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MENNINGARMÁLARÁÐUNEYTIÐ
Ministry of Education, Science and Culture

Deliverables for the Second Arctic Science Ministerial Ministry of Education, Science and Culture, Iceland

Mapping of the ocean floor

As a part of the Government's policy on marine research, the Marine Research Institute launched, in 2017, a project on mapping the ocean floor around Iceland. The data produced in the project will form the basis of research on the use of natural ocean resources, protection of the marine ecosystem, the physical properties of the ocean and the geology of the ocean floor. In particular, the mapping of fishing grounds and fragile ecosystems, such as corals, will be stressed.

Relates to theme 1: Strengthening, Integrating and Sustaining Arctic Observations, Facilitating Access to Arctic Data, and Sharing Arctic Research Infrastructure and theme 2: Understanding regional and global dynamics of arctic change.

Changes in the marine ecosystem

Currently, the Marine Research Institute is conducting a research program funded by the Government on pelagic species in Icelandic and adjacent waters with emphasis on capelin. The stock of capelin that inhabits the cold-water areas between Iceland, East Greenland, and the island of Jan Mayen spawns in shallow coastal water south and west of Iceland. The capelin is a key species for the ecosystem and is a key prey for many economically important species that are caught in the EEZ of Iceland. Substantial changes in its distribution have occurred since late 1990's at the same time as the seawater around Iceland have changed. The program aims to increase and strengthen research in the Arctic on environmental factors, recruitment processes and food-web studies. The program will last several years and aims to increase our understanding of the effects of changes in the environment on organisms in the ecosystem.

Relates to theme 1: Strengthening, Integrating and Sustaining Arctic Observations, Facilitating Access to Arctic Data, and Sharing Arctic Research Infrastructure and theme 2: Understanding regional and global dynamics of arctic change.

Climate education

In 2016, a three-year project called *The glaciers of Iceland – a living classroom for climate education* was launched as a part of the Government's plan on climate change from 2015. The project is carried by the Icelandic Meteorological Office and the Vatnajökull National Park and its aim is to increase young people's and tourists' understanding of the effects of climate change on the glaciers in Iceland.

Moreover, as a part of the Government's Action Plan on Climate Change from 2018, a program on climate education for preschools, primary schools and upper secondary schools will be developed in

the year 2019. Emphasis will be on enhancing the students' problem solving skills and on the use of democratic and empowering teaching methods. Also, a program on climate education aimed at the public be developed within the same time frame.

Relates to theme 3: Assessing vulnerability and building resilience of arctic environments and societies.

Glacier monitoring

Approximately 11% of Iceland's total area is covered by glaciers, but it is predicted that future climate change will have pronounced effects on these glaciers and lead to their almost complete disappearance in the next 150-200 years. Icelandic scientists at the University of Iceland and at the Icelandic Meteorological Office participate in various international collaborative and data-sharing forums including the Global Cryosphere Watch (GCW), World Glacier Monitoring Service (WGMS), and Global Land Ice Measurements from Space (GLIMS), IASC Cryosphere Working Group and Arctic Spatial Data Infrastructure (SDI). Iceland also contributed to the Snow, Water, Ice and Permafrost (SWIPA) Assessments in 2011 and 2017, which are coordinated by AMAP in collaboration with IASC, WMO/Clic and IASSA.

Relates to theme 1: Strengthening, Integrating and Sustaining Arctic Observations, Facilitating Access to Arctic Data, and Sharing Arctic Research Infrastructure and theme 2: Understanding regional and global dynamics of arctic change.

Agreement on Enhancing International Arctic Scientific Cooperation

Along with the other members countries of the Arctic Council, Iceland signed a legally binding agreement on research collaboration in the Arctic, in the Arctic Council Ministerial meeting which took place in the spring of 2017. In the agreement, the Arctic countries commit to increased cooperation on research and education in and on the Arctic.

Relates to theme 2: Understanding regional and global dynamics of arctic change.

The Sustaining Arctic Observing Networks (SAON)

SAON is a joint initiative between the Arctic Council through the Arctic Monitoring and Assessment Programme (AMAP) and the International Arctic Science Committee (IASC). Its purpose is to support and strengthen the development of multinational engagement for sustained and coordinated pan-Arctic observing and data sharing systems that serve societal needs, particularly related to environmental, social, economic and cultural issues. SAON promotes the vision of well-defined observing networks that enable users to have access to free, open and high-quality data that will realize pan-Arctic and global value-added services and provide societal benefits. Its goal is to enhance Arctic-wide observing activities by facilitating partnerships and synergies among existing observing and data networks ("building blocks") and promoting sharing and synthesis of data and information.

Relates to theme 1: Strengthening, Integrating and Sustaining Arctic Observations, Facilitating Access to Arctic Data.