



Introduction of KHOA

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International Cooperation Team
10 April 2019



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General Activities of KHOA



1950s: National Security

Hydrographic Division of
the ROK Navy

1960s: Economic Growth

Hydrographic Division
of the Ministry of
Transportation

1990s: UN Law of the Sea

KHOA under
the Ministry of Oceans
and Fisheries

2000s: Climate Change

KHOA under
the Ministry of Oceans
and Fisheries

• National Defense

• National Defense
• Marine Transportation

• National Defense
• Marine Transportation
• Marine Territory
• Marine Disasters
• Marine Leisure

• National Defense, Rescue
• Marine Transportation
• Marine Territory
• Marine Disasters
• Marine Leisure
• Climate, Disaster Prevention
• Energy, Resources



**Vision : To be the Leader of the Marine Information Industry
By Integrating Ocean Data**



Organization

KHOA

5 Divisions / 1 Research Div. / 3 Regional Offices /
Approx. 230 members of staff

**Director
General**

**General Services
Division**

**Oceanographic
Observation Division**

**Oceanographic Forecast
Division**

**Hydrographic Survey
Division**

**Nautical Chart
Division**

**Ocean Research
Division**



HQ



Survey Vessels

KHOA

8 vessels in total with latest survey equipment
in the East, West, and South Offices

Haeyang 2000 (2,161t)



Badaro 1 (695t)



Badaro 2 (273t)



Badaro 5 (189t)



Namhaero (52t)



Donghaero (136t)



Hwanghaero (77t)



Haeyangnuri (90t)





Hydrographic Surveying to manage Jurisdictional Sea Area

Hydrographic Surveying

Bathymetry

Research undersea information (seabed image, sediment)

Delimit maritime boundaries





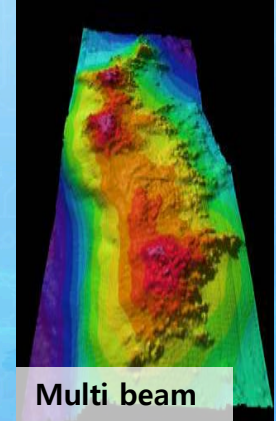
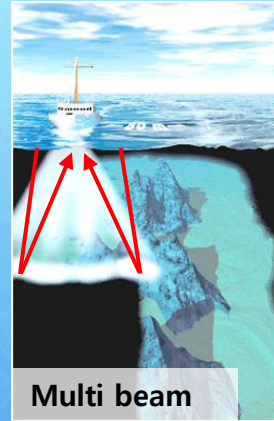
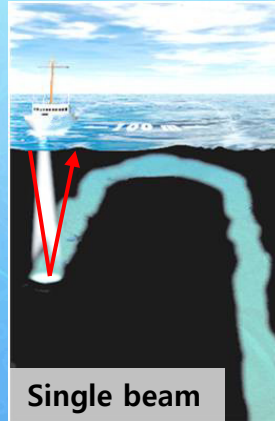
Various Ways of Surveying

KHOA

Singlebeam & Multibeam

A way of surveying
main depth of water

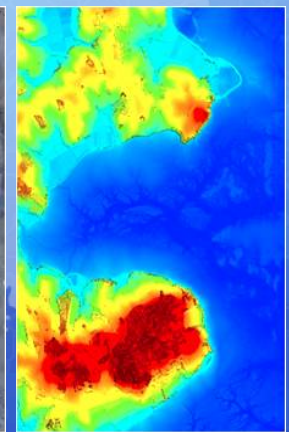
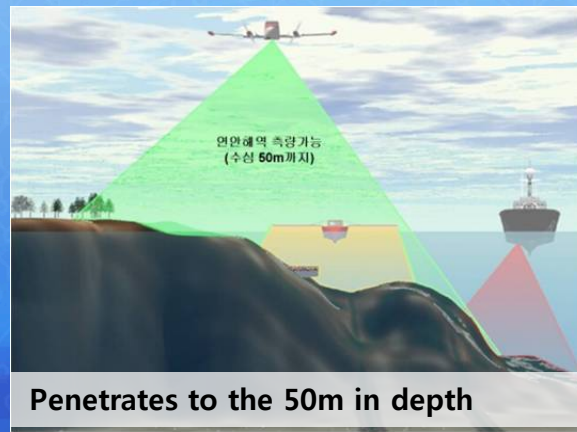
Different resolution
according to the
number of beams



Airborne LiDAR

Survey areas
difficult to navigate

Also produce
coastal lines (high
water lines)





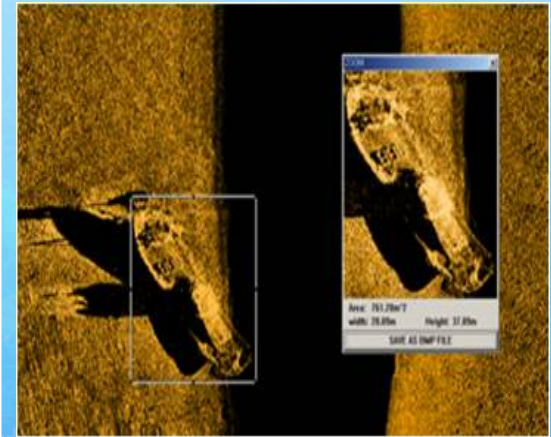
Various Ways of Surveying

KHOA

Seafloor Image

Scan the seafloor

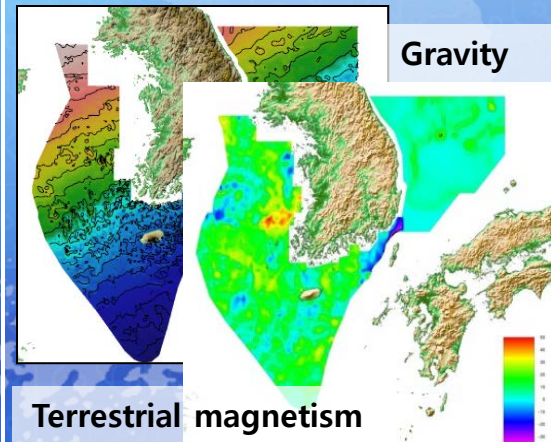
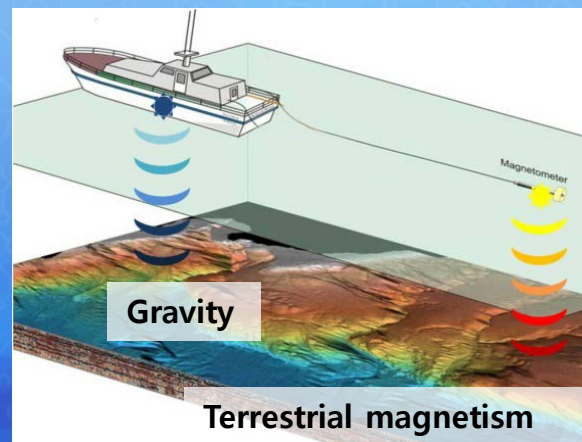
Produce photos that shows brightness using the intensity of sound wave



Gravity & Terrestrial magnetism

Investigate the composition of seafloor

Density distribution, composition difference





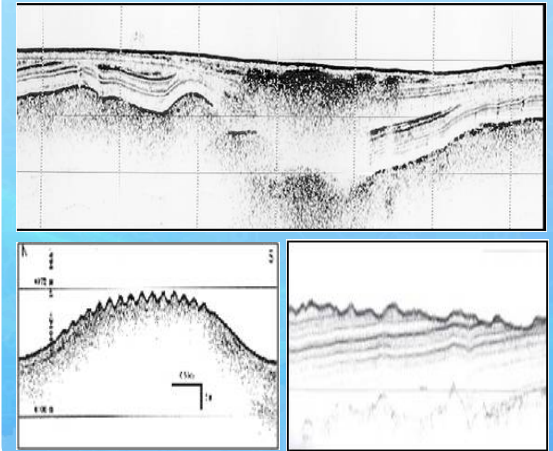
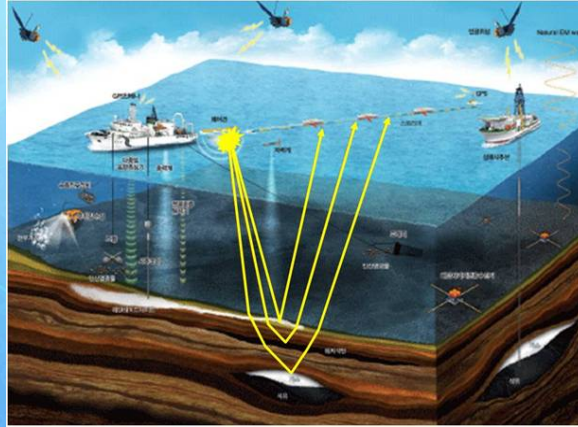
Various Ways of Surveying

KHOA

Sub-bottom

Take a photo of seafloor sediments

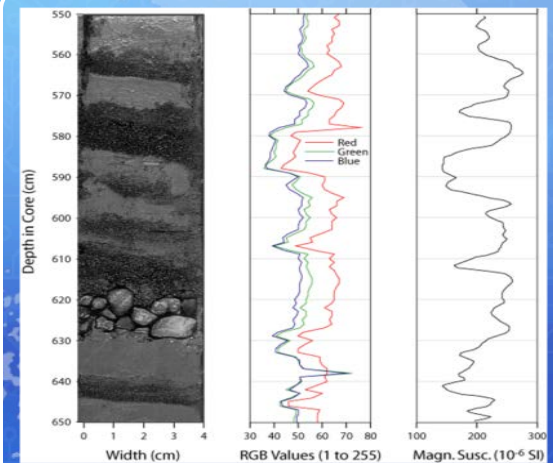
Identify the boundary layer of sedimentation with the velocity change of sound wave



Sediment analysis

Collect real sediment and analyze

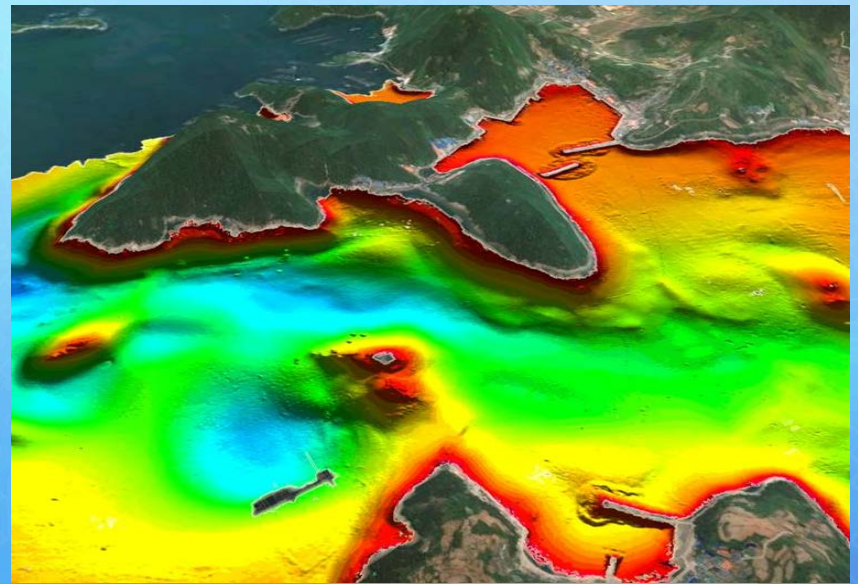
Types, contents, and age of sediment





Hydrographic Survey to Manage the Jurisdictional Sea Area

KHOA



Providing marine information for military operations **to defend marine territory**



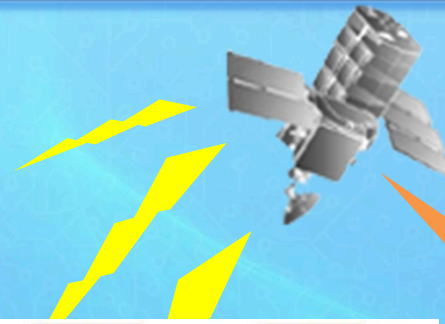


Ocean Observation to Monitor Oceanic Phenomena



Various Ocean Observation Facilities

KHOA



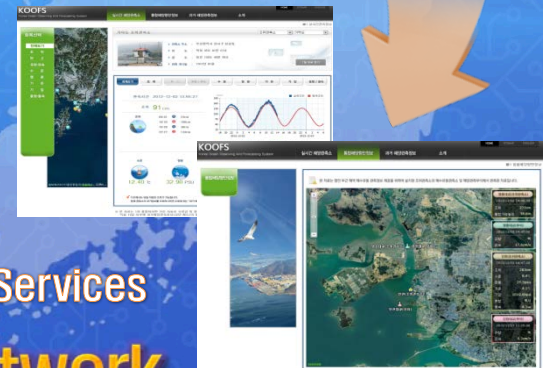
Transfer observation data in real-time



Save & Process data

Observation Facilities

Services



National ocean observation network responsible for ocean observation of Korea



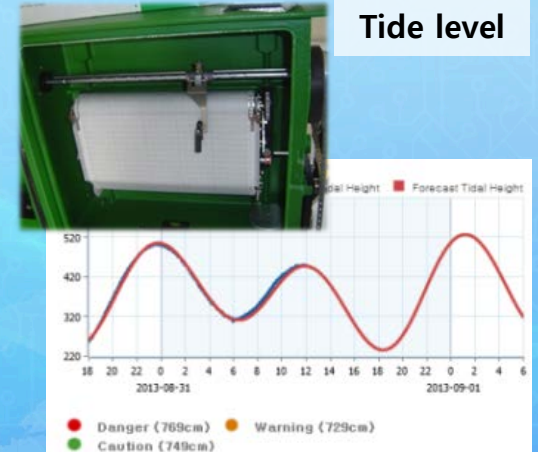
Various Ocean Observation Facilities

KHOA

50 Tidal Stations

Tidal observation facilities located on the coast

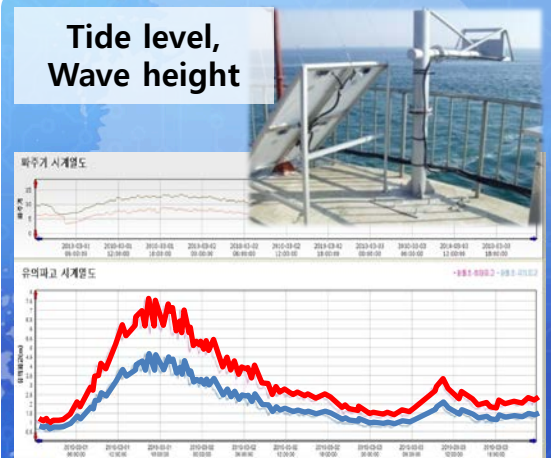
Tide, temperature, salinity, meteorology



3 Ocean Observatories

Install observation devices on a light beacon of littoral sea

Tide, wave height, temperature, salinity, meteorology





Various Ocean Observation Facilities

KHOA

32 Ocean Buoys

Buoy type observation facilities afloat on the adjacent seas and on the open seas

Surface current velocity, wave height, meteorology

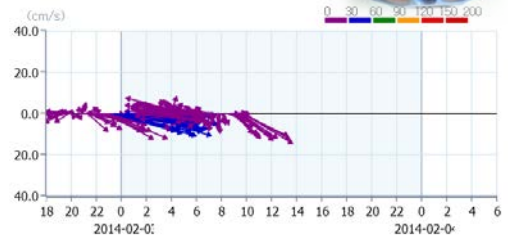


Haeundae Buoy

Surface Current Velocity

관측시간 2014-02-03 09:50

관측값 동남동 24.2 cm/s



44 HF-radar Systems

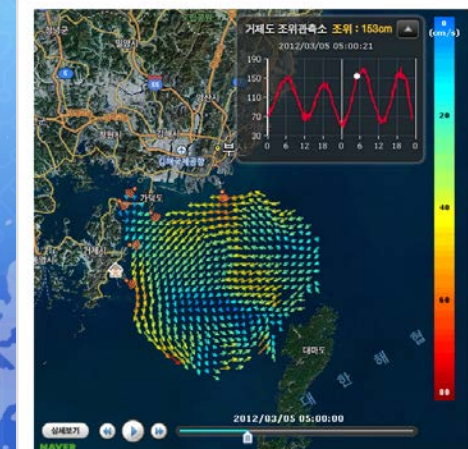
Observation antenna installed on the shoreline

Surface current velocity of broad sea area



Transmission Facilities

Observation Antenna



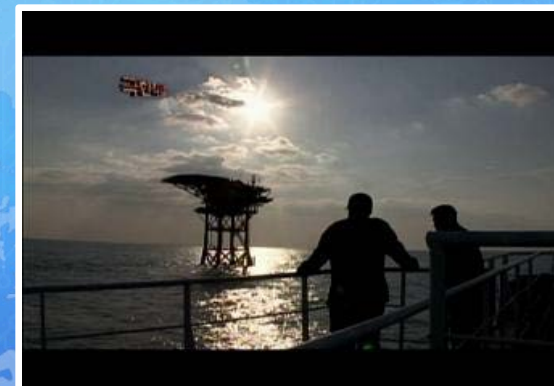
3 Ocean Research Stations

Large scale observation facilities located in the open sea of marine territory



Various Ocean Observation Facilities

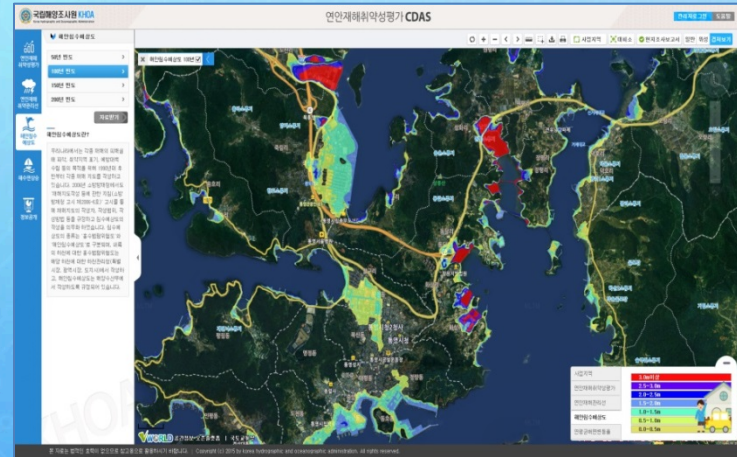
KHOA



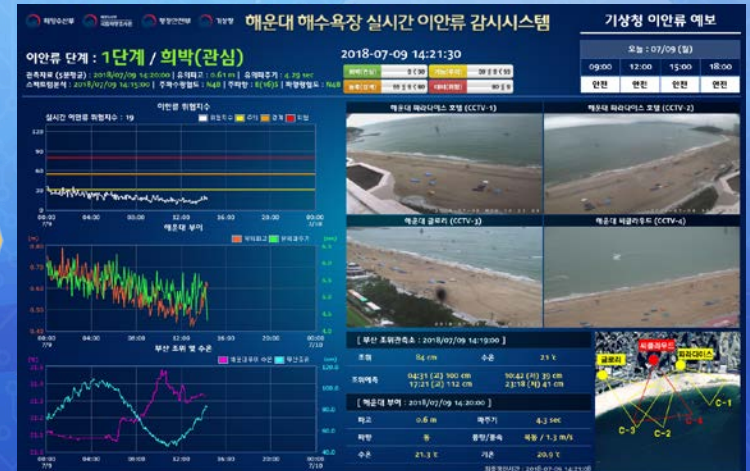
Jeodo Station operates **21 types of** observation equipment **in oceanic, meteorological and environmental fields.**



Predict coastal inundation



Monitor rip currents





4 Chart Production for the Safety of Navigation



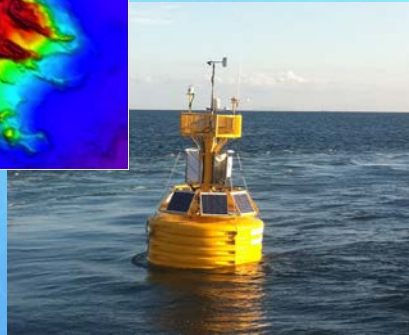
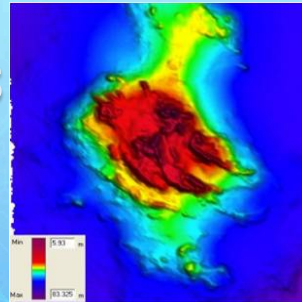
Notices to Mariners & Navigational Warnings

KHOA

Notices to Mariners

Provide information on the safety of navigation

Light buoy, rocks, surveying plans, etc.



2014년 1월 31일 발령
(제 55-54도 124-12도)
제 5 호
제 5 호
제 5 호

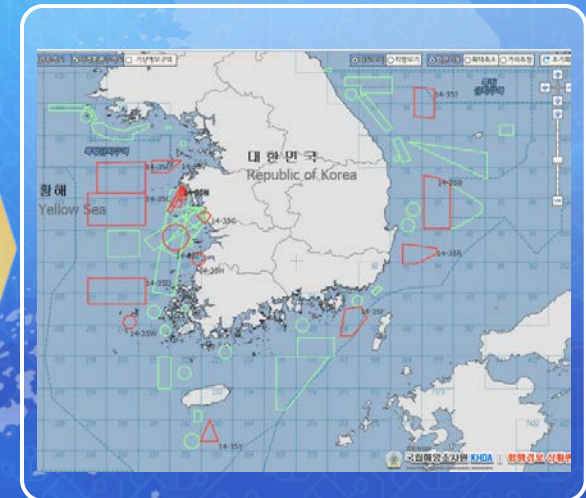
1. 항행통보 제 5 호
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4. 항행통보 제 5 호
5. 항행통보 제 5 호
6. 항행통보 제 5 호
7. 항행통보 제 5 호

국립해양조사원

Navigational Warnings

Inform special cases among NTMs

Firing exercise area and plans



We inform mariners of all that happens on the sea for the safety of navigation

Provision of



Marine Information

for the Public



We produce thematic ocean maps for marine leisure and sports activities.



Provision of Marine Information for the Public

KHOA



Improving the quality of marine activities by providing marine information closely linked to daily life

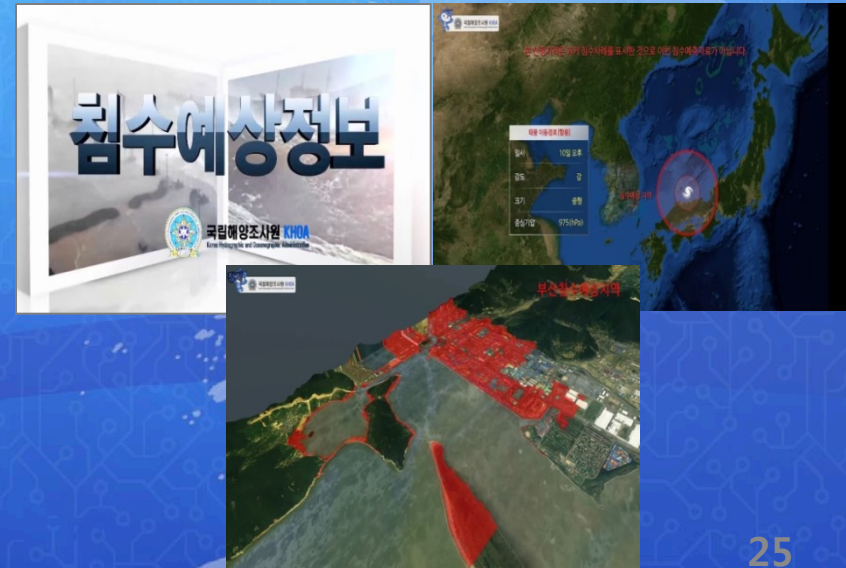




◆ Marine information internet broadcasting

(www.khoa.go.kr/0nbada)

- Information on coastal lines, sea parting, foreshore and inundation, and general marine information

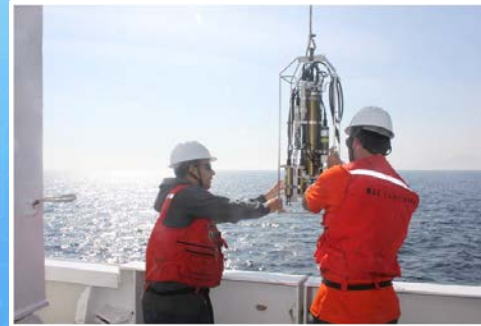
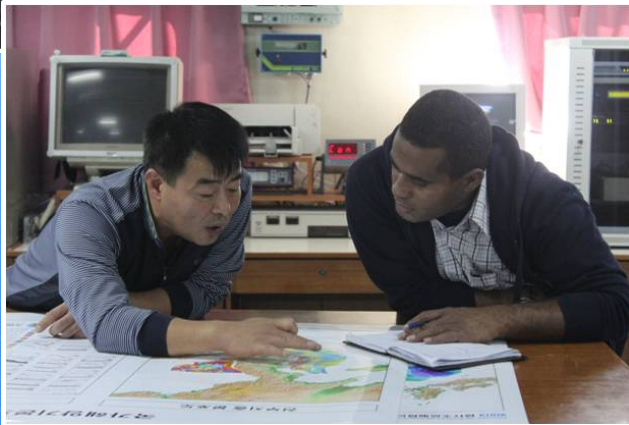




International Cooperation



Continuous international exchange
to obtain advanced marine technology



Transferring hydrographic
technology to other
countries

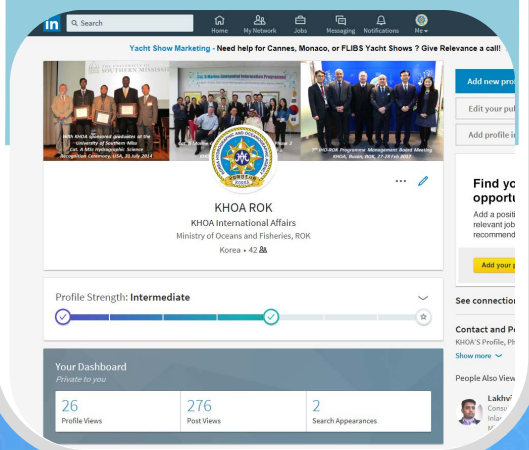




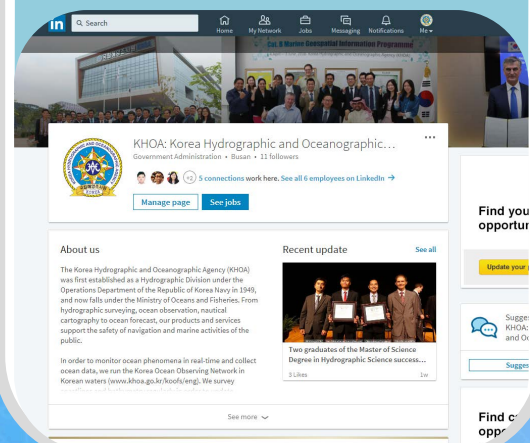
If you want to learn more about us..

KHOA

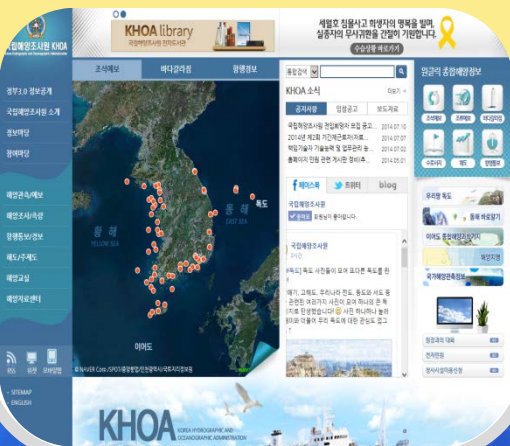
LinkedIn Account: KHOA ROK



LinkedIn Page: KHOA



Webpage khoa.go.kr/eng



Facebook Page





Thank You