

I. TEMPLATES FOR THE SIXTH NATIONAL REPORT

Section I. Information on the targets being pursued at the national level

If your country has set and/or adopted national targets or equivalent commitments related to the Strategic Plan for Biodiversity 2011-2020 please use the following template to describe them. Please complete this template for each of your country's national targets. National targets entered in this section will be linked to section III so that progress in their implementation can be assessed. If your country has not set or adopted any national targets related to the Strategic Plan for Biodiversity 2011-2020 please indicate so in the first box and move to section II.

| |
|---|
| <p>I. Information on the targets being pursued at the national level</p> <p><input type="checkbox"/> My country has adopted national biodiversity targets or equivalent commitments in line with the Strategic Plan for Biodiversity 2011-2020 and the Aichi Targets</p> <p>or</p> <p><input checked="" type="checkbox"/> My country has not adopted national biodiversity targets and is reporting progress using the Aichi Biodiversity Targets for reference. (Move to section II. In section III, the Aichi Biodiversity Targets should be used for the purpose of this report as the national targets and progress should be assessed towards their achievement in the national context.)</p> |
| <p>National Target (Please use the official title, if available)</p> |
| <p>Rationale for the national target</p> |
| <p>Level of application (Please specify the level to which the target applies):</p> <p><input type="checkbox"/> Regional/multilateral – please indicate area concerned <Text entry></p> <p><input type="checkbox"/> National/federal</p> <p><input type="checkbox"/> Subnational – please indicate area concerned</p> |

Relevance of the national targets to the Aichi Biodiversity Targets (Links between national targets and Aichi Biodiversity Targets.)

Main related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is wholly or partially related. Parties can select an entire target or a target component (not shown below))

- 1 6 11 16
 2 7 12 17
 3 8 13 18
 4 9 14 19
 5 10 15 20

Other related Aichi Biodiversity Targets (Please select one or more Aichi Biodiversity Target to which the national target is indirectly related.)

- 1 6 11 16
 2 7 12 17
 3 8 13 18
 4 9 14 19
 5 10 15 20

or

National target has no corresponding Aichi Biodiversity Target or relates to other parts of the Strategic Plan for Biodiversity – please explain

<Text entry>

Other relevant information (Please use this field to provide any other relevant information, such as the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included.)

<Text entry>

Relevant websites, web links, and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to this national target can be found.)

<Add link> <Add file>

Section II. Implementation measures taken, assessment of their effectiveness, associated obstacles and scientific and technical needs to achieve national targets

Using the template below, please report on the major measures your country has taken to implement its national biodiversity strategy and action plan. Please also provide an assessment of the effectiveness of these measures. The template should be replicated for each measure reported.

II. Implementation measures taken, assessment of their effectiveness, associated obstacles and scientific and technical needs to achieve national targets

Describe a measure taken to contribute to the implementation of your country's national biodiversity strategy and action plan

National biodiversity strategies and action plans (NBSAPs) are the key instrument for translating the Convention and decisions of the Conference of the Parties into national action. In the fifth National report Greenland reported that a Strategy and Action plan for biodiversity in Greenland would be developed in 2015 which unfortunately never happened. Århus University is now contracted to assist in the development of a National Biodiversity Strategy 2030,

However, even though Greenland has not adopted a specific National Biodiversity and Action Plan a range of activities have been carried out both nationally and in regional fora with close links to the targets and goals which would be required in the political process to develop a final strategy and implementation plan.

These activities can however not be assessed or tracked against a national strategy, since such a strategy is not finally developed and implemented. Section three contains a summary of national activities (contributions) of relevance to the achievement of each global Aichi Biodiversity Target.

For the implementation measure, please indicate to which national or Aichi Biodiversity Target(s) it contributes

See above and section IV

Assessment of the effectiveness of the implementation measure taken in achieving desired outcomes:

See above and section IV

Please explain the selection and where possible indicate the tools or methodology used for the assessment of effectiveness above

See above and section IV

Relevant websites, web links and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to this assessment can be found).
Naalakkersuisut website: www.naalakkersuisut.gl

At the official website for the Naalakkersuisut – the Government of Greenland – additional information about how Naalakkersuisut works with the protection of biodiversity could be found. Also information about sustainable use of species are found at this website.

Following sites are relevant:

- <https://naalakkersuisut.gl/en/Naalakkersuisut/Departments/Natur-Miljoe/Natur-og-Klimaafdelingen/Natur>

- <https://naalakkersuisut.gl/en/Naalakkersuisut/Departments/Natur-Miljoe/Natur-og-Klimaafdelingen/Natur/Fredede-landomraader>
- <https://naalakkersuisut.gl/en/Naalakkersuisut/Departments/Natur-Miljoe/Natur-og-Klimaafdelingen/Natur/Evaluering-af-Arktisk-Biodiversitet>
- <https://naalakkersuisut.gl/en/Naalakkersuisut/Departments/Natur-Miljoe/Natur-og-Klimaafdelingen/CITES>
- <https://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Natur-Miljoe/Natur-og-Klimaafdelingen/Natur/Ilulissat-Isfjord>
(only in Greenlandic and Danish)
- <https://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Natur-Miljoe/Natur-og-Klimaafdelingen/Natur/Nationalparken-i-Nord-og-Oestgroenland> (only in Greenlandic and Danish)
- <https://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Natur-Miljoe/Natur-og-Klimaafdelingen/Natur/Forvaltningsplan-for-Kangerlussuaq> (only in Greenlandic and Danish)

Further information and relevant reports and documents can be found at the website of Århus University: <http://arctic.au.dk/> & <http://dce.au.dk/myndigheder/groenland/> and Greenland Institute of Natural Resources: <http://www.natur.gl/en/>

Other relevant information, including case studies to illustrate how the measure taken has resulted in (or is expected to result in) outcomes that contribute to the implementation of the NBSAP

See above and section IV

Relevant websites, web links and files (Please use this field to indicate any relevant websites, web links or documents where additional information can be found)

<Add link> <Add file>

Obstacles and scientific and technical needs related to the measure taken: Please describe what obstacles have been encountered and any scientific and technical needs for addressing these, including technical and scientific cooperation, capacity development activities or the need for guidance materials.

<Text entry>

Relevant websites, web links and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to these obstacles and scientific and technical needs can be found).

<Add link> <Add file>

Section III. Assessment of progress towards each national target

Using the template below, please assess the level of progress made towards each of your country's national targets or similar commitments. The template should be replicated for each national target. If your country has not set national targets please use the Aichi Biodiversity Targets.

| III. Assessment of progress towards each national target |
|--|
| <p>The resource manual for the sixth National Report, specifies that parties whose national targets are identical to the Aichi Biodiversity Targets, may have the same information for sections II, III and IV. As described in II, Greenland has not yet finalized its national strategy. Therefore Greenland has decided to report against the Aichi Targets. In section IV an integrated description is given on national progress (III) on each target as well as national contributions to achieve the target. Therefore section III is made without further descriptions, but section IV should be consulted in connection with III.</p> |
| <p>Target 1</p> <p>Category of progress towards the implementation of the selected target:</p> <ul style="list-style-type: none"><input type="checkbox"/> On track to exceed target<input type="checkbox"/> On track to achieve target<input type="checkbox"/> Progress towards target but at an insufficient rate<input type="checkbox"/> No significant change<input type="checkbox"/> Moving away from target<input checked="" type="checkbox"/> X Unknown |
| <p>Target 2</p> <p>Category of progress towards the implementation of the selected target:</p> <ul style="list-style-type: none"><input type="checkbox"/> On track to exceed target<input checked="" type="checkbox"/> X On track to achieve target<input type="checkbox"/> Progress towards target but at an insufficient rate<input type="checkbox"/> No significant change<input type="checkbox"/> Moving away from target<input type="checkbox"/> Unknown |
| <p>Target 3</p> <p>Category of progress towards the implementation of the selected target:</p> <ul style="list-style-type: none"><input type="checkbox"/> On track to exceed target<input type="checkbox"/> On track to achieve target<input checked="" type="checkbox"/> X Progress towards target but at an insufficient rate<input type="checkbox"/> No significant change<input type="checkbox"/> Moving away from target<input type="checkbox"/> Unknown |
| <p>Target 4</p> |

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target (Fisheries)
- Progress towards target but at an insufficient rate
- No significant change (Hunting)
- Moving away from target
- Unknown

Target 5

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target (trawling in the sea bottom, research and documentation)
- Progress towards target but at an insufficient rate
- No significant change (loss of sea ice and other climate related habitat loss)
- Moving away from target
- Unknown

Target 6

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 7

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 8

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 9

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- X** Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 10

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- X** Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 11

Category of progress towards the implementation of the selected target:

- X (terrestrial)** On track to exceed target
- On track to achieve target
- X (Marine)** Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 12

Category of progress towards the implementation of the selected target:

- On track to exceed target
- X** On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 13

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change

- Moving away from target
- X Unknown

Target 14

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- X Unknown

Target 15

Category of progress towards the implementation of the selected target:

- On track to exceed target
- X On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 16

Category of progress towards the implementation of the selected target:

- On track to exceed target
- X On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 17

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- X (NBSAP is delayed but under development) Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 18

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 19

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Target 20

Category of progress towards the implementation of the selected target:

- On track to exceed target
- On track to achieve target
- Progress towards target but at an insufficient rate
- No significant change
- Moving away from target
- Unknown

Date the assessment was done:

February 2019

Additional information (Please provide information on the evidence used in the assessment of this target, drawing upon relevant information provided in section II, including obstacles in undertaking the assessment).

The assessment(s) has been developed by the Ministry of Nature, Environment and Science, with assistance from Århus University. Greenland Institute of Natural Resources has quality assured the Assessment. The various descriptions has been send for comments and further input to relevant Ministries within the Government of Greenland.

Indicators used in this assessment

Indicator(s) used in this assessment

<Indicator(s) used> Please provide a list of indicators used for the assessment of this target

or:

- No indicator used

Please describe any other tools or means used for assessing progress

No other tools than mentioned above and based on the descriptions given in IV.

Relevant websites, web links and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to this assessment can be found).

Information (such as reports and other documents) from the following websites are included in this assessment:

- Website of Naalakkersuisut: www.naalakkersuisut.gl
- Website of Conservation of Arctic Flora and Fauna: www.caff.is
- Website of Århus University: <http://arctic.au.dk/> & <http://dce.au.dk/myndigheder/groenland/>
- <http://dce.au.dk/en/authorities/greenland/>
- Website of Grenland Institute of Natural Resources: <http://www.natur.gl/en/>
- Website of Arctic Monitoring and Assessment Programme: <https://www.amap.no/>

Level of confidence of the above assessment

- Based on comprehensive evidence
- Based on partial evidence
- Based on limited evidence

Please provide an explanation for the level of confidence indicated above.

See IV

Adequacy of monitoring information to support assessment

The Strategy and Action plan for Greenland is still under development. The strategy will contain a description on how the national goals can be monitored and assessed. The monitoring builds on the descriptions of progress and contributions mentioned in IV. Therefore no system as such is implemented for the various targets.

- Monitoring related to this (all) target is adequate
- Monitoring related to this (all) target is partial (e.g. only covering part of the area or issue)
- No monitoring system in place
- Monitoring is not needed

Please describe how the target is monitored and indicate whether there is a monitoring system in place

See above

Relevant websites, web links and files (Please use this field to indicate any relevant websites, web links or documents where additional information related to the monitoring system can be found)

- See above

Section IV. Description of the national contribution to the achievement of each global Aichi Biodiversity Target

Using the template below, please describe your country's contribution towards the achievement of each global Aichi Biodiversity Target. This template should be replicated for each of the Aichi Biodiversity Targets.

For Parties whose national targets are identical to the Aichi Biodiversity Targets, some of this information may be captured in sections II and III above. Please provide additional descriptions of your country's national contribution to the achievement of each global Aichi Biodiversity Target.

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 1: Awareness increased

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Greenlanders generally are, due to their traditional hunting and fishing lifestyle, well aware of their environment and of the biodiversity in their neighbourhood.

To increase the awareness several outreach and communication activities can be mentioned from the recent years and a few examples are given below.

- For instance, the Greenland institute of Natural resources and Aarhus University has built up experience to communicate and cooperate with local communities distant from Nuuk, and in relation to research a number of activities is going on. Among others, Greenland Institute of Natural Resources (GINR) arrange public meetings and involves local communities in relation to research activities, and in many cases includes local knowledge in scientific research. Further, a cooperation agreement between GINR and the Hunters association (KNAPK) exist. Depending on the type of research activity Aarhus University also inform and cooperates with local communities.
- At a national level two reports, with the aim to give an overview of important areas for the Greenlandic biodiversity, have been carried out by Århus University. Further a document with the results has been developed for the public.

- Podcasts about how climate changes affect nature and society have been published in 2018 and 2019. <http://climategreenland.gl/en/podcasts/>
- Outreach programmes targeting children and youths through the use of social media and music. In spring 2019 a new campaign called “Superheroes of Nature”, was initiated with the aim to teach the younger generation that we have a shared responsibility to take care of nature. The Superheroes are inspired by Greenlandic mythology. Website: <https://Inua.gl> (in Danish and Greenlandic)
- In relation to communication and awareness raising of international processes of relevance for Greenland, it must be mentioned that ongoing work in the Arctic Council, including in the working group *Conservation of Arctic Flora and Fauna* (CAFF) has a high priority, since much work here are regarded as regional implementation of many CBD goals. As reported in the fifth national CBD report, CAFF in 2013 released the Arctic Biodiversity Assessment (ABA) with major inputs from Greenlandic and Danish scientists. The most important messages from the report are that climate change is the most serious underlying driver of overall change in biodiversity in the Arctic. At the same time, the report argues for the necessity of taking an ecosystem-based approach to management and the importance of mainstreaming biodiversity by making it integral to other policy fields (CAFF, 2013). It is important to the Government of Greenland that knowledge about biodiversity is readable and in an understanding language for the public. Therefore, the ABA summary report has been translated to Greenlandic and Danish and further, the summary report for the recent CAFF publication *State of the Arctic Marine Biodiversity Report* has been translated into Greenlandic and in the process of being made available.
- Another Arctic Council initiative about *Adaptation Actions to a Changing Arctic* (AACCA) has also been used to raise awareness on biodiversity aspects. Based on dialogue with stakeholders, including representatives of the public and private sectors, and residents, seven themes were chosen for analysis, including living resources and human wellbeing. For each of the themes, the authors considered the current knowledge regarding climate change and other stressors, and described potential options for future planning and actions. The report was published in 2018 as an Arctic Council Report, and the summary report was translated into Greenlandic and Danish. Several follow up workshops with relevant ministries, stakeholders and the public was held in 2018, and one more workshop with the purpose to explore the possibilities to introduce ecosystem based management concepts in Greenland is planned ultimo 2019.
- As mentioned above hunting is an important part of the traditional way of living in Greenland. Hunting is very important in Greenland, although in larger towns it is now becoming more of a recreational activity for many people. Nevertheless, all hunters need a license and are required to report their catch; the data are subsequently used for assessing impacts on the affected populations and for updating quotas in the future. The system with the annual reporting (Piniarneq), is also regarded and used as an important

tool to raise awareness about biodiversity aspects, including ecological information about the different species.

- There are several examples of workshops and seminars for all fishery stakeholders being held in coastal cities and settlements in the northern coastal fisheries management areas, addressing changes in the marine ecosystems in relation to fish stock abundance and distribution. Meetings have been hosted by the Department of Fisheries, Hunting and Agriculture in cooperation with NGO's and the Fishermen and Hunting Association KNAPK. Meetings have also been hosted by the Fishing Industry. Themes have included climate change, sustainable fisheries, international and national obligations concerning quota level and scientific advice. These ongoing local meetings are contributing to raising awareness on ecosystem issues on the coast and not only in the larger cities.
- The PISUNA program, *Opening doors to local knowledge* is another tool for raising awareness and dialogue on biodiversity and climate change. PISUNA is a local monitoring and management program of living resources for local communities. It can facilitate dialogue locally and between the community, the municipality and the government. Find more information at www.pisuna.org

There has been no comparative analysis to see if the efforts to create awareness have increased or decreased in the period covered by the Aichi Biodiversity targets. There has been a number of noteworthy initiatives to create awareness about biodiversity before the timeperiod covered by the Aichi Targets, such as the Tulugak campaign from 2002 – 2004, or the Pitu magazine delivered to all households in Greenland from 2000 – 2005. Further there has been no study about the level of awareness on the values of biodiversity and the steps towards conservation and sustainability. Therefore it is unknown if there has been progress towards achieving goal 1

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The contributions will help achieve several of the UN sustainable development goals, especially no. 13 (Especially the communication related to the scientific report Adaptation Actions for a Changing Arctic), no. 14 (communication about careful management and ecosystem services related to marine biodiversity and ecosystems), no. 15 (communication about careful management and ecosystem services related to terrestrial biodiversity and ecosystems).

Aichi Biodiversity Target 2. Biodiversity values integrated

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

The aim of this target is mainly to place biodiversity into mainstream decision-making framework when developing country strategies and planning instruments.

One important issue to take into account in this regard is that the Arctic is changing at a fast pace. As mentioned in the fifth national report for Greenland “The Arctic Biodiversity Assessment” of the Conservation of Arctic Flora and Fauna (CAFF) has identified that climate change is by far the most serious threat to Arctic biodiversity. In Greenland, the ice-associated organisms will be especially affected. Further many environmental features may change rapidly due to climate change as well. Some changes offer new opportunities for the people living in the Greenland, while others can pose severe challenges. For both the opportunities and the challenges, proper preparation and planning can help people to make the best of the changes. There is an awareness that such planning will require an adaptive management approach, also as regards biodiversity aspects (ecosystem based management).

In Greenland, some sector plans have already considered how to mainstream climate change effects into the sector planning and in some cases biodiversity values has been considered, as part of these plans. In 2015, for example, the Government of Greenland published a “dialogue report” about possible adaptation actions related to shipping in Greenland. This report includes descriptions on how shipping traffic in the region has increased in the past decade and on how some ship types are expected to continue to increase in the future due to climate change effects. At the same time, the report contain suggestions for adaptation action related to environmental and ecosystem consequences.

The report “Opportunities for Climate Adaptation in the agriculture sector” from 2017 describes the consequences of climate change towards 2050 for the agricultural sector of Greenland and identify potential specific adaptive measures for the sector.

Fisheries are, as mentioned elsewhere in this report, of paramount importance to employment and export in Greenland. On a national level, more than one fifth of the workforce is employed in fisheries and related industries. The report “Opportunities for Climate Adaptation in the Fishing and Hunting Profession” from 2012 summarizes some of those areas in which a changing climate is expected to impact fisheries in Greenland. It is for example mentioned that a transformation of the industry might be necessary.

The anticipated effects of climate change vary significantly depending on the species. The expected environmental changes will result in a variety of changes in fish stock distributions and productivity. Given the complexity and interrelatedness of environmental drivers and their effects, it is however not possible to predict the development of fisheries (for either local or emerging species) over a longer period. In addition, the effects of management initiatives will modulate any ecosystem responses, thus making predictions even more difficult. Hence, the report highlights the need to make fisheries more resilient to the changes that an altered climate may present. Here, ability to adapt will be of the utmost importance. Special attention has been

placed on expanding the information available for fishermen and fishery managers with regard to the climatic conditions and processes that affect the ecosystems and biodiversity in the Greenlandic waters. Revised sector plans for fishing and hunting are planned for, but have not yet been fully formulated in Greenland.

As mentioned in the description of biodiversity target 6, the fishery is regulated by a total allowable catch (TAC) paradigm to secure sustainable catch levels. Within the living resources management this has increasingly balanced ecological sustainability concerns against the more immediate economic and employment concerns of those groups in society that are directly dependent on fishing. The subsistence fisheries are not subject to TAC governance, but these fisheries are in some cases subject to closure seasons (e.g., salmon). The yearly TAC policies are therefore not directly affecting regulatory access to subsistence fishing.

Harvest of other living resources (particularly seals, walrus, whales, seabirds, and caribou/reindeer) is culturally and economically important in Greenland because it forms the basis of the traditional food system that is still common in contemporary diets. As with fishing, hunting is regulated with quotas and a license system to ensure a sustainable harvest level. The principal regulatory tool is the setting of total allowable harvests (TAHs) for certain species within designated management zones. Currently, there are TAH/quotas in Greenland for polar bear, walrus, narwhal and beluga, as well as for minke, fin, humpback and bowhead whales. For the seabirds there are hunting seasons, and for some species hunting seasons in combination with bag quota. Hunting of muskox and reindeer is regulated by a license system, quota and hunting seasons.

The responsibility for managing shellfish, fish, mammals and birds is placed in the Ministry of Fisheries, Hunting and Agriculture. The Greenland Institute of Natural Resources provides advice on sustainable utilisation of living resources and safeguarding of the environment and biodiversity. The biological advice of GINR is independent of special interests, and it is based on scientific documentation from research and monitoring. Population assessments, advice, etc. are produced and assured in scientific committees under various international bodies. The TAC's / TAH's are politically decided by the Government of Greenland. These are based on consultations between the Ministry of Fisheries and Hunting and relevant organizations, including the Association of Fishermen and Hunters in Greenland (KNAPK), the municipalities, and the Greenland Institute of Natural Resources.

The use of sector plans as a tool to coordinate economic and physical planning is enshrined both in the Greenland Budget and Accounting Act for the Government of Greenland Authorities and the municipalities and in the relevant Planning Act. Work on compiling national sector plans started in 2014. Annual interagency seminars have been held with participants from ministries, municipalities and companies that have contributed to proposals on the goals and framework for the work in sector planning. As part of a better integration of sector planning in Greenland, a digital geo-data platform, NunaGIS (see www.nunagis.gl) where many different measurable factors are made visible, has been established. NunaGIS is Greenland's system for publishing geodata on the Internet, and it consists of websites, databases and servers for the online processing of maps and location-based information. NunaGIS is responsible for managing land-use permits and municipal planning through digital, geographic representations of the interests of the Greenlandic Authorities, in other words, all of the restrictions and obligations that the

municipalities must respect in their planning processes. On top of the maps, many geographical information themes include nature and biodiversity concerns and values, such as breeding bird colonies, sensitive areas, migration corridors, core areas for many species and lots of other themes.

The *Nature Protection Act - Greenland Home Rule Government Act No. 29* of 18 December 2003 on Protection of Nature contains a framework for Environmental Impact Assessments. The framework leaves wide opportunities for demanding the preparation of an EIA that match the scale of an anticipated project. In 2013, an executive order on EIA was passed through. The executive order complies with international EIA standards and applies to anyone planning activities in the open land which may significantly impact the environment – including for example landscape, and wildlife. If projects are assessed to cause substantial damage to the environment, the Government may decide that the project cannot be carried out. Special EIA guidelines for petroleum exploration have been issued by the Greenland Minerals Authority.

In 2013, the Environment Agency for Mineral Resources Activities (EAMRA) was established under the Ministry of Environment and Nature, in order to separate the environmental regulation of mineral and petroleum activities from the Ministry of Mineral Resources, which grant the licenses. In 2014, the Greenland Institute of Natural Resources opened a new Department of Mineral Resources, in order to deliver Greenland-based environmental advice to the Government of Greenland.

EAMRA is the authority in Greenland concerning assessments and considerations of all environmental aspects related to petroleum and mineral activities. EAMRA is legally obligated to base assessments and decisions on independent, scientific advice. EAMRA therefore has a close cooperation with the affiliated scientific advisors, Danish Centre for Environment and Energy, Aarhus University (DCE) and Greenland Institute of Natural Resources (GINR).

In connection with new licensing rounds and the opening of frontier areas with technologically challenging conditions, DCE and GINR carry out Strategic Environmental Impact Assessments (SEIA) on behalf of the EAMRA. A SEIA provides an overview of the environment in the potential license area and adjacent areas, which may be impacted by the activities, and identifies major effects associated with potential activities. Furthermore, the SEIA identify gaps in knowledge and data, highlights issues of concern, provides recommendations for mitigation, monitoring and planning that must be dealt with by the companies applying for hydrocarbon licenses. Moreover studies to fill gaps in environmental knowledge are suggested.

The Environmental Impact Assessment (EIA) carried out by the company is a crucial part of the application for activities with potential major environmental effects. It shall be performed for example for seismic surveys, exploration drilling for hydrocarbons and establishment of a mine. The mineral resources authorities have developed guidelines for preparing EIAs for hydrocarbon and mining activities. with two rounds of public consultations (pre-consultation and consultation). These guidelines are based on the Mineral Resources Act of Greenland and a.o. inspired by EIA procedures and practices in other Arctic countries, on Arctic Offshore Oil & Gas Guidelines issued by the Arctic Council and on the OSPAR Guidelines for Monitoring the Environmental Impacts of Offshore Oil and Gas Activities.

A final initiative that should be mentioned under this AICHI target is that, the Arctic Monitoring and Assessment Programme (AMAP) in 2018 published the report “Adaptation Actions for a Changing Arctic, perspectives from the Baffin Bay / Davis Strait Region”. Input from Greenlandic and Danish scientists, stakeholders and other experts was supported by the Danish Environmental Agency through the DANCEA programme (The Programme of Danish Cooperation for Environment in the Arctic). The report provides the accessible scientific basis for the development of a more informed, timely and responsive policy, including how to deal with climate change and other pertinent environmental stressors. The report suggests future adaptation actions in Greenland within the different sectors, and includes descriptions of changes in biodiversity and ecosystems and how these changes may affect or will be further affected by other sectors.

It should be mentioned, however, that pivotal progress in Greenland towards conservation of biodiversity occurred before the Aichi Targets from 2011, with initiatives such as the executive orders regulating the harvest of birds (2001), narhval and beluga (2004), walrus (2005) and polar bears (2006), as well as the executive order about CITES (2005) and the first redlist (2007). Those were all radical changes on the way biodiversity is managed in Greenland.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country’s contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The effort support: Goal 1 (By starting up a process to reduce exposure and vulnerability to climate-related extreme events and other economic and environmental changes). Goal 12 (continue work to achieve sustainable management and efficient use of natural resources), Goal 13 (start a process to integrate climate change measures into national policies, strategies and planning). Goal 14 (by reducing marine pollution, regulate harvesting and end manage fisheries sustainably, implement science-based management plans). Goal 15, particular 15.9 (by ensuring the conservation and sustainable use of terrestrial and inland freshwater ecosystems and their services).

Aichi Biodiversity Target 3. Incentives reformed

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

The input given in this target is linked closely to the input given in relation to other targets, where further information can be found. However, hunting and agriculture should be mentioned specifically here, since these occupations are subsidised by the Government of Greenland and

because the related activities potentially have negative effect on biodiversity if not managed properly.

As mentioned elsewhere Greenlanders are traditionally hunters and fishermen and have subsisted on the living resources for hundreds of years. Hunting and fishing has been the way to survive in a harsh environment. For many generations hunting and fishing traditions have been passed on to the next generation and today many young people know how to shoot seals, caribou, birds or how to fish. Therefore fishing and hunting is, as mentioned elsewhere, also an important cultural activity, and fishery creates the main export revenue for Greenland.

In some areas, the input to the formal economy from hunting has decreased over the years, but it remains a valuable contribution to the economy and self-supply of many households especially in small and remote settlements. Hunting and artisanal fishing as occupations are supported by the Greenlandic government, with incentives, such as subsidies to sealskin industry etc. These incentives have not been reformed, but the biodiversity impacts from the activities has in recent decades been counteracted to some extent by regulation of the hunt through quotas and closed seasons with the aim to keep the harvest at sustainable levels. Government subsidies are generally not harmful to biodiversity because fisheries and catches of most birds and mammals are sustainable.

Finally, the system with the annual reporting (Piniarneq), is also regarded and used as an important tool to communicate with hunters and fishermen about biodiversity aspects, including ecological information about the different species.

There is in Greenland a fishery subsidy scheme on the Government Finance Act every year which is approved by the Parliament and varies from year to year. The grant is supported by the EU. The purpose is to support actors in the inshore fishery. There are several tracks under the scheme. Part of the support goes to low income coastal fishermen and thus has social concerns. Another part of the support is a fishing development pool, which is a co-financing for the purchase of new smaller vessels to continuously maintain and modernize the inshore fleet.

The main agricultural occupation in Greenland is sheep farming (see also target 7), and the sheep farmers are dependent on government subsidies and loan capital. How sheep farming impacts biodiversity in Greenland is unknown, but at least in many areas grazing pressure has reached a maximum and impacts on vegetation is evident. See also Target 5.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

See goal 1,2, 4, 6.

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 4. Sustainable consumption and production

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Fishery is the primary production industry in Greenland and as mentioned under target 2 and 6, commercial fisheries produce over half of the total export revenue. More than one fifth of the workforce is employed in fisheries and related industries and the export of shrimp, Greenland halibut, cod and crab products contributes significantly to the Greenlandic economy.

The offshore fisheries are currently dominated by bottom trawling for Greenland halibut and northern shrimp. In the inshore waters both commercial and subsistence fishery takes place. Greenland halibut, northern shrimp, Atlantic cod and lumpfish (very short period in spring) are the most important target species of the commercial interest. The subsistence fishery target many other species such as: Atlantic halibut, wolffish, redfish, Arctic char and Atlantic salmon, which are fished primarily for private use or local marketing.

Since the 1980s, the total allowable catch (TAC) or total allowable harvests (TAH) paradigm within living resources management has increasingly balanced ecological sustainability concerns against the more immediate economic and employment concerns. In the TAC/ TAH governance system, knowledge and research carried out by the Greenland Institute of Natural Resources play a defining role in formulating the scientific advice.

Overall, Greenland halibut offshore TAC and landings have gradually increased during the past 20 years. The offshore resource is assessed by NAFO, and in the Baffin Bay / Davis Strait at the request of Canada and of Denmark on behalf of Greenland. Here the Greenland halibut quota is set in accordance with the scientific advice and is divided equally between Canada and Greenland. The fishery in Greenland waters has for the past decades been concentrated in relatively small areas and is conducted almost exclusively by bottom trawl, except for a very small and irregular fishery with longlines. Gillnets, are prohibited in the offshore fishery in Greenland. Stock indicators show a stable or slightly positive trend, and the stock is considered to be in good condition and fished at a sustainable level. A long term management plans is in place. The fishery obtained a MSC certification in 2017.

The inshore Greenland halibut fishery takes place primarily in northwest Greenland, in three main areas: Disko Bay, Uummannaq, and Upernavik (listed south to north). The pattern in the fishery has been stable for the last 20 years with little variation. Most notably, the Disko Bay landings peaked in the early 2000s at 12,000 t but have since returned to the previous levels of approximately 8,000 t per year. The 2018 quotas were set at high levels in all three areas – 28,200 t in total. However, the quota was not fully exploited in any of these areas and the total landings were 20,252 t, which was slightly above the scientific advice (19,200 t).

There are also catches of Greenland halibut in quota-free areas that are fish from the same stock. In 2018, 4,325 tonnes of Greenland halibut were fished in the quota-free areas, and thus the total catches of Greenland halibut in North Greenland increased to 24,577 tonnes - or 5,377 t above biological advice. Thus, a certain amount of overfishing takes place in relation to the biological advice. Stock indicators for these areas show that recruitment is good from the off shore region. The stock in the Disko Bay area does however show signs of suffering negative consequences from the fishery, relative fish sizes being markedly decreasing. There is an ongoing debate among fishery stakeholders as to whether this trend is due to overfishing or climatic and biological factors. Initiatives among stakeholders are addressing these challenges through regulations and seminars etc. with an aim to raise the sustainable approach in this fishery. In the two northernmost areas (Uummannaq and Upernavik), there are no indications that the stock is suffering negative consequences of the fishery.

The Government has decided that the Greenland halibut quotas in the management areas Disko Bay and Upernavik must start a stepwise adjustment of the TAC, over a four-year period, to the biological advice. Thus, the quota has already been reduced in 2019.

There is an inshore fishery for Greenland Halibut also in the Nuuk area. There are no quotas in place and no management area implemented. A new legislative order is on the way which will create a new management area there and the work to align the catches with the biological advice for the area will be initiated.

Northern shrimps in Baffin Bay and Davis Strait (NAFO Division 0A and Subarea 1) is a joint Greenland–Canada fishery assessed annually as a single stock by the NAFO Scientific Council. There is no sharing formula for the off shore portion of this stock, and both Canada and Greenland set autonomous quotas for the stock. A long term management plan is in place. The fishery obtained a MSC certification in 2013. The inshore fishery takes place along the entire west coast of Greenland from Cape Farewell to 72° N but is currently concentrated north of 66° N at depths between 250 and 350 m. Total annual catches (inshore + off shore) peaked in 2005 and 2006 at 157,000 t but have steadily decreased since then to approximately 90,000 t in 2014, in accordance with declining quotas based on the scientific advice. The stock has been declining (the quota for 2015 was set at 73,000 t.) but is regaining and the quota for 2019 is set at 105.000 t. in accordance with the scientific advice.

Due to climate change the fisheries will most likely be affected through changes relating directly to the fish resources. Even within the next 15 years it is expected that environmental changes will result in a variety of changes in fish stock distributions and productivity and the first indications have already been observed. For instance, in addition to already present pelagic species in East Greenland waters, a single mackerel was first observed in 2011 in the East Greenland surveys. In 2013, it was observed in high abundances. This occurrence was so profound that a fishery quickly developed, and mackerel was fished intensely, and the fishery went from no catches in 2010, to 63.000 t in 2018.

In relation to climate change the effects of management initiatives can modulate ecosystem responses. Empirical evidence from an already-warming North Atlantic suggests that the region's fishery should be prepared to shift or expand to new fishing grounds farther north and can expect to see shifts in the importance

A recent but seemingly significant trend in relation to fishery is the influence of Marine Stewardship Council (MSC) certification on fishery policy-making; the certification requirements tend to favour more restrictive TAC policies in the Greenland fisheries

An important part of the consumption in Greenland is the products from the hunting activities. Hunting takes place on subsistence and professional basis, where the products are used in own households, sold at local markets, traded in at the plant or one of the larger supermarket chains. Several products are marketed on national level such as the meat and skin of whales ('mattak'), meat of muskox and reindeer as well as from seal. There are two types of hunting permits – full-time hunters (those who make a living from hunting and fishing; i.e., >50% of their income) and recreational hunters. Outfitters who can be either a professional or a leisure time hunter are permitted to guide trophy hunters for relatively few species (caribou, muskoxen, seal, fox, arctic hare and ptamigan).

The hunt impacts the populations of the targeted species –seabirds, marine mammals (polar bear, whales and seals) and terrestrial mammals (muskox and caribou) and many populations decreased markedly through the 1900ies. This has been counteracted by legislation on where, when and how the hunt is performed, who can take part in the hunt, as well as quotas and closed seasons through the recent two decades.

A few seabird species are monitored on a regular basis in Greenland and these are mainly among the harvested species. Two important species that are highly valued among the living resources in Greenland are the common eider (*Somateria mollissima*) and Brünnich's guillemot (*Uria lomvia*). The common eider experienced a severe population decline in Greenland over the period 1960 – 2000 and this was probably related to unsustainable harvest. However, concurrent with the introduction of more restrictive hunting regulations in 2000, a quick population recovery has since occurred. Similar to the common eider the Brünnich's guillemot experienced a large decline in the past and since then the hunting season was shortened several times. However, for the Brünnich's guillemot the changes in the management have not had the desired effect. A recent status of the monitoring program shows that previously declining colonies are still declining. Despite a large reduction in harvest levels, it appears that illegal hunting and disturbances still constitute a problem in some breeding areas. However, a potential deterioration of some of the wintering areas, related to large-scale changes in the marine environment, may also have contributed to the recent decline.

Marine mammals include the most important hunted species, including polar bear (*Ursus maritimus*), walrus (*Odobenus rosmarus*), seals, minke whale (*Balaenoptera acutorostrata*), narwhal (*Monodon monoceros*), and beluga (*Delphinpterus leucas*, also known as white whales).

As mentioned above the principal regulatory tool in Greenland is the setting of total allowable harvests (TAHs). The TAHs for marine mammals are decided by the Ministry of Fisheries, Hunting and Agriculture after consultation with relevant organizations, including the Association of Fishermen and Hunters in Greenland (KNAPK), the municipalities, and the Greenland Institute of Natural Resources. Currently, there are TAH/quotas in Greenland for polar bear, walrus, narwhal and beluga, as well as minke, fin, humpback and bowhead whales. Management advice for narwhals and belugas is given by the Canada/Greenland Joint

Commission on the Conservation and Management of Narwhal and Beluga (JCNB) and from the North Atlantic Marine Mammal Commission (NAMMCO). Similarly, the Canada/Greenland Joint Commission on Polar Bear gives advice for the harvest of polar bears in Baffin Bay and Kane Basin. Greenland receives advice on walrus and marine mammals in general from the North Atlantic Marine Mammal Commission (NAMMCO). Quotas for large whales in Greenland are given by the International Whaling Commission (IWC). The cases of walrus and narwhales are highlighted in NAMMCO as success of scientific recommended quota and sustainable hunt leading to halt in decrease and increasing population numbers.

Until recently it had not been possible to document the sustainability of the combined Canadian and Greenlandic harvest of polar bears. Therefore, negative CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) non-detriment findings (NDFs) prevent export of hides, claws, or other products originating from the Baffin Bay and Kane Basin subpopulations, thus limiting the economic value of harvesting the bears. The Scientific Working Group to the Canada-Greenland Joint commission on Polar Bear (SWG) delivered an updated harvest advice for Baffin Bay and Kane Basin in summer 2017. The advice triggered negotiations about harvest levels between Canada/Nunavut and Greenland, which may in turn result in updated CITES non-detriment findings. It is not possible to assess the sustainability of harvest of Polar bears from Eastern Greenland and they hence have negative CITES NDF

CITES NDF are given only when it has been documented that harvest are sustainable, and therefor international trade has no detrimental effect on populations. Besides polar bear, the other harvested marine mammal species without NDF are narwhal, harbor porpoise, pilot whale, white beaked dolphins and killer whales.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The effort support: Goal 12 (continue work to achieve sustainable management and efficient use of natural resources), Goal 13 (start a process to integrate climate change measures into national policies, strategies and planning). Goal 14 (by reducing marine pollution, regulate harvesting and end overfishing, implement science-based management plans). Goal 15 (by ensuring the conservation and sustainable use of terrestrial and inland freshwater ecosystems and their services).

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 5 Habitat loss halved or reduced

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

The relative well-being of many Greenlandic terrestrial habitats today is largely the fortuitous result of a lack of intensive human encroachment. No forestry exists in Greenland, and farming constitutes only a small part of the Greenland economy and only in a very restricted area in the most south. There are no infrastructure outside the towns and settlements, as they are connected only by sea and air transportation. Therefore, and opposite many other places on the globe, habitat degradation in the inland of Greenland is very limited.

In relation to farming it should however be mentioned, that Greenland's few farms are located in South Greenland in a relatively small geographic area, (Narsaq, Qaqortoq, and Nanortalik) and are mainly single-family estates. The majority of farmland (99%) is used for the production of winter fodder for sheep. Over the past 10 years, the number of farms declined steadily – from 60 in 2001 to 43 in 2013 and 37 in 2016. However, the total area of cultivated farmland increased during the same period. There is no information on how natural habitats have been or are affected by the agriculture, except that over-grazing from the sheep is evident in some areas.

In relation to the fishery sector, bottom trawling has the potential to damage sensitive seafloor habitats and their ecological communities. Recent initiatives, including the influence of Marine Stewardship Council (MSC) certification on fishery policy-making, have been introduced, to protect seafloor habitats/ benthic habitats (e.g. cold-water corals) from destructive fishing gear, including from the impacts of bottom trawling, or to protect areas with special importance for life-history stages of certain important species.

As described in the fifth national report, the Arctic Council working group CAFF (Conservation of Arctic Flora and Fauna) in 2013, released the *Arctic Biodiversity Assessment (ABA)*. The most important message from that report is that climate change is the most serious underlying driver of overall change in habitats and biodiversity in the Arctic.

In 2018, another Arctic Council working group, Arctic Monitoring and Assessment Programme (AMAP) published the report “Adaptation Actions for a Changing Arctic, perspectives from the Baffin Bay / Davis Strait Region”. The report includes an overview and compilation of the accessible scientific knowledge about potential changes in terrestrial and marine ecosystems and habitats in Greenland due to climate change and other stressors. Input from Greenlandic and Danish scientists, stakeholders and other experts was supported by DANCEA (The Programme of Danish Cooperation for Environment in the Arctic) (see also descriptions under target 2). The report describes how for example summer sea ice cover – and particularly the habitats connected to multi-year ice – is decreasing at an accelerating rate. Also, other marine habitats and ecosystems are undergoing changes due to climate change, including coastal and benthic habitats. Rapid climate-related changes to the terrestrial ecosystem have also occurred – for example, increased shrub growth together with an expansion of shrubs into new areas.

These pressures of climate change cannot be prevented by local protection measures, but conservation actions can help mitigate their impacts by minimizing the diversity of stressors acting simultaneously on a system. Protected areas are one of the possible approaches for protecting biodiversity and habitats, but at the same time the report argues for the necessity of

taking an ecosystem-based approach to management and the importance of mainstreaming biodiversity by making it integral to other policy fields

As mentioned under target 11, Greenland has initiated a national project analyzing existing biodiversity hotspots and important habitats. The project is financed by DANCEA (Danish Cooperation for Environment in the Arctic - administrated by the Danish Ministry of Environment and Food). The study covers where and when important species and habitats can be sensitive to human impact. Each of the identified areas is mapped in GIS. In the coming years the study will be a platform for future management planning and to assess if and how the work can be used in more sector-integrated management plans (a further step towards ecosystem based management), and also a tool to identify the need for further potential protected areas.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The initiatives will contribute to several of the UN sustainable development goals, especially no. 13 (To be able to quickly respond on species' changing distributions), 14 (identify and manage important marine areas and ecosystems), and 15 (identify and manage important terrestrial areas and ecosystems).

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 6. Sustainable management of marine living resources

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Fishery and hunting are important issues in Greenland, as described elsewhere in this report.

Both activities harvest from the living marine resources occurring in Greenland, and this harvest was unregulated for most species through the 1900ies, with the result that many populations were overexploited and decreased in numbers.

The total allowable catch (TAC) paradigm, quotas and closed seasons within living resources management has been gradually introduced.

Commercial fisheries are all submitted to TAC governance in order to balance economic development with biological sustainability. So far, the subsistence fisheries are not subject to TAC governance, but these fisheries are in some cases subject to closed seasons. The yearly TAC policies are therefore not directly affecting regulatory access to subsistence fishing.

In the TAC governance system, knowledge and research carried out by the Greenland Institute of Natural Resources play a defining role in formulating the scientific advice. With respect to some species, TAC policy and its supporting scientific knowledge base can be highly contested by industry and harvesters. The final TAC quota is a political decision, which is often reached following a negotiation of competing interests between industry, community requirements and hunters and fishermen's associations. Regarding the key target species, the scientific advice is currently followed for offshore Greenland halibut and shrimp (using an adaptive management approach), but not for cod (inshore or offshore) or inshore Greenland halibut. Regarding the smaller scale commercial fisheries, the scientific advice is followed in the lumpfish fishery, but not in the snow crab fishery.

A recent but seemingly significant trend is the influence of Marine Stewardship Council (MSC) certification on fishery policy-making; the certification requirements tend to favour more restrictive TAC policies in the Greenland fisheries. MSC certification has been perceived by the fishing industry as a way to gain access to premium international markets. This certification requires scientifically based advice and a management scheme (management plan) that complies with the advice. The continued observance of scientific advice and other conservation measures may thus have a positive impact on stock status and on the fishery-based economy under this new marketing paradigm.

Only the small toothed whales are unregulated in a species specific executive order, however as for all hunted species in Greenland a hunting license is a requirement and catch reporting is mandatory. All other species have today a species specific executive order and either a quota and/or closed seasons or other protective measures. See elsewhere in this report. Greenland is a member of several regional fishery management organisations:

NEAFC North East Atlantic Fisheries Commission, NAFO North Atlantic Fisheries Organisation NASCO North Atlantic Salmon Commission and also ICES The International Council for the Exploration of the Sea.

The Government of Greenland's Fisheries Act is the legislation, which constitutes Greenland's legal framework and administrative underpinnings by which the fishery is managed. The Greenland fishery is regulated by quotas and licence regulations on the basis of biological advice to ensure a sustainable use of the natural resources.

Greenland carries out extensive research via Greenland Institute of Natural Resources, and is also traditionally supported by scientific guidance primarily from NAFO (Northwest Atlantic Fisheries Organization) and ICES (International Council for the Exploration of Sea). The scientific advice is traditionally first presented in June each year, but the guidance for shrimp and snow crab is generally presented towards the end of November each year. According to the fishing legislation, the Government, in accordance with the biological advice from GINR, ICES and NAFO, establishes the following year's total allowable catch (TAC) at the end of each

calendar year for the subsequent calendar year. Quotas are set separately for offshore and inshore fisheries.

Management plans are in place for many species and the Government aims at having management plans in place for all commercial species.

The utilisation of fish resources is fully recorded and reported. The Greenland Fisheries and License Control (GFLK) is responsible for the regulation, enforcement and surveillance of Greenland's inshore and offshore fisheries. Its regulations are built upon the Danish system and largely mirrors EU regulatory frameworks and practices, with few exceptions.

The offshore fisheries are managed with a comprehensive human observer program. The human observer program places GFLK employees on large, offshore fishing vessels. The program's intent is to reduce bycatch, ensure the use of legal and approved gear types and to improve the quality of log book catch data. Catch data provided by offshore fishing fleets is especially vital for the production of biological advice for management purposes. The program has been hugely successful and is one novel highlight of the Greenland's fisheries regulatory control.

Additional offshore enforcement and prevention of illegal, unreported and unregulated (IUU) fishing is carried out with the full support of the Joint Arctic Command, part of the Danish Defence, who patrol the waters off of both East and West Greenland. Among other responsibilities, the Joint Arctic Command ensure the Unity of the Realm sovereignty and protect its living marine resources from IUU fishing activity around the Faroe Islands and Greenland. In the inshore regions of West Greenland, GFLK operates small patrol vessels that monitor inshore fishing activity, from dinghy and small-scale fishing to larger inshore vessels.

FAO (UN Fisheries and Aquaculture Department), of which the Kingdom of Denmark is a part, Greenland is in compliance with and enforces the United Nations Port State Measures Agreement (PSM). It complies with the PSM as part of its obligations under the North East Atlantic Fisheries Commission (NEAFC) and the North Atlantic Fisheries Organization (NAFO). As of 2016, Greenland Fisheries and License Control is in the process of implementing new control regulations, of which the Port State Measures will be a part. In addition, under the Kingdom of Denmark, Greenland is one of the parties to the Fish Stocks Agreement, which it ratified in 2003.

Greenland has a select number of bilateral agreements that relate to fisheries with neighboring countries, thus Greenland has bilateral fishery agreements with the EU, Faroe Islands, Norway and Russia.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support

the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

Several targets under the Sustainable Development goal no. 14.

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 7. Sustainable agriculture, aquaculture and forestry

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Neither aquaculture nor forestry exist in Greenland.

However, a few forest plantations have been established in South Greenland, mainly from a research point of view. These plantations are not utilised, but have contributed to the biodiversity for example by creating habitats for a large number of tree-associated fungi and a forest birds.

In a few places in South Greenland relatively luxuriant birch forests (continuous with heights above 7 meters) exist in isolated localities. These areas contain several boreal species not found elsewhere in Greenland. Still the vegetation is relatively species-poor. Birch forest is sensitive to sheep grazing. The largest area in Greenland with birch forest is found in the Qinnua Valley. The valley is protected, by an executive order, to preserve this unique environment. Entry to the valley is not prohibited, but activities that can harm the area are.

Greenland's few farms are also located in South Greenland (Narsaq, Qaqortoq, and Nanortalik) and are mainly single-family estates. The majority of farmland (99%) is used for the production of winter fodder for sheep. But also production of potatoes for the national market takes place. The sector is heavily subsidized by the government; in the amount of approximately 40 million Danish kroner in 2013 and 23 million in 2014. The Greenlandic parliament has a vision of some future level of self-sustainable production of foodstuff in Greenland.

Intensive sheep farming is the main agricultural activity in Greenland. It was initiated in the 1920s and then increased until the mid-1960s, when the stock of sheep reached 48,000 head. Sheep farming relied on extensive grazing for most of the year, and the production of winter fodder was negligible. This approach allowed farmers to expand the stock of sheep in periods of mild climate. The system was also highly vulnerable to the vagaries of weather and many animals died during harsh winters.

During the 1980s, sheep farming changed to a more intensive form. Keeping sheep in stables and fed during the winter stabilized the sheep stock, but at the same time increased operating costs for farmers – and the Greenland society. During the past 40–50 years, Greenland farmers have depended on government subsidies and loan capital as stated above. Since the 1990s, there

have been approximately 40,000 sheep on grass during summer and 20,000 in stables during winter. The first decade of the 21st century was the most productive in the history of Greenland sheep farming and the load of grazing in many areas has reached a maximum.

The environmental impacts of the sheep farming are unknown, but at least over-grazing in some areas is evident and it is not possible to assess the degree of sustainability of the sector.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

<Text entry>

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 8. Pollution reduced

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Greenland in general suffers from far less pollution than other countries. The population density is extremely small and there is relatively little industrial or agricultural activity. Therefore, most of the pollution from the Greenland society is from local dumps and from discharge of grey and black waste water. At present time there exists neither biological nor mechanical treatment of any sewage water in Greenland. In general wastewater is discharged into open waters, where the ocean current is strong. Here the waste water is being distributed and mixed together with ocean water and the waste water dissolves quickly. Usually the waste water has dissolved completely within a 50 meters' radius from the end of the pipeline. There is only a limited production of waste water, as its population is just 56,673 in 2019 with a population density of only 0.026 people per square kilometer.

There are however areas of concern: Levels of long-transported pollutants such as mercury and persistent organic pollutants (POPs) are high in Greenland and of serious concern. A recent UN report (<https://www.ohchr.org/EN/Issues/Environment/ToxicWastes/Pages/Visits.aspx>) asserts Greenland is affected by external pollution and receives disproportional amounts of pollutants naturally transported northward from distant sources. The vast majority of these toxics do not originate in the Arctic and were banned or restricted several decades ago, incl. pesticides and

PCBs. The impact of these is seen in particular in an accumulation of PCB's in marine mammals.

Greenland today produces more household waste than can be handled. Consequently, there has been an accumulation of untreated waste, especially in rural areas and smaller cities. Several older waste treatment plants operate with reduced capacity and emit harmful flue gas emissions, and waste disposal on dumps can cause pollution of nearby marine environment.

Plastic pollution is also a challenge for Greenlandic nature and marine environment. Research has shown that approx. 80% of the waste that washes ashore in Greenland is plastic. The research also shows that the waste comes to a great extent from the local area and only to a lesser extent is brought here by ocean currents.

Since 2014, the Government of Greenland has focussed on these issues and a national strategy and action plan has been agreed upon. A new system has been introduced, in which the waste producer is obliged to arrange transportation and delivery at the municipal reception facilities. The waste management follows with an instruction scheme. This includes hazardous waste, electronic scrap, and any domestic cooling systems for food. The amount of hazardous waste is determined and classified, and an assessment is made as to whether the waste is properly packed. The waste is post-treated and packed at the receiving station, after which the dangerous fractions are disposed of for treatment in Denmark or overseas.

Two large combustion plants with up-to-date technology and with sufficient storage capacity to handle all household waste are being planned

In 2017, the Government of Greenland adopted a new marine environmental legislation on the protection of the marine environment on the Greenlandic sea territory. Same year, the Danish Parliament also adopted a new law on the protection of the Greenlandic exclusive economic zone. These two laws, together with the 2011 Environmental Protection Act, mean that polluting activities both on land and at sea are regulated. The Government will look at whether there is a need for further measures to reduce plastic pollution of nature.

In 2018, the Government of Greenland established an Environmental Fund. The purpose of the environmental fund is to promote the development of sustainable social development with respect for human living and conservation of animal and plant life.

In 2019, the Government will invite citizens, companies and municipalities to apply for the Environmental Fund for funds for projects relating to minimization and recycling of plastics, including possibly projects that enable resource-conscious behavior of citizens and businesses. Also projects related to abandoned/lost fishing nets and tools and cleaning of fishing and fishing grounds, including possibly projects that enable a resource conscious behavior among citizens and companies, will be supported by the Environmental Fund in 2019. DKK 2,000,000 of such projects have been allocated.

Between 1941 and 1951 the United States build a number of bases and radar stations in Greenland. Upon leaving a considerable amount of waste was left behind. In recent years,

concern over this potential hazardous wastes has increased. Denmark and Greenland reached in 2018 an agreement that earmarks \$29 mill over the next six years to address this issue.

Recently Greenland has announced that it supports a ban on the use and transport of Heavy Fuel Oil (HFO) in the Arctic.

Trough participation in Arctic Council and its working groups, especially the arctic *Monitoring and Assessment Programme* (AMAP), *Conservation of Arctic Flora and Fauna* (CAFF) and Protection of Arctic Marine Environment (PAME), Greenland is contributing to, and working with the other Arctic nations to better understand ecosystem and human effects caused by long-transported pollutants. This work also includes discussions on possible adaptation and mitigation actions. In the future there will be more focus on a multi-stressor approach to ecological risk in these assessments. This recognition is particularly important in light of the magnitude and variety of anticipated changes in the Arctic over the coming decades.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

Goal no. 3 (Good health and well being; related to pollution, contamination and contribute to risk reduction and management of national and global health risks), Goal no. 6 (Clean water and sanitation; e.g. by reducing pollution and minimizing release of hazardous chemicals and materials), Goal no. 14 (Life below water; prevent and significantly reduce marine pollution), Goal no. 15 (Life on land; e.g. to take action to reduce the degradation of natural habitats)

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 9. Invasive alien species prevented and controlled

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Relatively few studies have examined invasive species in the Arctic, and thus even fewer in Greenland. But so far, very few cases are known in Greenland.

The introduction and spread of alien invasive species in Greenland (and the Arctic) is however a potentially serious problem that will increase with climate change.

Therefore, there is a need to improve the understanding of the means by which alien, invasive species are entering Greenland and to create an invasive alien species strategy.

The most conspicuous example of an alien invasive species in Greenland is the Alaska-lupine (*Lupinus nootkatensis*), which is introduced in many towns, and it has here the potential to spread to the countryside as in Iceland. A 3-year pilot project on combating Alaska-lupine was initiated 2018. The purpose of this pilot project is to have a well-founded decision-making basis to determine and, if necessary, how a longer-term control of Alaska-lupine shall take place in Greenland. Another example is botflies that were introduced to the wild reindeer stock with the import of domesticated reindeer in 1952.

There is no published examples of invasive species introduced to the marine environment in Greenland, but the potential is high with increasing water temperatures. The Government of Greenland has adopted a new law on the protection of the marine environment in 2017, and it includes new ballast water rules to protect against invasive species.

The Arctic Council has initiated a process to achieve effective technical and policy cooperation with regard to the prevention, detection and eradication of invasive alien species in the Arctic. Greenland is (as part of the Kingdom of Denmark) active in relation to ongoing projects related to this issue, including the Arctic Invasive Alien Species Action Plan (ARIAS), under the two working groups *Protection of The Arctic Marine Environment* (PAME) and *Conservation of Arctic Flora and Fauna* (CAFF). Further the Arctic Council/ CAFF Circumpolar Biodiversity Monitoring Programme (CBMP) has an increasing focus on invasive species. As an input to the ARIAS, Greenland (Aarhus University and Greenland Institute of Natural Resources) perform a risk assessment of potential invasive marine species in Greenland. CBMP is currently lead by Greenland and the US.

In relation to the marine environment, the Danish EPA provided funding in 2017 for a science-based project led by Aarhus University in collaboration with the Greenland Institute of Natural Resources. The project is focused on a limited literature review and a risk assessment of potential invasive marine species in Greenland, and it also includes funding for communication with the public and local stakeholders and is designed to be an important input to the Kingdom of Denmark's ARIAS Strategy and Action Plan implementation.

A final initiative that should be mentioned under this AICHI target is that, the Arctic Monitoring and Assessment Programme (AMAP) in 2018 published the report "Adaptation Actions for a Changing Arctic, perspectives from the Baffin Bay / Davis Strait Region". This report includes descriptions of the changes in Arctic shipping activity (resulting from reduced sea ice and increased resource exploitation), and how this can possibly augment the risks introducing alien species e.g. harmful algal and invasive marine invertebrates.

The Nature Conservation Act (Greenland Government Act no. 29 of 18. December 2003) prohibits the release of non-resident animals, plants and microbes into the wild. Greenland Government Act no. 12 of 6. June 2016 regulates non-resident invasive species that can spread zoonoses. The Government of Greenland has adopted a new law on the protection of the marine environment in 2017, and it includes new ballast water rules to protect against invasive species.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

Goal no. 9 (Build resilient infrastructure, promote sustainable industrialization and foster innovation; e.g. by contributions to make industry more sustainable, with environmentally technologies and industrial processes). Goal no. 14 (e.g. contribute to sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience). Goal no. 15 (e.g. introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species).

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 10 Pressures on vulnerable ecosystems reduced

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Climate change is by far the most serious threat to Arctic biodiversity and ecosystems. For example, the ice-associated ecosystems will be especially affected. But the reduction of anthropogenic pressures on those ecosystems affected by climate change or ocean acidification will give them greater opportunities to adapt. In this context there has been an increased focus on some of the most important and sensitive marine areas in Greenland. As mentioned under descriptions of target 2 and 11 Greenland has initiated a national project analyzing existing biodiversity hotspots and vulnerable ecosystems with financial support from DANCEA (Danish Cooperation for Environment in the Arctic - administrated by the Danish Ministry of Environment and Food). In this context two areas, the North Water Polynya and Disko Bay and Store Hellefiskebanke (se descriptions in the fifth national report) – stand out, and has been given high priority. More detailed studies and finer scaled mappings of important and sensitive ecosystems within these areas has been done since the fifth national report, and considerations related to potential conservation measures is ongoing.

In general the Nature Conservation act (Greenland Government Act no. 29 of 18 December 2003 on Protection of Nature) is an important legal basis for the development of executive orders to protected ecosystems, including executive orders on specific protected areas in Greenland. Under Aichi target 11 this is further described.

In relation to other sectors it should be mentioned that different initiatives have been implemented (see among others descriptions under target 2). One example is as described, conservation measures have been introduced, for instance to protect seafloor habitats/ benthic habitats (e.g. cold water corals) from destructive fishing gear, including from the impacts of bottom trawling, or to protect areas with special importance for life-history stages of species. Further it should be mentioned that over the past decade considerable effort has been invested in identifying marine areas and coastlines vulnerable to oil spills as well as key habitats, migration routes, and the population size and ecology of sensitive species and resources in Greenland, resulting in a number of strategic environmental impact assessments (SEIAs) for hydrocarbon exploration and exploitation activities.

More relevant information related to this Aichi Target can be found under descriptions given under especially target 2, 5 and 11.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

Several of the UN sustainable development goals, especially no. 12 (Responsible consumption and production; E.g. target related to achieve sustainable management and efficient use of natural resources) no. 13 (Climate Action; E.g. to be able to quickly respond on species' changing distributions), 14 (Life below Water: E.g. identify and manage important marine areas and ecosystems), and 15 (Life on Land: Identify and manage important terrestrial areas and ecosystems).

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 11; Protected areas increased and improved

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

The Government of Greenland takes care of the area-based protection in land. However, the responsibility for Greenland's marine environment is shared between Greenland and Denmark. Greenland is responsible within three nautical miles from the coast, whereas Denmark is responsible beyond three nautical miles, until the borders of the exclusive economic zone (EEZ). The Mineral Resources Act however also covers the EEZ.

As mentioned earlier, the Nature Conservation Act (Greenland Home Rule Government Act no. 29 of 18 December 2003 on Protection of Nature) is the legal basis for the development of

executive orders to protect ecosystems and species, including executive orders on specific protected areas in Greenland. Twelve areas in Greenland are, with this act as the legal basis, protected, each through specific executive orders. Three of these areas are also protected by international agreements: The Ilulissat Icefjord is an UNESCO World Heritage Site and Kitsissunnguit is a Ramsar site. Further two Ramsar sites exist within the National Park in North and East Greenland, which is among the largest protected areas in the world. The twelve protected areas can, by using the IUCN (International Union for Conservation of Nature) guidelines for applying protected areas management categories, be defined as either IUCN category V or VI.

In 2016, a new executive order about protection of the 12 Greenland Ramsar sites (Greenland Government executive order no. 12 of June 16, 2016) was adopted. The purpose of the executive order is to ensure the conservation status for nature and wildlife within the Ramsar areas. Three of the Ramsar areas are protected as part of the twelve protected areas mentioned above.

In 2011 a new Ramsar site was designated, as a replacement area for another Ramsar site, which was in risk of being reduced in size by a mining development plan.

The protected areas, including the Ramsar sites all together cover 41 % of the Greenland land area and 4,2% of the marine areas (for the marine areas the number include the whole EEZ, though all protected areas are found inside three nautical miles from the coast).

In 2017, the number of seabird breeding sanctuaries was increased to 40. This increase was the result of a revised executive order about protection of birds in Greenland (Greenland Government executive order no. 1 of January 5, 2017). Further, this executive order includes general rules about protection of bird colonies. The regulation at these areas are temporary (apply to the breeding season) and can be regarded as “other area based conservation measures”.

In relation to fisheries, other specific area based conservation measures have been introduced, for instance to protect seafloor habitats/ benthic habitats (e.g. cold water corals) from destructive fishing gear, including from the impacts of bottom trawling, or to protect areas with special importance for life-history stages of certain species.

The protected areas mentioned above, are generally not protected in relation to exploration and exploitation of minerals and petroleum, since such activities, are not regulated by the nature protection act. Therefore, the areas mentioned above can only be classified as V or VI according to the IUCN category system. However, mineral explorations in Greenland are regulated by the the Mineral Resources Act, which sets a stricter set of rules than called for in the Nature Conservation act mentioned above to protect the fauna, flora and terrain in relation to mineral and petroleum activities. These rules and guidelines may regulate activities in particular sensitive areas, in order for example to protect sensitive species (e.g. geese, breeding seabirds, muskox, reindeer, walrus, narwhal and bowhead whale) from disturbing activities. Many of these areas are generally not protected according to other legislation. However legislation such as Executive Orders are existing for selected species.

Over the past decades considerable effort has been invested in the development of oil spill sensitivity atlases and strategic environmental impacts assessments (SEIA) of petroleum exploration in the waters of Greenland. This includes identifying marine areas and coastlines vulnerable to oil spills, identification of key habitats, migration routes and the study of populations and ecology of sensitive species and resources in Greenland. The result of this effort is an oil spill sensitivity atlas covering entire West Greenland and SEIA-reports covering the seas off West and Northeast Greenland.

In recent years, several other initiatives to identify valuable ecosystems and biodiversity hot spots in Greenland has been carried out. These are mainly based on the data assembled in the above mentioned SEIA-reports and on the monitoring of living resources carried out by Greenland Institute for Natural Resources.

In 2012, a study was conducted to identify ecologically valuable and sensitive marine areas around Greenland based on IMO's Criteria for Particularly Sensitive Sea Areas (PSSA). Subsequently 12 areas were identified and ranked in four priority categories. Two areas:

- *The North Water Polynya and*
- *Disko Bay and Store Hellefiskebanke*

stand out, and are ranked as Priority 1. Based on requests from the Greenland Government (Ministry of Nature, Environment and Research) and the Ministry of Environment in Denmark, two more detailed assessments were made in 2015 and 2017 to identify important biological and sensitive areas in a finer scale than in the two above mentioned areas.

Parallel to these studies Greenland has initiated a national project analyzing existing biodiversity hotspots. The project is divided into two phases. First phase was to compile a report that identifies biodiversity hotspots based on occurring species and ecosystem data. Included in this study is a thorough analysis of the distribution of species (including red listed species), nature types, and areas with high biological diversity. The study covers where and when these species are concentrated in specific areas and/ or can be sensitive to human activities. Each of the identified areas is mapped in GIS where all occurring resources/species are represented by a separate layer. These layers are given rank, based on internationally accepted criteria (such as the EBSA criteria, KBA criteria, Ramsar Criteria, areas with red listed species etc.) and nationally formulated criteria (such as importance of ecosystem services etc.). Based on this, an overlay analysis has been performed to reveal where in Greenland biological hotspots are found.

In the second phase (which is in progress), a report is planned to be a platform for future management planning and to assess if and how the work can be used in more sector-integrated management plans (a further step towards ecosystem based management), and also a tool to identify the need for further potential protected areas.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The contributions will contribute to several of the UN sustainable development goals, especially no. 2 (contribute to a sustainable use of the living resources by protecting and manage important areas), 13 (To be able to quickly respond on species' changing distributions), 14 (identify and manage important marine areas and ecosystems), and 15 (identify and manage important terrestrial areas and ecosystems).

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 12: Extinction prevented

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

In 2018, the second version of the national red list was issued. The first is from 2007. This redlist is based on the IUCN criteria for assessing the conservation status of the species occurring in a given region. The list includes 602 taxa/populations, including 38 mammals, 66 birds, three freshwater fish, five butterflies, two quillworts, seven clubmosses, five horsetails, 26 ferns and 450 flowering plants.

Among the animals are 13 species/subspecies/separate populations evaluated as Near Threatened (NT), 18 as Vulnerable (VU), four as Endangered (EN), two as Critically Endangered (CR), two as regionally extinct (RE) and one as extinct (EX). Among the vascular plants, 31 are Near Threatened (NT), 60 are Vulnerable (VU) and one is Regionally Extinct (RE). This means that 22% of the evaluated species are red listed.

Since the 2008 red list, eleven species/populations have changed red list category. Four have been up-listed and seven down-listed. Those up-listed include a species with a newly established very small breeding population (it was previously known only as a migrant visitor) and species with decreasing populations. The down-listed species/populations include species with increasing populations (for most of them due to introduction of hunting regulations such as quotas and reduced open seasons) and a species for which the data have improved.

In general are species without temporal hunting regulations (without an open season for hunt) legally protected, see Target 2.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

Greenland has as a part of the Danish kingdom signed the Convention on International Trade in Endangered Species of wild Fauna and Flora (CITES).

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

Mainly 14 og 15

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 13. Genetic diversity maintained

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

This Aichi target is directed towards cultivated plants and farmed animals. In relation to genetic diversity of cultivated plants and farmed or domesticated animals, it must be mentioned that farming only constitutes a small part of Greenland economy and exports from farming – mainly sheep and reindeer meat – make up about 0,1 % of the total national export. However, related to domesticated animals the sledge dog, which has basically nothing to do with agriculture, but with fishing and harvest in the more northern parts of Greenland, should be mentioned.

Greenland is home to the largest existing sledge dog population in the Arctic and a sledge dog culture that is unique for the world.

The Greenlandic sledge dog is genetically different from other sledge dog populations and has been bred to suit the harsh climate and the strength required to the subsistence hunting culture in Greenland. The sledge dog and the knowledge about technology and physiology, is in danger of disappearing due to climate change and globalization. The population has decreased from 30.000 to 15.000 animals over the last two decades. The Government of Greenland is working to protect the unique genetic trait through a national law (Act no. 18 of 30. October 1998) prohibiting other dog races in the dog sledge areas (i.e.: East Greenland and West Greenland north of the Arctic Circle). Sledge dogs that have been out of the sledge dog areas cannot return for fear of mixing other races into the gene pool. A number of Greenlandic and Danish research institutions are, furthermore, working together on the 'Qimmeq – the greenlandic sledgedog' project to study and collect knowledge about the sledge dogs genetic and cultural history to ensure a healthy future sledge dog population and a sustainable future for the Greenlandic sledge dog culture.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The contributions will help achieve UN sustainable development goal no. 12 (E.g. by ensuring local peoples' traditional lifestyle in harmony with nature) and 15 (E.g. by promoting fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed)

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 14. Ecosystems and essential services safeguarded

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Many major activities in Greenland (e.g., traditional hunting and fishing, industrial fishing, tourism, extraction industries, shipping) rely on ecosystem functions while also, in turn, generating impacts upon ecosystems. As mentioned under previous targets, fishery produce a huge amount of the total export revenue. As mentioned under target 2 and 4, hunting is also an important part of the traditional way of living in Greenland. While still very important in many settlements, hunting is now becoming more of a recreational activity, in the larger towns. As described under target 2, 4, 6, and 11 different management regimes are implemented to safeguard ecosystems and essential services.

The report "Adaptation Actions for a Changing Arctic, perspectives from the Baffin Bay / Davis Strait Region" (see target 2) provides the accessible scientific basis for the development of a more informed, timely and responsive policy, including how to deal with climate change and other pertinent environmental stressors. One conclusion from the report is, that wise ecosystem management is one of the key ingredients required to strengthen the adaptive capacity toward climate change and other external stressors, for utilizing ecosystem services as opportunities emerge. It is recommended that management should build on robust knowledge, including scientific research and long term monitoring programs.

It is already mentioned under target 2 how the Greenland Institute of Natural Resources provides the Government with advice on sustainable exploitation of living resources, based on scientific documentation from research and monitoring. In this relation also the Greenland Ecosystem Monitoring (GEM) program should be mentioned. The GEM program is an interdisciplinary long-term monitoring program run by Greenlandic and Danish research institutions. GEM has over the past two decades established itself firmly as an internationally leading climate change related environmental barometer measuring climate change and its

impact on arctic ecosystems. The GEM program is designed to study entire ecosystems to identify change and understand ecosystem processes and linkages from the land ice to the near coastal sea.

On regional level, Greenland represents the Kingdom of Denmark in the CAFF (Conservation of Arctic Flora and Fauna) working group of the Arctic Council. Further the Kingdom of Denmark (KoD) agreed to take co-lead together with the US, on CAFF's monitoring programme, the Circumpolar Biodiversity Monitoring Programme (CBMP) in May 2013. Aarhus University (AU) has, in collaboration with the Greenland Institute of Natural Resources (GINR), been co-leading CBMP on the behalf of KoD. and has through the leadership gained unique experience in the CBMP and coordination of Arctic monitoring and assessment processes. AU has in collaboration with the GINR contributed to ensuring the successful implementation of the CBMP through various products, including the development of the first Arctic Council State of The Arctic (Marine) Biodiversity Report and the development of the CBMP terrestrial monitoring plan. AU has also, through its work with the GEM provided invaluable experience in the design of adaptive and ecosystem based monitoring plans that are providing inspiration in other Arctic Countries and beyond.

Climate change is the most powerful driver of ecosystem change in Greenland. No matter how much is invests into safeguarding ecosystems, the sea ice will continue to decrease in extent and duration. Thus, the goal to restore and safeguard the ice associated ecosystem, which is also important for the livelihood of Greenlanders, is not being achieved.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

Same as target no. 10

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 15 Ecosystems restored and resilience enhanced

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

This Aichi target refers to ecosystem degradation due human impacts, as well as the process of actively managing the recovery of an ecosystem that has been degraded, damaged or destroyed. As mentioned under the description of target 5, most habitats and ecosystems are only to a very

small degree affected by human encroachment in Greenland, except for the fact that climate change have increasing effects on the ecosystems. Therefore, nature restoration and ecosystem restoration has due to the intact ecosystems not been relevant.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

Not applicable

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 16. Nagoya Protocol in force and operational

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

In 2016 a new act about utilization of genetic resources and activities in connection with these, was introduced (Act No. 3 of 3 June 2016). With this act companies, research institutions and others who want to collect and utilize genetic resources in Greenland must apply for access to these, as well as enter into a profit-sharing agreement on commercial utilization. The Act is defined to include genetic resources and replace the former Greenlandic legislation from 2006. Although the Danish ratification of the Nagoya Protocol excludes Greenland from its territorial application the revised Greenlandic legislation is nonetheless based on the principles of the Nagoya Protocol on access to genetic resources, as well as fair and just allocation of the benefits arising from their utilization. The purpose of the Greenlandic legislation is to ensure that a fair share of the proceeds from the utilization of genetic resources goes to Greenland. If the collected resource is to be the subject of commercial utilization, the ratio of profit sharing is negotiated (Mutually Agreed Terms) with the Government of Greenland. Profit sharing can consist of royalties, milestone payments, education, teaching and the like.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support

the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The contributions will help achieve UN sustainable development goal no. 15 (e.g. by promoting fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed)

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 17. NBSAPs adopted as policy instrument

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Please see section II, p 3. As described in this sixth national report, even though Greenland has not adopted a specific National Biodiversity and Action Plan a range of activities have been carried out both nationally and in regional fora with close links to the targets and goals which would be required in an NBSAP. In this regard Greenland has among others initiated a national project to analyse existing biodiversity hotspots (see target 11).

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The strategy is under development and will when published contribute to several UN Development Goals.

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 18. Traditional knowledge respected

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

The terms 'Traditional Knowledge' (TK), 'Aboriginal Traditional Knowledge' (ATK), 'Indigenous Knowledge' (IK) and 'Local Knowledge' (LK) are often used interchangeably. The

government of Greenland decided in 2018 to use the term ‘indigenous knowledge and local knowledge’ henceforth.

Indigenous knowledge and local knowledge associated with biodiversity and biological resources are not in general subject to national legislation, probably due to the nature of the Greenlandic society being **per se** an indigenous community. Both Parliament (Inatsisartut) and Government (Naalakkersuisut) are indigenous based.

The act on Hunting (nr. 12 29. October 1999 with later revisions) requires the Ministries consultation and inclusion of indigenous user knowledge.

As mentioned under target 2, The TAC’s / TAH’s are decided by Naalakkersuisut (the government of Greenland) after consultation with relevant organizations and the proposals undergoing a public democratic hearing process. An important institution in the TAC/ TAH system is the Hunting Council (Fangstrådet) and the Fishery Council (Fiskerirådet), that also include local knowledge in their considerations related to TAC’s/ TAH’s. The Government of Greenland are legally required to consult the Hunting Council and the Fishery Council when setting quotas / TAH’s or making legislation. Further the Association of Fishermen and Hunters in Greenland (KNAPK) and Greenland Business Association (GE) is included in the consultation process. Further The Greenland institute of Natural resources and Aarhus University has built up experience to cooperate and collect knowledge with local communities. In relation to research a number of activities is going on. Among others, Greenland Institute of Natural Resources (GINR) arrange public meetings and involves local communities in relation to research activities, and in many cases includes local knowledge in scientific research. In this relation it should finally be mentioned that a cooperation agreement between GINR and the Association of Fishermen and Hunters (KNAPK) exist.

In a program, called PISUNA, *Opening doors to local knowledge* The Government of Greenland is collaborating with communities on the use of locally based monitoring of natural resources as a tool for improving Arctic resource management. The program aims to involve local stakeholders in monitoring natural resources and climate change in the Arctic. The communities interpret the observation based on their local knowledge, while coming up with proposals for change in the management if this is judged needed.

The PISUNA-net Local Observations database (<https://eloka-arctic.org/pisuna-net/>) was developed to record, archive, and share indigenous and local knowledge and expertise on natural resources and resource use. This information is generously shared with the public by the observers and the communities within which the observers reside. As part of PISUNA, The Natural Resource Council in the small village Attu, established in 2014, received the Nordic Council Environment Prize 2018 for its work on documenting the marine environment and proposing new ways of managing it. More information can be found on: http://www.pisuna.org/uk_index.html.

An example of a law that explicitly includes indigenous knowledge is the law on utilization of genetic resources (2016), regarding access to and use of genetic resources. The purpose is among other fair distribution of dividends resulting from the utilization of traditional knowledge related to genetic resources, held by indigenous peoples and local communities (see target 16).

In relation to this target it should be mentioned that The Arctic Council plays an important role for Greenland in the development of tools to include indigenous knowledge.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The contributions will help achieve UN sustainable development goal no. 12 (achieve the sustainable management and efficient use of natural resources and ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature), no. 14 (effectively regulate harvesting and manage fishery sustainably) and 16 (Ensure responsive, inclusive, participatory and representative decision-making at all levels)

IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target

Aichi Biodiversity Target 19 Knowledge improved, shared and applied

Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description:

Several institutions house biodiversity information in Greenland. However Greenland Institute of Natural Resources and Århus University have central roles in relation biodiversity monitoring, development of indicators and development of national and international Assessments.

As mentioned elsewhere in this report, the Greenland Institute of Natural Resources, provides the Government with advice on sustainable exploitation of living resources and safeguarding of the environment and biodiversity. The advice is based on monitoring and extensive datasets on the living resources, including many species of marine mammals, seabirds and fish. Based on this several species and population assessments are regularly made.

Simultaneously, Århus University and Greenland Institute of Natural Resources carries out monitoring and research to produce Strategic Environmental Impact Assessments (SEIA) as part of the advice given to the Greenland Government in relation to mineral exploitation. The SEIA's provides overviews of the environment in the different license areas, and identify marine areas and coastlines vulnerable to oil spills as well as key habitats, migration routes, and population sizes and ecology of sensitive species.

NunaGIS is Greenland's system for publishing geodata, including spatial data on nature and biodiversity on the Internet, and it consists of websites, databases and servers for the online processing of maps and location-based information.

Through recent years these SEIA's have been used as a platform for different initiatives to identify valuable ecosystems and biodiversity areas. An ongoing project that is based on SEIA data is a study that based on certain national and internationally accepted criteria, including the EBSA criteria, will identify biodiversity hotspots (See target 11 for further details).

the Greenland Ecosystem Monitoring (GEM) program should in also be mentioned in relation to this target. The GEM program is an interdisciplinary long-term monitoring program run by Greenlandic and Danish research institutions. GEM has over the past two decades established itself firmly as an internationally leading climate change related environmental barometer measuring climate change and its impact on arctic ecosystems. The GEM program is designed to study entire ecosystems to identify change and understand ecosystem processes and linkages from the land ice to the near coastal sea.

On regional level, Greenland represents the Kingdom of Denmark in the CAFF (Conservation of Arctic Flora and Fauna) working group of the Arctic Council. Further the Kingdom of Denmark (KoD) agreed to take co-lead together with the US, on CAFF's monitoring programme, the Circumpolar Biodiversity Monitoring Programme (CBMP) in May 2013. Aarhus University (AU) has, in collaboration with the Greenland Institute of Natural Resources (GINR), been co-leading CBMP on the behalf of KoD, and has through the leadership gained unique experience in the CBMP and coordination of Arctic monitoring and assessment processes. AU has in collaboration with the GINR contributed to ensuring the successful implementation of the CBMP through various products, including the development of the first Arctic Council State of The Arctic (Marine) Biodiversity Report and the development of the CBMP terrestrial monitoring plan. Data collected through the above mentioned monitoring has been an important platform to contribute to these international assessments.

Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional)

<Text entry>

Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals:

The contributions will help achieve several of the UN sustainable development goals, especially no. 14 (Life below water: Increase scientific knowledge, develop research capacity), no. 15 (Life on land: build up knowledge to ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services)

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| IV. Description of national contribution to the achievement of each global Aichi Biodiversity Target |
| Aichi Biodiversity Target 20. By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties. |
| Please describe how and to what extent your country has contributed to the achievement of this Aichi Biodiversity Target and summarize the evidence used to support this description: Unknown |
| Please describe other activities contributing to the achievement of the Aichi Biodiversity Target at the global level (optional) <Text entry> |
| Based on the description of your country's contributions to the achievement of the Aichi Biodiversity Targets, please describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals: |

Section V. Description of the national contribution to the achievement of the targets of the Global Strategy for Plant Conservation (completion of this section is optional)

Using the template below, please describe your country's contribution towards the achievement of the targets of the Global Strategy for Plant Conservation. This template should be replicated for each of the 16 targets of the Global Strategy for Plant Conservation.

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|--|
| V. Description of the national contribution to the achievement of the targets of the Global Strategy for Plant Conservation |
| Does your country have national targets related to the GSPC Targets? <input type="checkbox"/> Yes. Please provide details on the specific targets below: <Text entry> or: <input checked="" type="checkbox"/> No, there are no related national targets |
| Please provide information on any active networks for plant conservation present in your country. |

| |
|---|
| <Text entry> |
| <p>Please describe the major measures taken by your country for the implementation of the Global Strategy for Plant Conservation. (Parties can report on actions taken to implement these targets if they are not covered in sections II, III or IV)</p> |
| <Text entry> |
| <p>Category of progress towards the target of the Global Strategy for Plant Conservation at the national level:</p> <p>GSPC Target 1, 2, 3...</p> <p><input type="checkbox"/> On track to achieve target at national level</p> <p><input type="checkbox"/> Progress towards target at national level but at an insufficient rate</p> <p><input type="checkbox"/> No significant change at national level</p> <p>Please explain the selection above:</p> |
| <Text entry> |
| <p>Please describe how and to what extent your country has contributed to the achievement of this GSPC Target and summarize the evidence used to support this description:</p> |
| <Text entry> |

Section VI. Additional information on the contribution of indigenous peoples and local communities (completion of this section is optional)

Using the template below, please provide any additional information on the contribution of indigenous peoples and local communities to the achievement of the Aichi Biodiversity Targets if not captured in the sections above

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|--|
| <p>VI. Additional information on the contribution of indigenous peoples and local communities to the achievement of the Aichi Biodiversity Targets if not captured in the sections above</p> |
| <p>Please provide any additional information on the contribution of indigenous peoples and local communities to the achievement of the Aichi Biodiversity Targets if not captured in the sections above.</p> |

Section VII. Updated biodiversity country profiles

Please review and update your country's biodiversity profile currently displayed on the clearing-house mechanism. Biodiversity country profiles provide an overview of information relevant to your country's implementation of the Convention.

VII. Updated biodiversity country profile (Please review and update the text currently displayed at <https://www.cbd.int/countries²>)

Biodiversity facts

Status and trends of biodiversity, including benefits from biodiversity and ecosystem services and functions:

Though part of the Kingdom of Denmark, the Government of Greenland has management responsibility over, amongst other things, biodiversity and living resources. Eighty-five per cent of Greenland is ice-covered, 15% ice-free. There is a large range of terrestrial habitat types (including heath, scrub, forest, snow-bed, herb-slope, grassland, steppe, mires), resulting in a diversity of living conditions for terrestrial organisms. Melting of glaciers and the Ice Cap, as well as summer rainfall create a range of freshwater habitats (e.g. homeothermic springs and saline lakes). The status of all habitat types has been assessed as favourable. Yet 4 species/subspecies/discrete populations are categorised as extinct or regionally extinct, 2 as critically endangered, 4 as endangered, 78 as vulnerable and 44 as near-threatened and the above-mentioned freshwater habitats face threat from the proximity of human settlements. The numbers are based on the second regional Red List (December 2018) over threatened animals and plants in Greenland. Since the first Red List, published 2008, the list has been amended to include all the vascular plants in Greenland – in total 490 species/subspecies. Only 2 species are considered critically endangered in the new Red List as opposed to 6 in 2008.

Biodiversity offers considerable benefits. In Greenland, for example, traditional hunting is of significant socioeconomic importance and central to the cultural identity of the people. Fishing notably is the lifeline of Greenland and the primary industry in the country, with 90 % of all export deriving from it.

Main pressures on and drivers of change to biodiversity (direct and indirect):

In Greenland, climate change constitutes a considerable threat. Average temperatures are predicted to rise by 2 degrees in southern Greenland and by 6-10 degrees in northern Greenland, with an increase in rain and snowfall of 10-50%. There is a risk that most of the high Arctic zone will be replaced by low Arctic conditions. Climate change is notably affecting the marine ecosystem: northern shrimp has already started to disappear from the waters off southern Greenland, while large stocks of northern cod are reappearing. Additional threats include environmental contaminants and, to some extent, habitat fragmentation, invasive species, and increased shipping and air traffic.

Measures to enhance implementation of the Convention

¹ *Note:* If the online reporting tool is being used, the text of the current biodiversity profile will be displayed. A time stamp will be added to indicate the date when the update was published.

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Implementation of the NBSAP:

Greenland hopes to finalize its Strategic Plan for Biodiversity, including relevant national Aichi Biodiversity Targets, in 2019. Due to delay in finalizing this plan the framework will be 2020-2025.

Overall actions taken to contribute to the implementation of the Strategic Plan for Biodiversity 2011-2020:

Greenland has protected 41 % of its land area and 4.2 % of its marine area. There are currently 4 national species management plans, with more forthcoming.

Support mechanisms for national implementation (legislation, funding, capacity-building, coordination, mainstreaming, etc.):

In Greenland, the Nature Protection Act provides the framework for legislation related to nature protection. The overall objective of the law is to conserve biological diversity, including genes, habitats, species and ecosystems and to ensure sustainable exploitation of natural resources. The Mineral Resources Act (last revised 2016) regulates mining activities, applying stricter rules for the protection of the environment than the Nature Protection Act. The governance over the marine environment of Greenland is divided between Danish and Greenlandic authorities. Both authorities have implemented up-to date legislation (2017) on the protection of marine environment. Greenland has acceded to various international agreements to reduce pollution of the marine environment (eg. the MARPOL Convention and the OSPAR Convention). Greenland is head of delegation on behalf of the Realm in The Conservation of Arctic Flora and Fauna (CAFF) initiative. CAFF is the biodiversity working group under the Arctic Council and can be regarded as a regional collaboration forum on CBD implementation. CAFF constitutes a unique tool for cooperation among national governments and indigenous peoples on matters such as monitoring sustainability, the environment, biodiversity, climate change, biodiversity conservation, assessing and preventing pollution in the Arctic. A major threat to biodiversity is climate change. Greenland takes part in climate-related activities in the Arctic Council and Nordic Co-operation, in particular through the working groups Arctic Monitoring and Assessment Programme (AMAP) and the Protection of the Arctic Marine Environment (PAME)

Mechanisms for monitoring and reviewing implementation:

<Text provided for possible update>

In Greenland, Greenland Ecosystem Monitoring (GEM) is an integrated monitoring and long-term research programme on ecosystems and climate change effects and feedbacks in the Arctic. Since 1995 the programme has established a coherent and integrated understanding of the functioning of ecosystems in a highly variable climate. In addition, Greenland co-lead and actively participates in the Circumpolar Biodiversity Monitoring Programme (CBMP) under the Arctic Council.

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