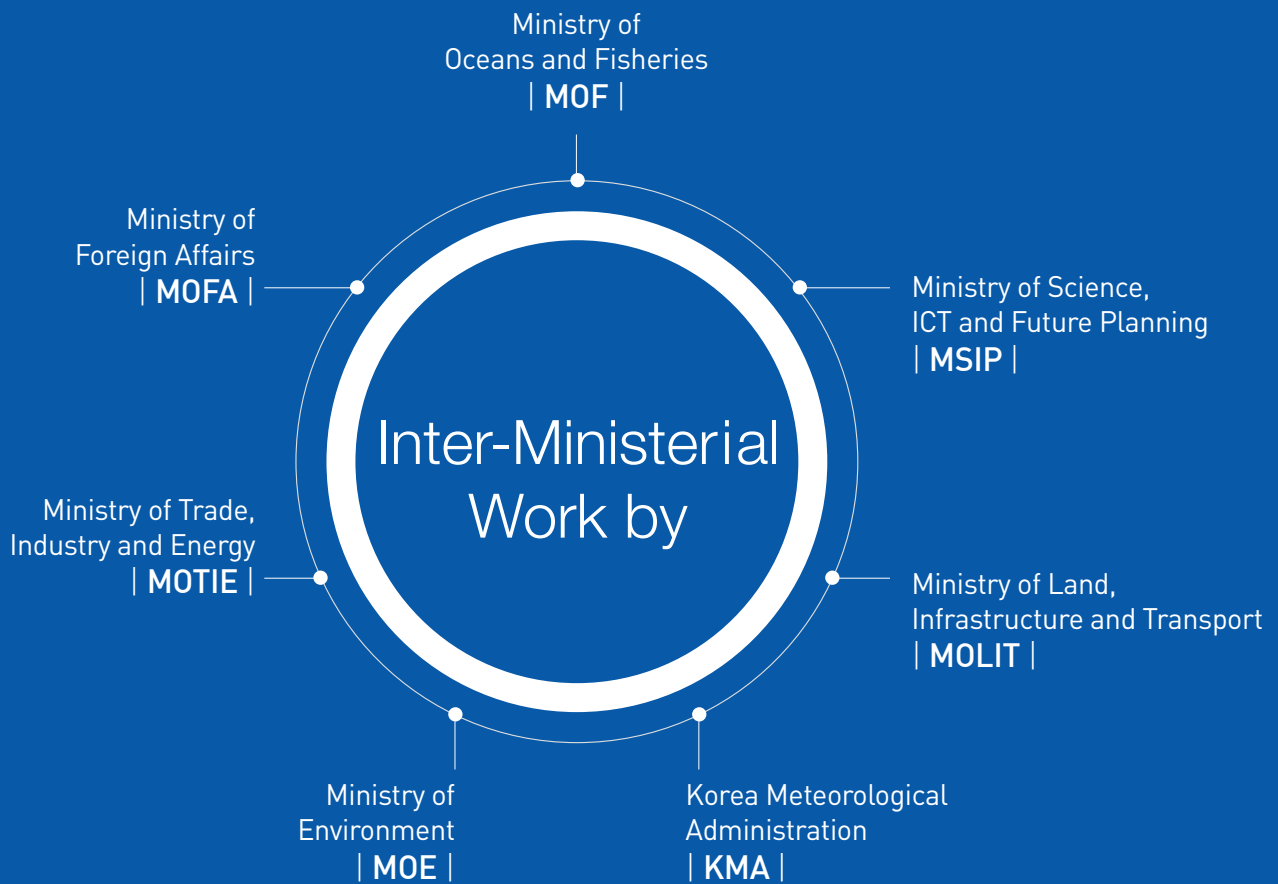


# Arctic Policy of the Republic of Korea

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**Cooperators** : Korea Maritime Institute, Korea Polar Research Institute, Korea Institute of Geoscience and Mineral Resources etc.

# Overview

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## The History

- 1993** conducted basic survey and research on the Arctic
- 1999** launched joint research on the Arctic Ocean with China
- 2002** established the Dasan Arctic Science Station in Svalbard, Norway, joined the International Arctic Science Committee
- 2008** applied for observer status in the Arctic Council
- 2009** built research icebreaker Araon
- 2012** joined the Svalbard Treaty
- 2013** joined the Arctic Council as observer, drew up a master plan for the Arctic

The melting of the Arctic ice will provide new opportunities for growth, but it also poses serious challenges to the livelihoods of residents in the Arctic and its biodiversity. The decreasing sea ice creates new business opportunities in the Arctic in such areas as resources development and commercialization of the Northern Sea Route (NSR). However, the increase in human activities may also affect the marine ecosystem, a vulnerable part of the environment, and threaten the livelihoods of residents, including the indigenous peoples of the Arctic.

Gaining an observer status in the Arctic Council will be a great opportunity to promote shared interests and cooperation in the Arctic. It will also lay the groundwork for establishing relations with the Arctic Council and its Working Groups and Task Forces and for strengthening bilateral or multilateral cooperation with various stakeholders in the Arctic including its indigenous peoples.

The ROK (Republic of Korea) seeks to establish a policy framework to maximize the capacity of Korean businesses and





contribute to the sustainable development in the Arctic drawing on its strengthened cooperation with the Arctic states. In July 2013, the government decided that Korea needs a master plan for implementing a comprehensive Arctic policy and follow-up measures.

As a result, the Master Plan was established in December 2013. The Plan was jointly developed by seven ministries and administrations.

The ministries that are involved are the Ministry of Oceans and Fisheries (MOF), Ministry of Foreign Affairs (MOFA), Ministry of Science, ICT and Future Planning (MSIP), Ministry of Trade, Industry and Energy (MOTIE), Ministry of Environment (MOE), Ministry of Land, Infrastructure and Transport (MOLIT), and Korea Meteorological Administration (KMA). National research institutes such as the Korea Maritime Institute (KMI), Korea Polar Research Institute (KOPRI) under KIOST, Korea Institute of Geoscience and Mineral Resources (KIGAM), etc. also took part.

# Vision

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The goal of the Master Plan is to contribute to sustainable future of the Arctic by enhancing cooperation with the Arctic states and relevant international organizations in the areas of science, technology and economy. It aims for the ROK to: a) strengthen international cooperation; b) build a foundation for polar scientific research; and c) create new business areas (by participating in the Arctic Council and its Working Groups).

It serves as a framework for developing consistent policies, and Korea will have a committee that would put into action the

above-mentioned three policy goals and review their implementation.

From 2013 to 2017, thirty-one key plans will be established to meet the following four major strategic goals: a) strengthening international cooperation with the Arctic region; b) encouraging scientific and technological research capacity; c) pursuing sustainable Arctic businesses; and d) securing institutional foundation.

Vision

**SUSTAIN THE FUTURE OF THE ARCTIC**



Policy Goals

1. Build a cooperative Arctic partnership
2. Enhance scientific research activities for the Arctic
3. Explore new business opportunities in the Arctic



4 Major Goals

Four Major Goals (2013-2017)

Strengthen  
International  
Cooperation

- Expand activities in the Arctic Council and its bodies
- Participate in the cooperation programmes of the Arctic-related organizations
- Facilitate private and academic initiatives

Encourage Scientific  
and Technological  
Research Capacity

- Support the scientific researches of Arctic stations
- Build science infrastructure in the Arctic
- Carry out more researches on climate change in the Arctic
- Launch a spatial information project for a safer Arctic

Pursue Sustainable  
Arctic Businesses

- Assess the feasibility of the Arctic Sea Routes
- Facilitate the development of Arctic technologies
- Seek cooperation in the fisheries sector

Secure Institutional  
Foundation

- Establish an institutional foundation for polar policy development
- Build a Polar Information Service Center



# Implementing Programs

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# **Implementing Programs**

## *Strengthening International Cooperation*

### **Expand Participation in the Arctic Council's Activities**

- Establish plans to follow up on the major decisions of the Arctic Council
- Hold consultation meetings with the Arctic Council's member states on a regular basis
- Establish plans to participate in the Arctic Council's Task Forces
- Participate in the follow-up projects to the Arctic Search and Rescue Agreement

### **Participate in the Arctic Council's Working Groups**

- Establish a plan to increase the participation of Korean experts in the six Working Groups
- Develop and participate in joint research projects related to the Working Groups

### **Cooperate with Observer States**

- Increase cooperation activities that contribute to achieving a sustainable Arctic with observer states such as China and Japan

### **Build Academia-led Research Networks**

- Strengthen cooperation with educational institutions such as the University of the Arctic
- Increase joint research with Arctic research institutes
- Establish and operate an Arctic Laboratory in the Arctic Circle

### **Scientific Research**

- Participate in the ICARP-III (3rd International Conference on Arctic Research Planning) within the IASC (International Arctic Science Committee)
- Plan and propose international joint research projects using Korean equipments including icebreaking research vessels

### **Participate in Other Consultative Forums**

- Encourage participation in international forums and consultative society such as the Arctic Frontier and Arctic Circle, etc.

### **Cooperate in Ship Safety and Marine Environmental Protection**

- Develop shipbuilding technologies for the Arctic and for different vessel types (containers, LNG carriers, etc.) and materials technologies (that are suitable for operations at very low temperatures)
- Set up national safety standards for polar ships, in preparation for the Polar Code

### **Cooperate with Indigenous Groups**

- Carry out cooperation projects to preserve the Arctic's unique history, culture and traditional knowledge

### **Cooperate with Indigenous Groups**

- Pursue cooperation projects to preserve the unique Arctic history, culture and traditional knowledge



# **Encouraging** *Scientific and Technological* *Research Capacity*

## **Expand Research at the Dasan Station**

- Start research on geological, atmospheric, and ecological changes in Svalbard, Norway at the Dasan Station
- Broaden participation in Svalbard Integrated Arctic Earth Observing System (SIOS) projects
- Seek to participate in international joint research projects taking place in the Svalbard region

## **Conduct Comprehensive Arctic Sea Research by Utilizing ARAON**

- Conduct research on ways to improve the monitoring of the surrounding environment of the NSRs (Northern Sea Routes)
- Conduct gas hydrate exploration and deep drilling in the Arctic Sea with Arctic States

## **Build an Observation System for Environmental Changes in the Circumpolar Permafrost**

- Expand research on developing basic and source technologies, identify new areas in which international joint research tasks can be conducted, and launch joint research projects with domestic and international universities and foreign institutes

- Operate research nodes for Arctic permafrost observation and develop related source technology

## **Expand the Dasan Station**

- Pursue expansion of laboratories for soil and geological sample preservation and increase all-sky cameras and field observation equipments for atmospheric science research
- Examine the feasibility of building a new independent station taking into account the possibility of conducting research in new areas

## **Build an Arctic Research Consortium**

- Build a ROK Polar Research Consortium that includes research institutes, relevant universities and relevant business sectors

## **Build a Polar Research International Cooperation Center**

- Jointly establish a Cooperation Center with Arctic states



### **Strengthen Studies on Polar and Global Climate Change**

- Develop a model to identify the causes of Arctic climate change by conducting high-definition atmospheric and marine modeling of the Arctic Sea and reproducing a circulation model of the ocean and sea ice
- Enhance the forecast capacity for changes in the sea ice and the environment around the Arctic Sea routes

### **Increase Cooperation Projects on Spatial Information Development in the Arctic**

- Pursue cooperation with Arctic coastal states and nearby nations to carry out Arctic spatial information development projects

### **Cooperate on the Arctic Sea Routes**

- Cooperate with the Arctic Regional Hydrographic Commission (ARHC) to provide safe nautical charts on the uncharted waters of the Arctic



### **Conduct Research on Climate Change Forecast Using Arctic Science Infrastructure**

- Pursue research to understand the physical processes in the atmosphere, the ocean, and sea ice through field observations of key areas in the Arctic Sea and satellite remote sensing and develop a model to increase understanding and interaction
- Develop data assimilation technology for marine and sea ice data in the Arctic Sea
- Seen new joint research programs on Arctic climate change

### **Conduct Feasibility Study and Establish Plan for Building a Second Research Icebreaker**

- Build a second research vessel with ice-breaking capabilities to perform more specialized and sophisticated functions
- Enhance research to accurately assess the effects on the climate of the Korean Peninsula caused by changes in the Arctic



# ***Pursuing*** *Sustainable Arctic Businesses*

## **Accumulate Arctic Sea Route Navigation Experience**

- Establish and implement follow-up measures to the pilot navigations along the Arctic Sea routes
- Operate a consultative body on energy that is consisted of ship and cargo owners and bulk cargo between Asia and Europe
- Provide consulting services and market research support to make it easier for Korean maritime logistics companies to enter the Arctic Sea market
- Conduct joint research with leading Arctic maritime nations to seek measures to resolve the shortage of crews and cooperate on the Arctic Sea route operation

## **Provide Incentives to Encourage Using the Arctic Sea Route**

- Implement a plan to reduce the port facility usage fee for vessels that use the Arctic Sea routes
- Provide possible incentives for the vessels that use the Arctic Sea routes

## **Conduct International Joint Research and Host Seminars to Increase the Use of the Arctic Sea Routes**

- Pursue joint research with Arctic states in the fields of resources development, cargo shipping infrastructure, transshipment ports, and the commercial use of NSRs
- Host international seminars and invite experts from the Arctic coastal states

## **Develop Arctic Sea Operators' Capacity**

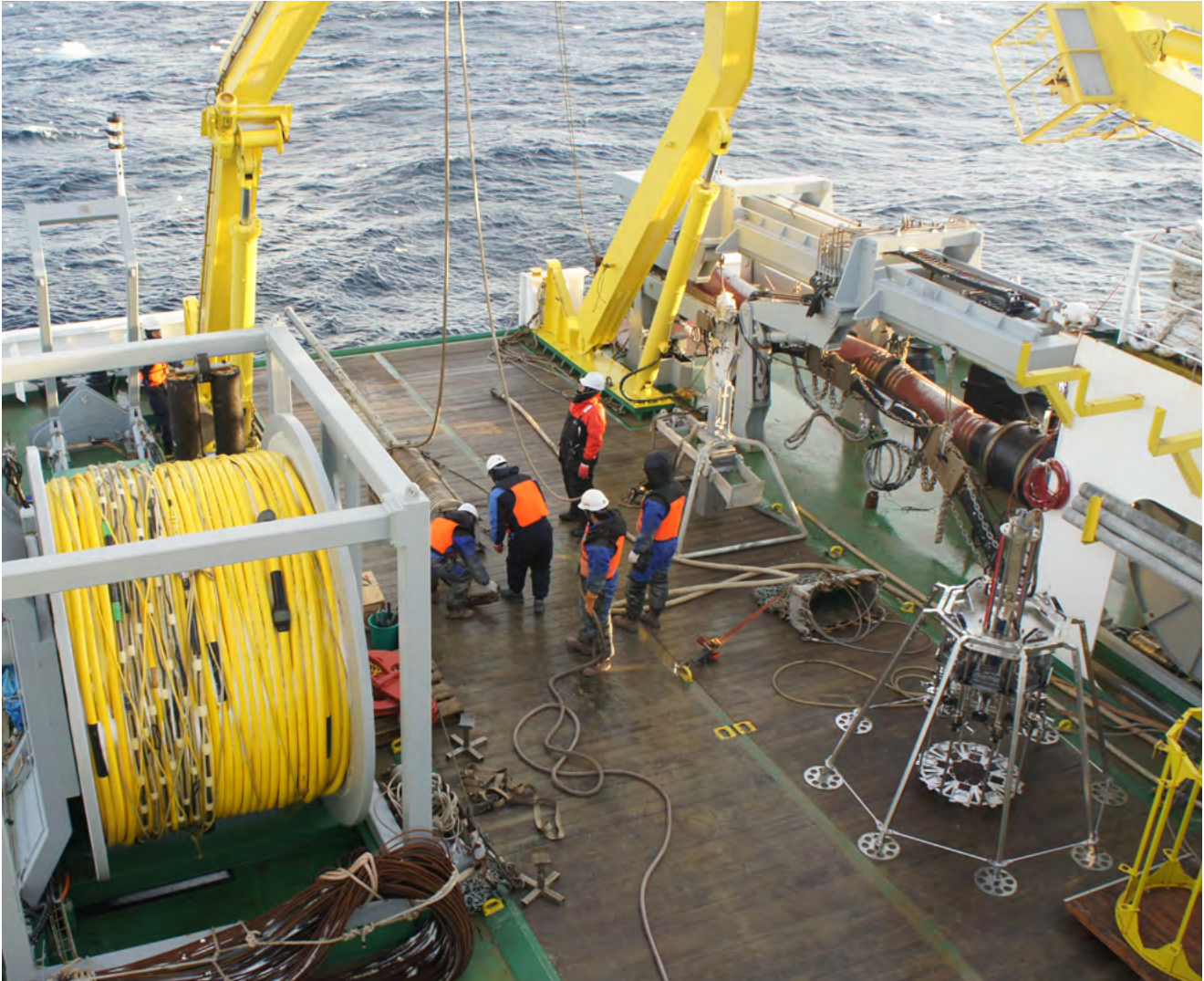
- Take advanced training courses on ice navigation and participate in trainings programs aboard an ice-class vessel and ice breaker to open a training course on ice navigation
- Develop a safety training course that teaches the basics of glaciers, emergency responses, and survival methods for crews that board polar operating vessels

## **Cooperate on Developing Arctic Coastal Ports**

- Establish a working group of experts from the governmental, industrial, academic, and research sectors

## **Revamp Korean Ports that are Connected to Arctic Sea Routes**

- Establish a basic plan for ports to prepare for the commercialization of the Arctic Sea routes



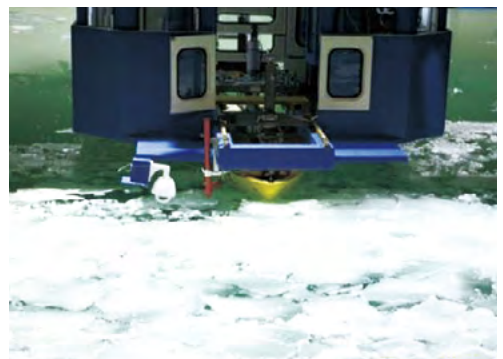
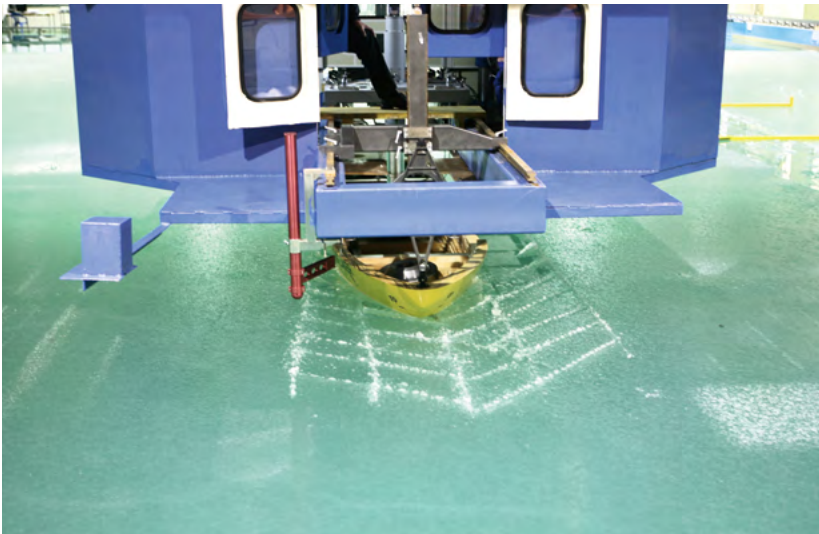
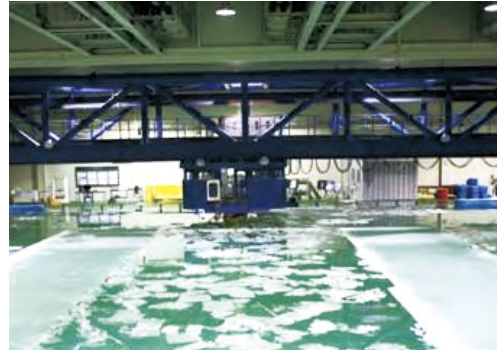
### Lay the Foundation for Sustainable Arctic Resource Exploration Cooperation

- Carry out joint programs, including an Arctic geological survey with an international group of experts
- Launch joint exploration of minerals and geological survey with resource-related public entities and institutes
- Host a symposium on ways to increase cooperation in developing mineral and energy resources in the Arctic

### Cooperate in Sustainable Fisheries Resource Management

- Strengthen cooperation with the region's major fisheries organizations that are associated with the Arctic and its adjacent seas
- Establish a project group led by the NFRDI (National Fisheries Research and Development Institute), KOFA (Korea Overseas Fisheries Association), PICES, KMI, and KOPRI, and develop a basic plan to strengthen cooperation





- Continue to strengthen bilateral fisheries cooperation with Arctic coastal states

### **Develop Shipbuilding and Safety Technology for Polar-Class Vessels**

- Develop core technology for safe navigation in the polar region
- Develop technology for safe navigation of ice class ships along polar routes and relevant testing technology

### **Develop Offshore Plant Technology for Deepwater Resources Development**

- Strengthen R&D throughout the entire offshore plant cycle to achieve independence in developing core technology and provide relevant support for the industry
- Increase R&D for offshore plants that produce deep-water resources



# Securing *Institutional Foundation*



## Establish Institutional Base to Develop A National Polar Policy

- Provide legal ground by enacting a law on Polar Region cooperation
- Establish a Polar Region Activity Promotion Committee that deals with matters related to activities in the polar region, including the establishment of a basic plan

## Build Polar Information Service Center

- Build an Information Service System that would collect, analyze, and provide information on international organizations including the Arctic Council, the activities of Arctic States and business activities in the Arctic





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