

Report on Real-Time Data Base (KHOA, Republic of Korea)

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01 Status of Korea Oceanographic Observation Network



- Tidal Station: 54
- Ocean Station: 2
- Ocean Buoy: 36
- HF-Radar: 44 (16 areas)
- Ocean Research Station: 3

□ Observed Data

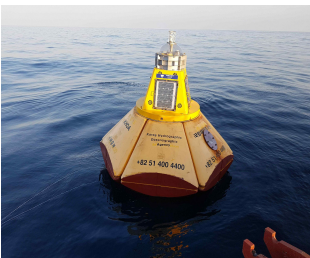
- Oceanographic: sea level, wave, currents, water temperature, salinity
- Meteorology: wind speed, air temperature, air pressure

⇒ All acquired data is serviced in **real-time**

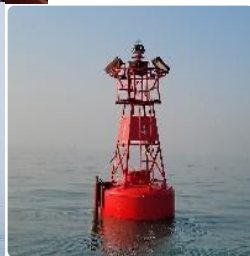
□ Tide Observation

Station	West	South	East	Total
Tidal Station	27	19	8	59
Ocean Station	-	2	-	
Ocean Research Station	2	1	-	
Observation Period	West	South	East	Total
More than 19 years	14	14	6	34
Less than 19 years	15	8	2	25

□ Ocean Observation Buoy



< Buoy in **Offshore Area** >
- offshore buoy : 10 stations

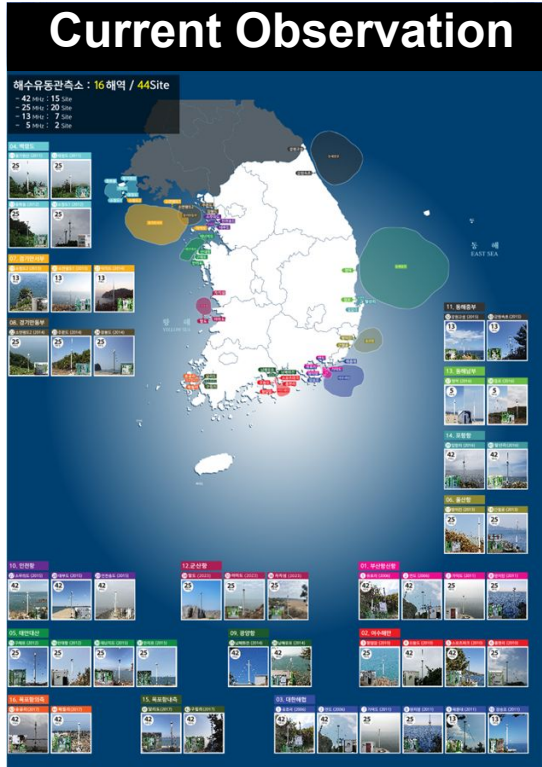


< Buoy in **Major Fairway** >
- coastal buoy: 3 stations
- ATON buoy: 13 stations



< Buoy for **detecting Rip Current** >
- coastal buoy: 10 stations

□ Current Observation – HF Radar



< 16 area / 44 radars (site) >

- 42 Mhz: 15 Site
- 25 Mhz: 20 Site
- 13 Mhz: 7 Site
- 5 Mhz: 2 Site

□ Ocean Research Station



① Ongjin
Socheongcho



② Sinan
Gageocho



③ IEODO

02 Real-time Ocean Data Processing

□ Data Quality Control (2 stages)

1

1st Quality Control (QC)

- Check the overall of data
- Time, location, error, variation, spike, statistic, delay, power, regional range, seasonal range, global range

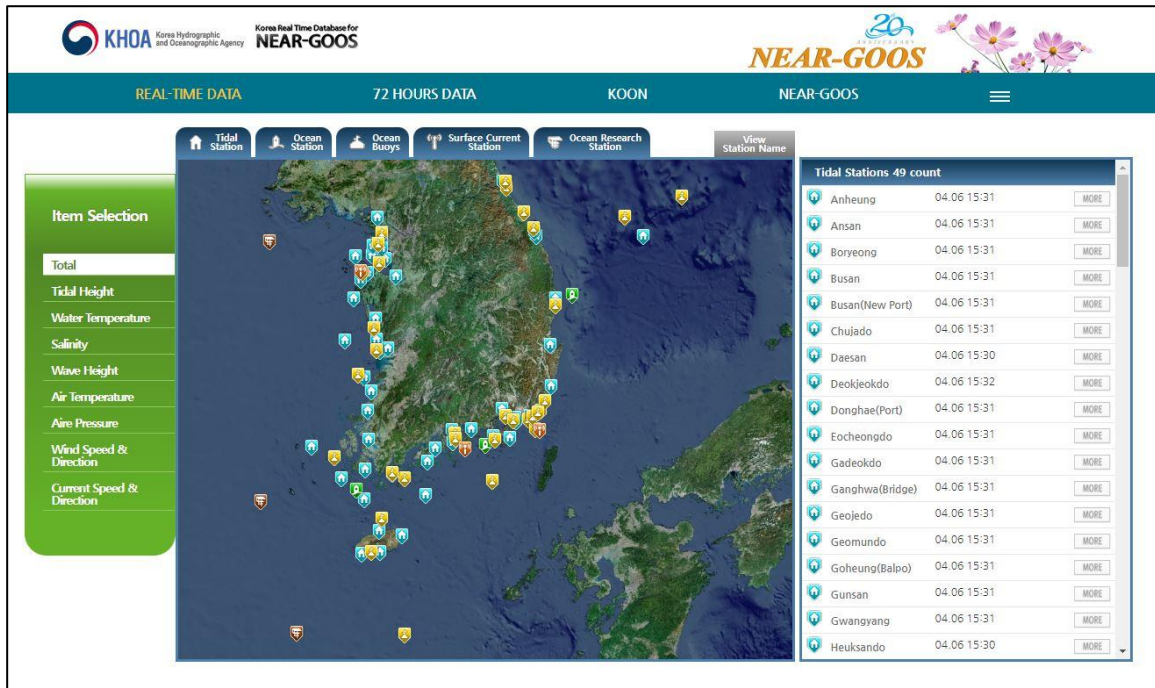
2

2nd Quality Control (QC)

- Re examine the result of last month's 1st QC
- Compare the past data and the data from nearby stations

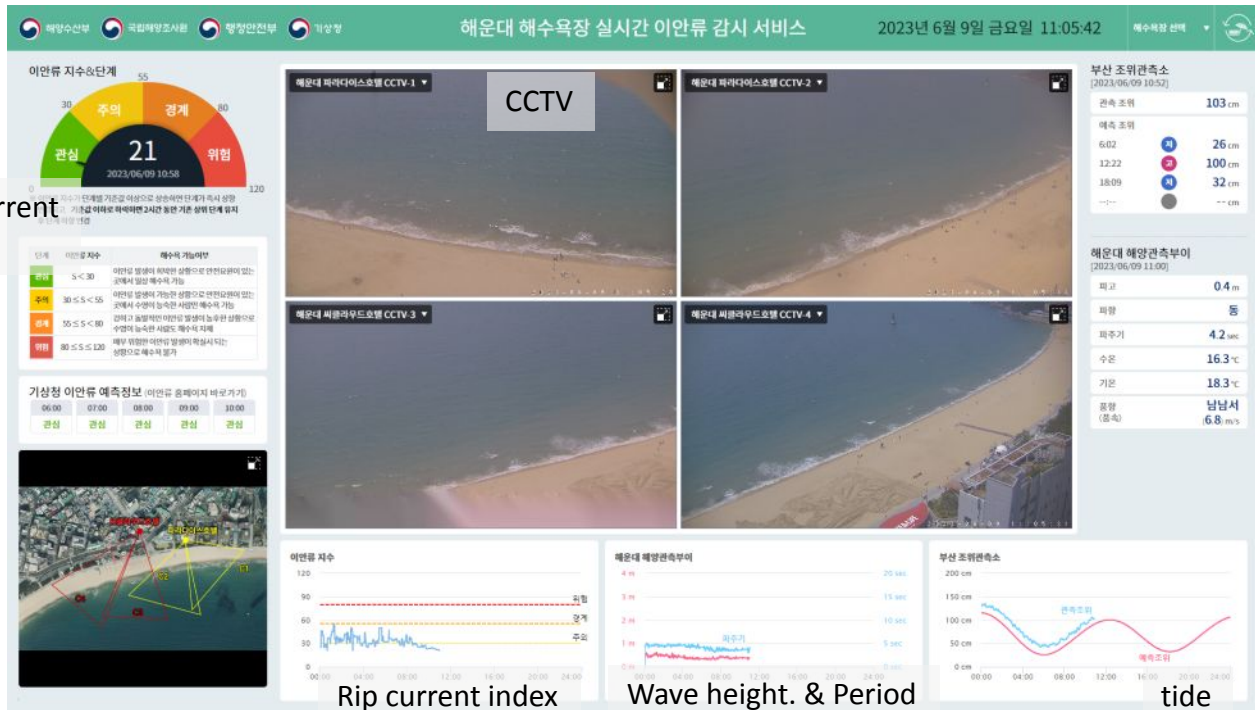
03 Service to public

□ Korea RTDB for Near-GOOS (URL: www.khoa.go.kr/neargoos)

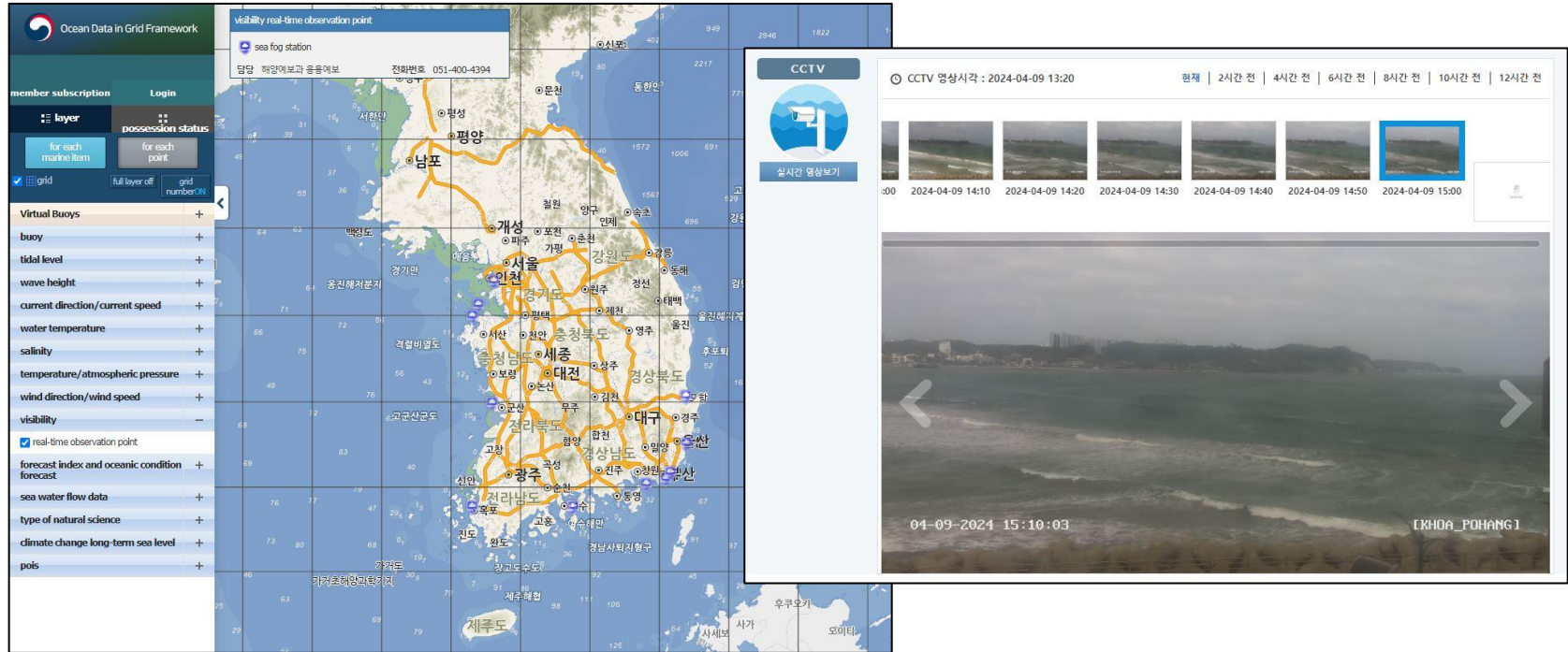


Rip current monitoring Service

Rip current
index



Grid Service – Sea fog station (URL: www.khoa.go.kr/oceangrid)



□ Grid Service

(URL: www.khoa.go.kr/oceangrid/khoa/intro.do)

Ministry of Oceans and Fisheries
Korea Hydrographic and Oceanographic Agency

Ocean Data in Grid Framework

business introduction real-time oceanographic observation gridded oceanographic information oceanographic information download user tool
OPENAPI information pool

The Grid is Place of Ocean Data Openness, Sharing & Exchange

Real-time ocean observation information and ocean forecast information can be checked in a grid system, and other ocean information can be downloaded and utilized through Open API.

gridded oceanographic information
Ocean observation/prediction information and research results can be

oceanographic information download
You can download and use the ocean information observed at tide stations, etc.

user tool
The support tool enabling the user to analyze the tidal form observation data to calculate the result is

OPEN API
It is provided as an open API so that the ocean observation and forecast information provided by Korea

□ Webzine

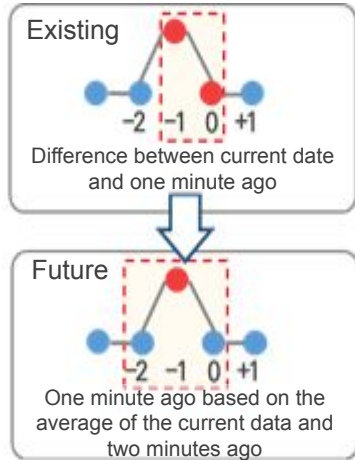
(URL: www.khoa.go.kr/webzine/webzine.do)



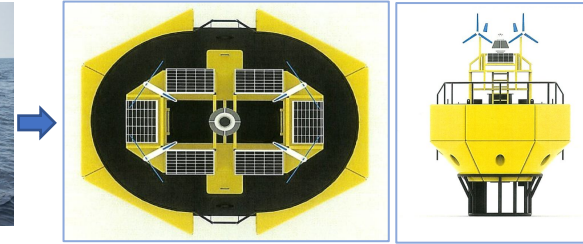
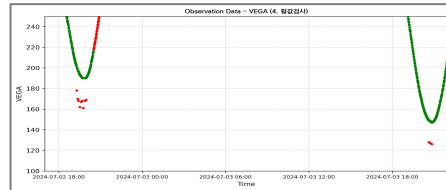
04 Future plans

□ Real time QC Improvement

• QC algorithm improvement

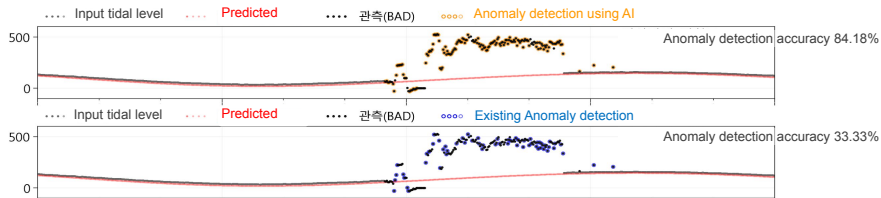


Application of jump value inspection



⇒ Enhancing maintenance stability

• Anomaly detection using AI



⇒ Improved anomaly detection accuracy with AI application

Thanks!

Any questions?

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