cabinet on the basis of the biological advice regarding sustainability.

Greenland has always been a *hunting* society, and hunting continues to be a very important economic and cultural activity. There are some 2,700 professional hunters in Greenland and 8,300 people hold a recreational hunting permit. Hunting is of great importance to the population, especially in the settlements and in outlying districts. The primary targets for hunters are seals, birds and mountain trout. Other important, although limited, resources are large and small whales, reindeer and musk ox. Hunting in Greenland requires a professional hunting permit or a recreational hunting permit, both subject to a range of conditions. All specimens caught must be reported. Furs and sealskins are exported.

In the past *mining* was important in Greenland, and deposits of cryolite, iron, zinc, and lead, have largely been worked out. Uranium, copper, coal, and molybdenum have also been detected, but are difficult to

extract. Considerable exploration activities have taken place in West and South-West Greenland where, since the middle of the 1990s, and the region between Kangerlussuaq and Maniitsoq has emerged as promising for diamonds. Deposits of gold have been discovered in several areas, and there is also potential for zinc, lead and silver. In the past *mining* was important in Greenland, and deposits of cryolite, iron, zinc, and lead, have largely been worked out. Uranium, copper, coal, and molybdenum have also been detected, but are difficult to extract. Considerable exploration activities have taken place in West and South-West Greenland where, since the middle of the 1990s, and the region between Kangerlussuaq and Maniitsoq has emerged as promising for diamonds. Deposits of gold have been discovered in several areas, and there is also potential for zinc, lead and silver. Two mines have opened in West Greenland in the last couple of years and 3 more mines may be opened in Greenland within the next 3 – 4 years. Oil exploration is going on in the offshore areas west of the capital Nuuk in Greenland, and drillings may take place in 2008. Greenland has just completed a licensing round in the Disko-Nuussuaq offshore region in West Greenland. 4 of the worlds largest oil companies have applied for licences in the area. Exploration in the Disko-Nuussuaq region will commence in the summer of 2007.

The government wishes to expand the *tourist industry*. Air transportation and telecommunications have greatly improved in recent years. Tourists can buy a temporary license to fish or hunt. Paid trophy hunts for musk ox and polar bears are envisaged. The prospects for tourism are however limited due to a short season and high costs.

Little *agriculture* is possible. The growing season is too short to allow even wheat to mature. There is some cultivation of horticultural and greenhouse vegetables and husbandry of sheep and reindeer;

Other industries include handicrafts, hides and skins and small shipyards. Many Greenlanders are employed in the service sectors.

1.6 Other

The Arctic countries generally, and Greenland in particular, regard sustainable development as having a fourth 'pillar' in addition to the economic, social and environmental pillars, and that is that opportunities must be taken to protect and enhance the culture and health of indigenous communities.

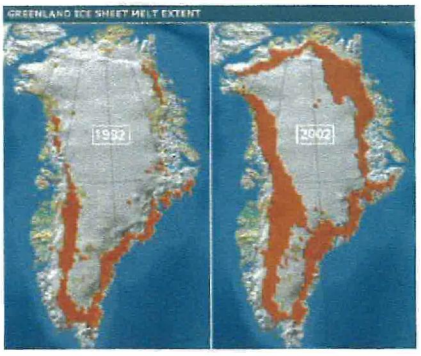
2. Main environmental challenges

2.1 Overview

Greenland is a large island with a very low overall population density. There is very little industry or (for the time being) mineral extraction on the island, and vehicle ownership is low (since there are no roads between settlements). Although there is no treatment of waste water, so that raw sewage is pumped out into the sea untreated, the quality of the air, surface waters, groundwater (often permafrost) and soil are generally relatively free of contamination, although there is an issue of low-level but generalised pollution by various contaminants brought into the area from the mid-Northern latitudes and which are accumulating in the food chain. Greenland intends to deal with its waste by a network of incinerators situated in the various communities. 80% of energy is used for space heating. Many houses are relatively poorly insulated, but a programme is in progress to refurbish and improve the energy performance of the housing stock. Greenland intends to expand its hydropower capacity.

2.2 Main challenges

Challenge 1 Climate change SEVERE

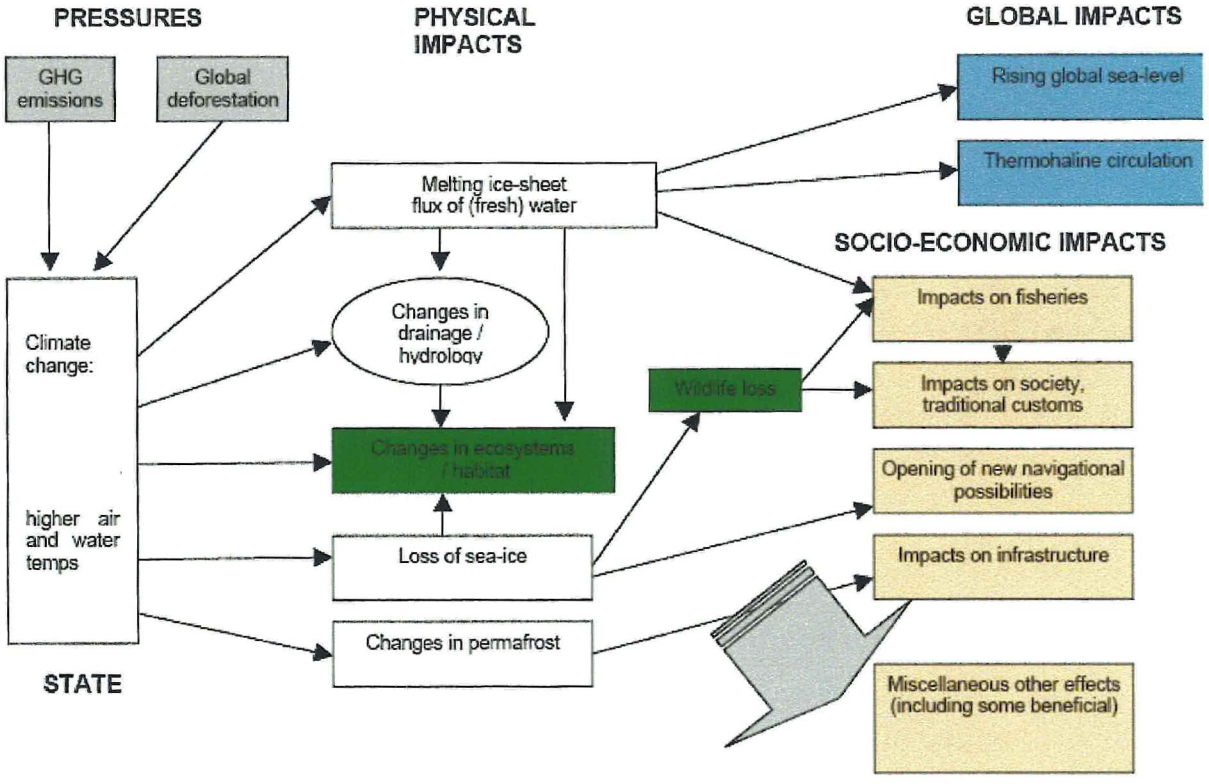


Images show how the areas of Greenland that melt in summer (orange) have expanded in recent years. *Source: Arctic Climate Impact Assessment*

Climate change is already having an impact in the Arctic region generally and Greenland in particular. Many observations of environmental change in the Arctic show a trend consistent with climate change models. In the last century temperatures over some land areas have increased by about 5°C. Greenland's ice sheet has thinned dramatically around its southern and eastern margins. Arctic sea-ice extent decreased by approximately 3% per decade between 1978 and 1996

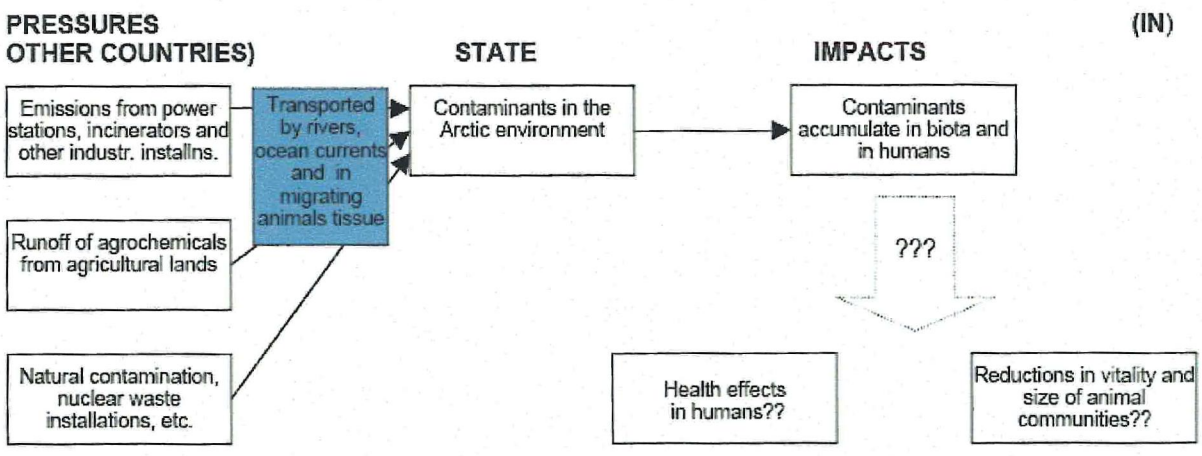
The Arctic region is extremely vulnerable to a change in climate—major physical, ecological, sociological, and economic impacts are expected. Because of a variety of positive feedback mechanisms, and because of the phase change liquid ↔ solid which H_2O undergoes at 0°C, the Arctic is likely to respond more rapidly and severely than other areas, with effects on ice cover, sea-ice, permafrost, and hydrology. Furthermore the fate of the Greenland ice sheet plays a crucial role in the *global* impact of climate change. Its total melt would mean a global sea-level rise of over 7 metres. The additional flux of fresh and low-saline water may change the major marine currents, thereby having other effects on the global climate which are difficult to predict.

DIAGRAM: IMPACT OF CLIMATE CHANGE IN GREENLAND



Surveys conducted from 1993 to 1998 showed the ice sheet in southern Greenland to be shrinking by about 8 km^3 each year, although ice cores collected in the area suggest that similar changes may have occurred in the past. From 1996 to 2004 the amount of ice melting each year in Greenland increased by a factor 2½, leading to concerns that the sea level may rise significantly, even during the 21st century.
The summer melting of the Greenland ice sheet at its margin is likely to continue. If warming continues, the Greenland ice sheet will shrink considerably, as occurred in previous interglacial periods, and if the warming is sustained, the ice sheet will melt completely.
Changes in temperature, in hydrology, in ice cover and sea-ice will have major impacts on ecosystems and habitats including, importantly for Greenland, fisheries. Changes in ocean currents will affect the availability of nutrients and the disposition of larval and juvenile organisms, thereby influencing fish stocks. Greenland turbot, a species more adapted to a cold climate, is likely to decline further. Cod stocks may recover however. Projected climate change could favour some species, decimate others; some fisheries may disappear, and other new ones may develop. More warmer water species will migrate northwards and compete for existing niches, and some existing populations may take on a new dominance. These factors may change the population distribution and value of the catch. This could increase or decrease local economies by hundreds of millions of euros annually, and have important social repercussions.
There will be a substantial loss of sea-ice in the Arctic Ocean and seas around Greenland. Projected losses in sea ice are likely to have considerable impacts on Arctic biology through the entire food chain. Sea-ice is a vital habitat for seals and other marine mammals. Seal species use ice for resting, pup-rearing, and moulting, and their polar bear predators are particularly at risk. If break-up of annual ice occurs too early, seals will be less accessible to polar bears. Changes will occur in the distribution, age structure, and size of populations of marine mammals. This will in turn affect indigenous peoples and their traditional ways of life. People who rely on marine systems for food resources are particularly at risk because Arctic marine food chains are long. When sea ice is late in forming, certain forms of hunting are delayed or may not take place at all. When sea ice in the spring melts or deteriorates too rapidly, it greatly decreases the length of the hunting season.
The loss of sea-ice will have major implications for trade. A more open ocean will favour increased shipping along high-latitude routes and could lead to faster and cheaper ship transport between eastern Asia, Europe, and eastern North America. It will also have defence implications.
Coastal erosion and retreat as a result of thawing of ice-rich permafrost are already threatening communities. The capacity of permafrost to support buildings, pipelines, and roads has decreased with atmospheric warming, so pilings fail to support even insulated structures

Challenge 2 Transboundary pollution of the Arctic environment **MODERATE**



Many animals in the Arctic have elevated levels of heavy metals (particularly mercury and cadmium) and persistent organic pollutants (POPs) in their tissue. Heavy metals tend to accumulate in specific organs

such as the liver, whereas POPs accumulate in organisms' fatty layers. This tendency is particularly pronounced in animals near the top of the food chain such as marine mammals, birds and polar bears. POP concentrations in ringed seals are close to the threshold limit value. Although much higher values have been measures in seals in the Baltic, this is not such a problem because seal does not form an important element of the human diet there. Polar bears, which eat only the fat of the ringed seals, get big doses of POPs. Studies done in Svalbard have suggested that the immune systems of the polar bears are under pressure as a result of PCB concentrations. Mercury levels in Arctic ringed seals and beluga whales have risen by between 2 and 4 times over the last 25 years in parts of Greenland. Many marine birds also have high POP levels. The kittiwake, which spends the winter on the coasts of North America, has high POP. The black guillemot, on the other hand, which spends its whole life in the Arctic, has lower values.

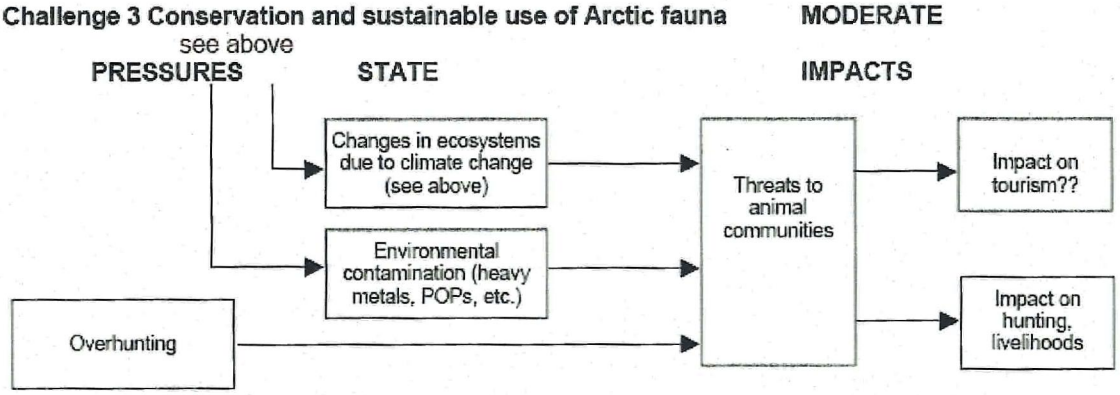
Many people whose diets are rich in these animals ingest more cadmium and mercury than international limit values. One Greenlander in six has potentially harmful blood-levels of mercury from eating contaminated fish and whales. 16% of people in northern Greenland have levels above that which can be toxic to non-pregnant adults (UNEP Earthwatch website). Little is known, however, about health effects in Greenland.

Metals occur naturally in the earth's crust and are introduced into the environment by weathering and other natural processes. But studies indicate that much of the contamination by heavy metals and POPs come from the middle latitudes of the Northern Hemisphere, and that these substances are transported to the Arctic by sea currents and winds. The watershed of the Arctic is enormous (see map beside) and includes many industrial areas in Northern Eurasia (particularly Russia) and North America. Because of cold condensation, Arctic waters are likely to serve as a major sink for contamination released around the world.

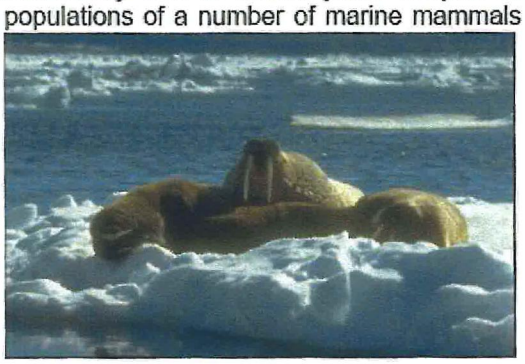
Radioactive contamination is also a concern in the Arctic, including Greenland.

It is not known whether contamination in the Arctic is rising or falling. There are some places where concentrations have fallen over time and other places where no conclusions can be drawn. In a few places, concentrations appear to be rising.

Challenge 3 Conservation and sustainable use of Arctic fauna **MODERATE**



Greenland's main commercial marine resources (shrimps and Greenland halibut) are holding up reasonably well in recent years despite the crisis in fisheries elsewhere in the Atlantic. However populations of a number of marine mammals and birds have been declining, and the Greenland Home Rule has recognised that they need greater protection. These include the beluga whale, narwhal, walrus, common seal, porpoise, polar bear, common murre (common guillemot), thick-billed guillemot (Brünnich's Guillemot), eider, king eider and Arctic tern. All of the mammals in this list are classified by the IUCN as 'vulnerable' species, and they are all hunted in Greenland. In some cases a hunting licence is required and the species may be subject to a quota. In some cases populations are being stressed by other phenomena shown in the diagram (changing climatic conditions, pollution bio-accumulating in their bodies), but it is widely accepted that for the species listed, overhunting has contributed to declining populations.



Although hunters and conservationists have a common interest in ensuring that wildlife stocks are sustainable, they often do not agree on the status of and trend in the populations, and therefore on the measures such as hunting quotas necessary to guarantee this. The hunters are more optimistic than the biologists. The Home Rule government believes it would be lacking in legitimacy to impose the recommendations of the scientific community on hunters, and that a consensus should be achieved among all sections of the community.

There has been considerable criticism of Greenland's management of its living resources. In November 2003 the WWF published a report (Hjarsen, 2003) arguing that Greenland was failing to meet its conservation obligations under the multilateral MEAs with which it is associated. Greenland has recognised there is a problem with some species, and has taken measures to increase protection. A new Nature Protection Act was enacted in December 2003, AND legal protection and quotas have been introduced for birds, for the narwhal, the beluga, the polar bear and, shortly, for the walrus.

However some hunting quotas being set still fall well short of scientific advice. So for example, although the Canada/Greenland Joint Commission on the Conservation and Management of Narwhal and Beluga (JCNB) has expressed grave concern about the size of the beluga harvest, and recommends that the Greenland annual take be reduced to 100 in order to halt the decline (JCNB, 2006), the quota is currently 310 (quota exceeded for 2005/6). A similar situation applies with regard to the narwhal.

The thick-billed murre is an important game bird in Greenland, and contributes between EUR 300,000 and 1 million a year to the Greenlandic economy. This bird has been overexploited locally by hunters. In some parts of the country the colonies have declined drastically. An estimated 50-90% of some colonies has disappeared, others have vanished entirely (Greenland Institute for Nature, 2003). The breeding behaviour of this bird is such that, once depleted, populations take a long time to recover.

The problem is not only related to the absence of adequate legal controls or over-generous quotas. There is also a problem with enforcement (see section 3.6).

The IWC Scientific Committee has pointed the absence of documentation on counts of large whales in Greenlandic waters. Similarly there is insufficient knowledge of other stocks (e.g. polar bears) to permit scientifically sound hunting quotas.

If declines in the populations of the relevant species are not halted, there could be adverse impacts for the burgeoning tourist industry

Other challenges

1. The requirement for EIA applies only to the oil, gas and minerals industries..

2. Waste? Concerns about solutions involving local incinerators? Dumps by expeditions, US military and historical mining?
3. Concerns about pumping of untreated sewage into the sea?

3. Environmental policies and institutions

No questionnaire received from Greenland, and it was not possible to find in the public domain the data needed to complete this chapter fully.

3.1 Institutional structure, manpower and budgets

The Department of Environment and Nature is responsible for environmental and conservation policy. The Department of Fisheries and Agriculture is responsible for fisheries policy and for agriculture. The Bureau of Minerals and Petroleum has a service for environmental matters which coordinates its work with the Danish Environment Agency, in the Danish Ministry of the Environment.

The Institute of Natural Resources, set up in 1994, is charged with establishing the scientific foundation for the sustainable use of living resources in and around Greenland and safeguarding the environment and biological diversity. The Institute has a staff of 40, of which more than half are biologists

3.2 Policy instruments

The legislation most relevant to environmental protection in Greenland is indicated in the table below.

Item of legislation	Comments / detail
Nature Protection Act	Approved by Greenlandic parliament In December 2003 This allows the government to create regulations on the protection of the living resources, regulate or protect species or stocks, restrict periods where hunting is permitted, set quotas, prohibit catching and hunting or any activity in geographically defined areas as well as work out wildlife management plans.
Executive order for protection of birds	January 2004
Executive order for protection of narwhal	February 2004
Executive order for protection of beluga	February 2004
Executive order for protection of polar bears	2006
Executive order for protection of walruses	July 2006
Orders setting hunting quotas	June 2004
Executive order on CITES	Came into force in September 2004
Conservation (Nature and Ancient Relics) Act	Allows protected areas to be established. Administered by the Department of Environment in close collaboration with the Danish Ministry of Environment.

There is currently no detailed EIA legislation in Greenland, although the 2003 Nature Protection Act does provide that an EIA is required for infrastructural projects..

A major information campaign was waged in Greenland during 2002-2004 on the sustainable use of living resources. This included programmes on TV and radio, factsheets and brochures distributed to schools, hunters' groups, etc., seminars and discussions for stakeholders, administrators and the general public

3.3 Monitoring

Environmental quality monitoring is mainly carried out in cooperation with other Arctic countries under the auspices of AMAP, in which Greenland/Denmark participates.

Conservation monitoring is the responsibility of the Greenland. Institute of Natural Resources.

3.4 Enforcement

Enforcement poses great problems in a country with the extraordinarily low population density of Greenland. The country has only eight police officers to enforce conservation and hunting regulations. Greenland cannot rely on enforcement and therefore has to rely on legitimacy and consensus.

4. International cooperation

4.1 Cooperation with Denmark

In 1989, Denmark passed responsibility for environmental protection to the Home Rule Government, and in 1992, the Home Rule Government gained jurisdiction over the marine environment around Greenland within the three-mile inshore limit.

Since this time the Danish and Greenlandic environment ministers have signed joint declarations on cooperation and launched a number of initiatives on nature and the environment in Greenland. There is also a contact group involving the Ministry of Environment and Nature in Greenland, and the Danish Environmental Protection Agency and the Danish Forest and Nature Agency, which meets once a year to discuss common problems and share experiences.

Since 1994, Denmark has focused particularly on Greenland as an element of its environmental assistance to the Arctic, and has cooperated with the Home Rule Government of Greenland. Greenland finances and attends to the interests of the Danish Kingdom with respect to the framework of CAFF, while Denmark funds the Greenland contribution to AMAP (see 4.5). Activities have included developing technological solutions to specific environmental problems in Greenland, including waste management and ensuring clean drinking water, developing environmental standards for the oil and mining industry, mapping things left behind after earlier exploration for mineral resources, military activities, expeditions, etc., and clarifying and incorporating Greenlandic factors in the preparation and implementation of international agreements and conventions. The initiatives are usually in the nature of pilot or demonstration projects and can, for example, cover physical installations, information activities and administrative tools.

The Danish EPA also evaluates the sector programme for low-energy housing refurbishment in Greenland based on an agreement between the two governments

4.2 Cooperation with the EU

When Greenland withdrew from the EC in 1985, the parties concluded the agreements on fishing. The agreements gave Greenland duty-free access to the European market for fish products and gave fishing rights to EU countries in Greenland waters in exchange for agreed remuneration. It also included Greenland as an OCT whereby Greenland products were given duty free access to the EU market. However Greenland was not given access to the EDF. During 2001 - 2006 Greenland received €42.8 million/year from the EU.

A new Fisheries Partnership Agreement was recently signed between Greenland and the EU, effective from January 2007. The annual EU financial contribution will be €15.8 million, of which 25% is earmarked for support to the Greenlandic fisheries policy. The new protocol decreases the EU catch to reflect the state of the stocks and the needs of the Greenlandic fishing industry. A further €2 million is expected from EU shipowners in the form of licence fees. Greenland will also receive € 25 million from the EU for cooperation in areas other than fisheries. Greenland will therefore receive the same amount as it does under the current fisheries protocol.

The Council Decision on the association of the OCT with the EEC, which governs EU-OCT relations, also emphasises co-operation and development aspects, but due to per capita income limits, Greenland only qualifies for relatively small amounts of support. No other Community support funding is forthcoming (also not under EDF) except for the compensation provided under the fisheries agreements.

4.3 MEAs

Greenland participates in the following MEAs:

MEA	Remarks
Biodiversity Convention	Greenland has started implementation by elaborating a National Red List and a Strategy and Action Plan for the Biodiversity Convention.
Ramsar Convention	Protection of wetland and coastal ecosystems. Greenland has 11 Ramsar sites. The 2003 Nature Protection Act provides a legal framework for implementation, but Greenland has not yet begun to develop management plans and improve the conservation of the ecosystems of the designated sites, or seek designation for other sites meeting the Ramsar criteria.
CITES	In September 2004, the Greenland Home Rule government approved a CITES executive order, thereby creating a legal framework for a national implementation of CITES. The Institute of Natural Resources, the designated CITES scientific body, has now begun to assess the influence of the trade on the wild population as required by the Convention. This work has been carried out for the export of narwhal, and resulted in a ban on export of narwhal products from Greenland in 2006.
International Whaling Commission (40 countries)	Minke, fin and other large whales. Greenland has a quota for fin and minke whales under the Aboriginal Subsistence Whaling provision. However Greenland has not provided data on stocks to support the quota. In 2006 the IWC Scientific Committee recommended to the IWC that it dramatically cut the fin whale quota. Greenland responded by agreeing to implement a voluntary limit of 10 fin whales a year.
Joint Commission on Narwhal and Beluga/JCNB	Greenland has set quotas for the narwhal and beluga considerably higher than the JCNB recommendations. (Greenland and Canada only))
NAMMCO: North Atlantic Marine Mammal Commission	
Oslo Convention	Polar bears
NAFO: Northwest Atlantic Fisheries Org.	Agreement on fisheries covering the northwest Atlantic outside the 200 nautical mile zones
ICES: International Council for the Exploration of the Sea	Advises on fishing in waters between Greenland and Iceland
International Murre Conservation Strategy	Polar common guillemot

In July 2004 the Ilulissat ice fjord was appointed World Heritage Site by the IUCN. Greenland is also a member of the PAME (Protection of the Arctic Marine Environment) programme of the Arctic Council. PAME has produced Arctic Offshore Oil and Gas Guidelines

4.4 Funding by international community for environmental projects

None identified.

4.5 Other international cooperation on the environment

Environmental cooperation in the Arctic between Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden and the USA was formalised in 1991 with the adoption of the Arctic Environmental Protection Strategy (AEPS). This arose from a growing concern for the Arctic environment, in particular about transboundary pollution from the industrialized countries and their accumulation in the food chain. One of the main purposes of the AEPS is to provide the Arctic governments with scientifically based advice on necessary measures to improve the state of the environment in the Arctic. The scientific evidence is mainly procured through a joint Arctic Monitoring and Assessment Programme (AMAP), which each country is responsible for implementing in its Arctic region.

In 1996, the Arctic Council was established, due to a wish that cooperation should be extended to include other dimensions of sustainable development. The AEPS environmental cooperation and working groups continue as before under the framework of the Arctic Council.

Conservation of Arctic Flora and Fauna (CAFF) is a working group of the Arctic Council. It is a forum of Arctic professionals and indigenous people's representatives which addresses circumpolar Arctic conservation issues. It advises Arctic governments on conservation matters and sustainable use issues. The CAFF Working Group has sponsored a number of projects, including circumpolar conservation strategies for murres (guillemots) and eiders, and the Circumpolar Protected Area Network (CPAN) Strategy and Action Plan. Greenland will chair CAFF for the next two years (2007 and 2008).

PAME (Protection of the Arctic Marine Environment) is another programme of the Arctic Council. Its workplan for 2004-2006 includes: Improving knowledge on the Arctic marine environment,
Determining the adequacy of applicable international/regional commitments and promoting their implementation and compliance, Facilitating partnerships, programme and technical cooperation and Supporting communication, reporting and outreach both within and outside the Arctic Council. PAME has produced Arctic Offshore Oil and Gas Guidelines.

5. Recommendations on future cooperation between EU and Greenland

5.1 Climate change

Ultimately there are two types of response to the challenge of climate change, i.e. *mitigation* (reducing impacts by reducing pressures, i.e. reducing emissions of or creating new sinks for greenhouse gases) and *adaptation* (taking measures which recognise that the climate is changing, but reduce the impacts.

In so far as mitigation is concerned, climate change is a global problem: all that matters is the total global emissions of greenhouse gases. It does not matter where the emissions occur. This means that international awareness, cooperation and a sense of urgency are necessary. The amount which any country can do on its own is very limited, and this applies very much to Greenland which probably accounts for less than 0.001% of the worlds' anthropogenic GHG emissions.[2] However Greenland can put its weight behind efforts to mobilise the world community to take action on climate change. Greenland can leverage these efforts by virtue of being the site of the Greenland ice-sheet, the potential impact of the melting of which is gaining considerable attention worldwide, and the pivotal role of the Arctic environment generally on global climate. Another important strategy will be for Greenlandic institutes to seek full involvement in research programmes seeking to gain an understanding of the impact of global

[2] This is not to say that Greenland should not try to minimise its own GHG emissions. Apart from its obligations under the UNFCC and Kyoto Protocol, this is important to provide legitimacy to its efforts towards global emissions reductions.

warming on the Greenland ice-sheet. Measures which reduce uncertainties about the impacts will make it more likely that international decision-makers will take appropriate action. Because Greenland is not responsible for its foreign affairs, this work will have to be done in concert with Denmark and its partners in other regional bodies such as the Arctic Council.

Adaptation will in any case also be needed. In the Arctic this must take into account the especially sensitive and vulnerable natural and human systems of the region. Special attention will need to be paid to strengthening the adaptive capacities of Arctic residents. The successful long-term occupation of the Arctic by indigenous peoples has been possible, in part, owing to their adaptive capacity (in social, economic, and cultural practices) to adjust to climate variation and change. Today however, Arctic peoples cannot adapt, relocate, or change resource use activities as easily as they could in the past, because most now live in permanent communities with more constrained social and economic situations. Their hunting and herding activities are determined to a large extent by resource management regimes, land use regulations, and by local and global markets.

Recommendations for areas of cooperation between the EU and Greenland
(At present Green land does not benefit from EDF funding)

- Technical assistance in reducing GHG emissions, particularly where there are synergies with other economic or social goals, i.e. particularly through improved energy-efficiency in the residential housing stock and an increase in hydro-power.
- Support projects which involve working closely with Arctic residents, including indigenous and local communities, to help them to adapt to and manage the environmental, economic and social impacts of climate change: research, better information, participation in decision-making.
- Research to provide that new *opportunities* provided by climate change, such as increased navigability of sea routes and access to resources, are identified, developed and managed sustainably, including consideration of environmental and social impacts and appropriate measures to protect the environment, local residents and communities.
- Natural and social science research on impacts and adaptation, including studies to enhance understanding of fundamental processes, procedures for integrating indigenous and local knowledge into scientific studies and partnerships between indigenous peoples, local communities, and scientists in defining and conducting research and monitoring associated with the Arctic climate.
- Seek to ensure that relevant data from research, observation, monitoring and modelling activities are made available to local, national and international research and monitoring programmes.

5.2 Transboundary pollution of the Arctic

Apart from general concerns about the contamination of a pristine environment, there are specific concerns relating to high levels of contaminants in Arctic fauna and in the people who consume them. A significant proportion of inhabitants of Northern Greenland have blood-levels of mercury and POPs in excess of WHO guidelines. However no health effects have been specifically observed and little is known about whether health or animal communities are being affected. In the first place research is needed into this phenomenon.

Recommendations for areas of cooperation between the EU and Greenland

- Support research projects either in Greenland or in cooperation with Greenland's Arctic partners in, for example the Arctic Council, into the health impact of transboundary pollution: sources, pathways, body levels of key contaminants in the 'critical group' (i.e. those with high dietary intake of marine birds and mammals), health surveys, intake, relationship between intake (ingestion) and uptake, etc.

5.3 Conservation and the sustainable use of the Arctic fauna in Greenland

An important bottleneck appears to be the absence in some cases of adequate mechanisms to obtain the basic data needed for wildlife conservation, i.e. reliable community censuses and time series which allow trends to be identified, or in other cases the failure to find common ground between hunters and biologists about estimates made.

Recommendations for areas of cooperation between the EU and Greenland

- Support for projects to quantify populations and trends of the critical species of Arctic wildlife. The focus should be on methods which win consensus across all strands of society, for example by integrating community-based networks, hunters' associations and indigenous groups into the scientific work, applying standardised, agreed methodologies.