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

10 March 2025

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Korea Hydrographic and Oceanographic Agency

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01 **Status of Korea Oceanographic Observation Network**

KHOA's 139 Stations (Present)

- 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**

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❑ **Tide** Observation

Station	West	South	East	Total
Tidal Station	27	19	8	
Ocean Station	-	2	-	59
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

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❑ Ocean Observation **Buoy**
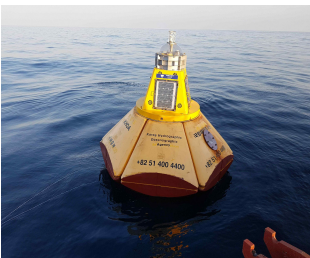
< Buoy in Offshore Area >
 - offshore buoy : 10 stations
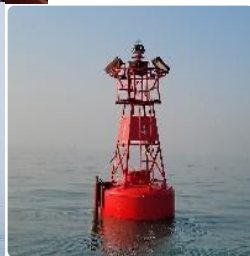
< Buoy in Major Fairway >
 - coastal buoy: 3 stations
 - ATON buoy: 13 stations

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

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☐ **Current** Observation – **HF Radar**
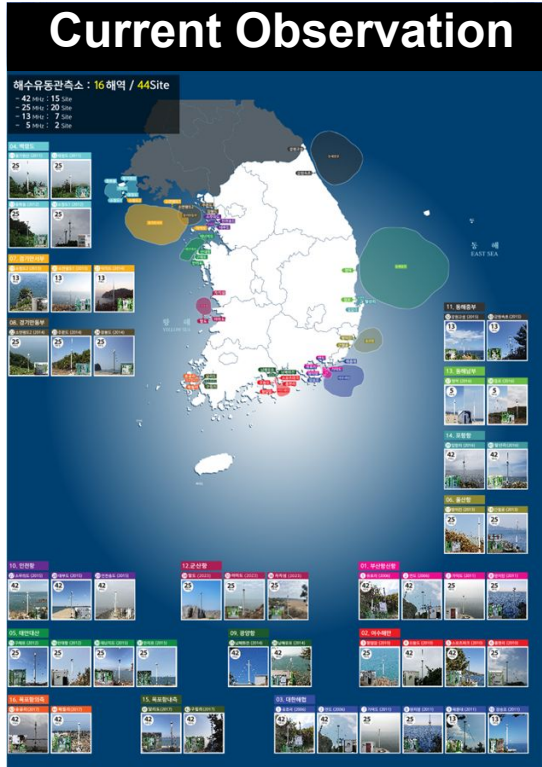
< 16 area / 44 radars (site) >

- 42 Mhz: 15 Site

- 25 Mhz: 20 Site

- 13 Mhz: 7 Site

-   5 Mhz: 2 Site

☐ **Ocean** Research Station

①Ongjin Socheongcho

②Sinan Gageocho

③IEODO

02 Real-time Ocean Data Processing

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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

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03 Service to public

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03 Service to public

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

☐ **High Tide Information Service**
(URL: www.khoa.go.kr/hightide)

· Normal
· Attention
· Caution
· Warning
· Danger
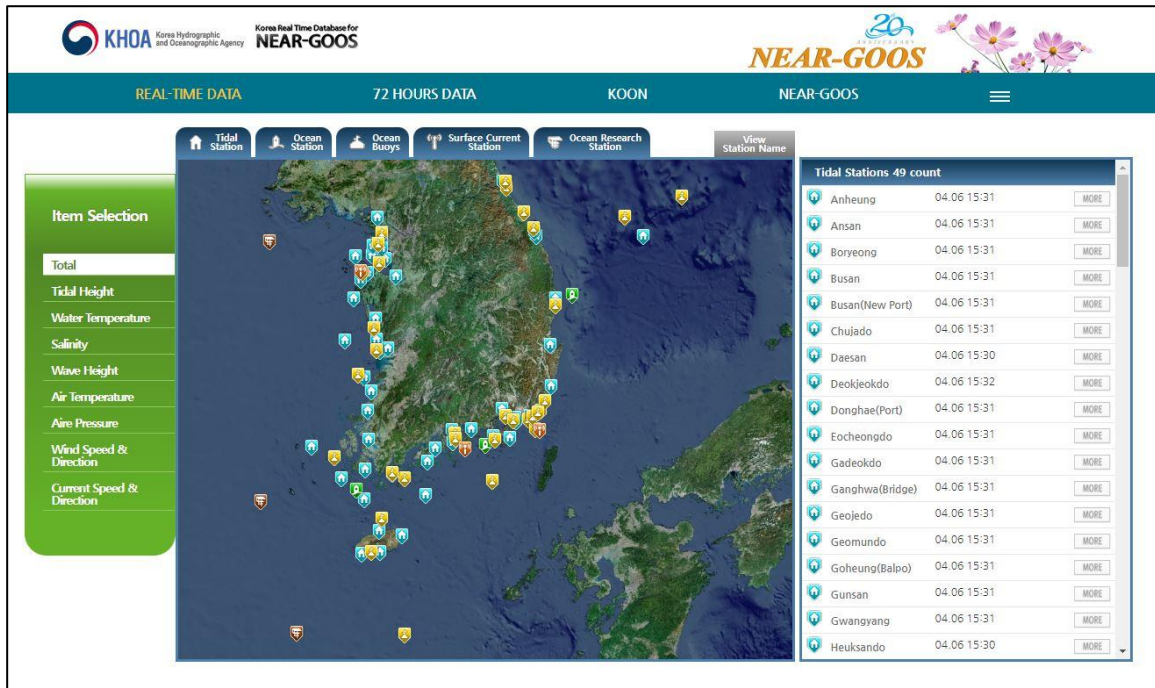
□ Rip current monitoring Service
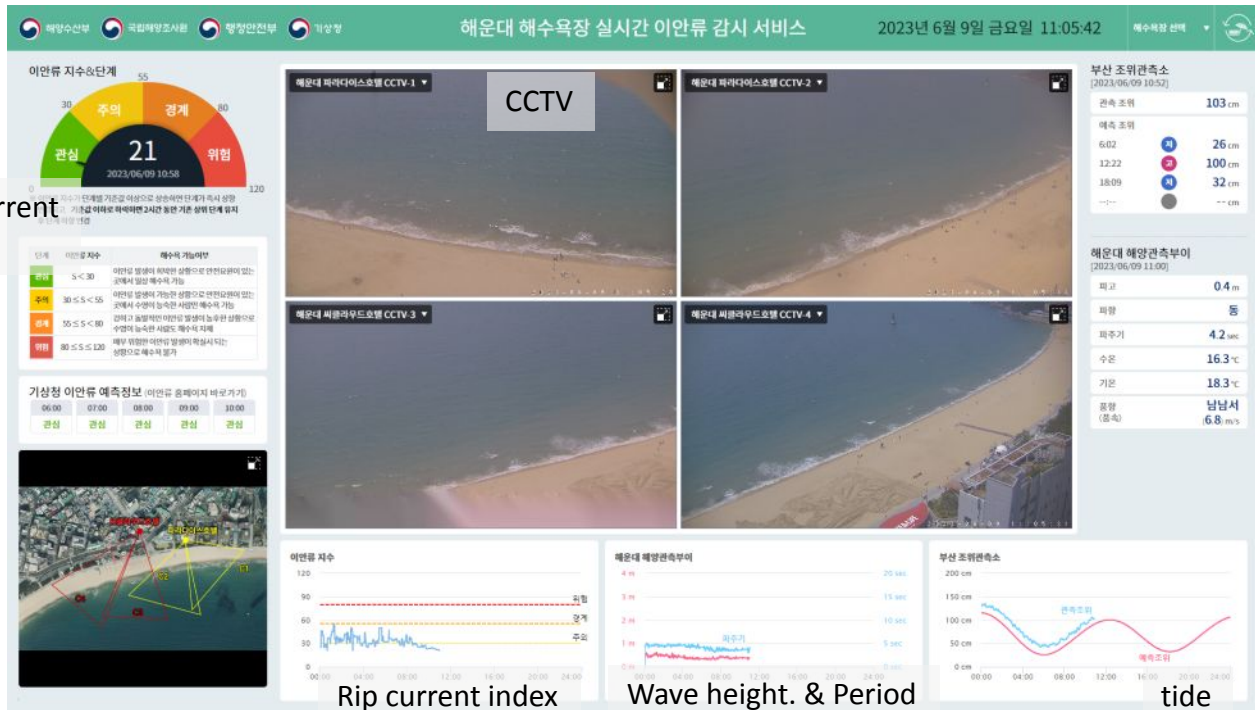
☐ **Grid Service – Sea fog station**
(URL: www.khoa.go.kr/oceangrid)
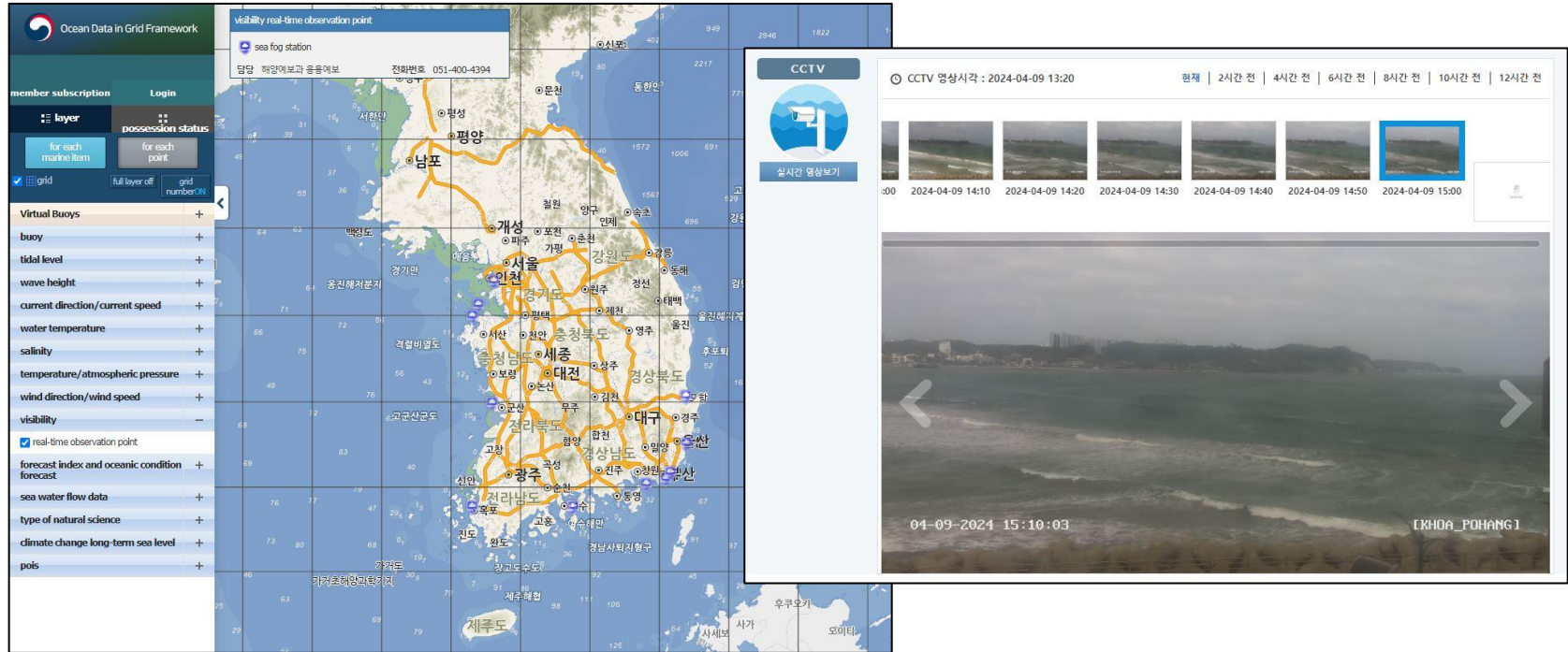
Grid Service
(URL: www.khoa.go.kr/oceangrid/khoa/intro.do)

❑ Webzine

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

04 Future plans

☐ **Real time QC Improvement**

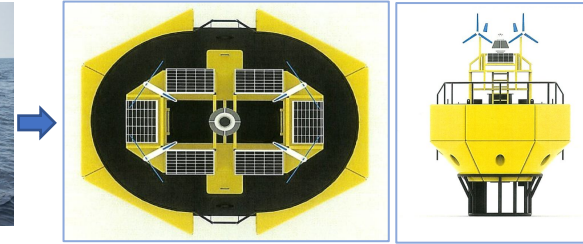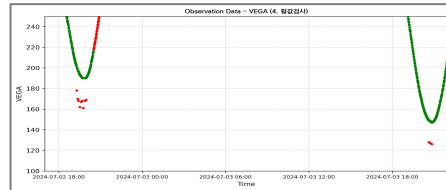☐ **Buoy design improvement**
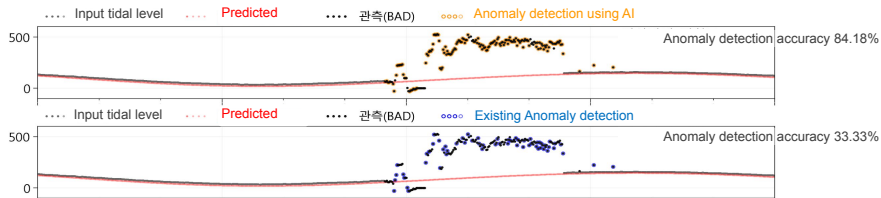
• QC algorithm improvement
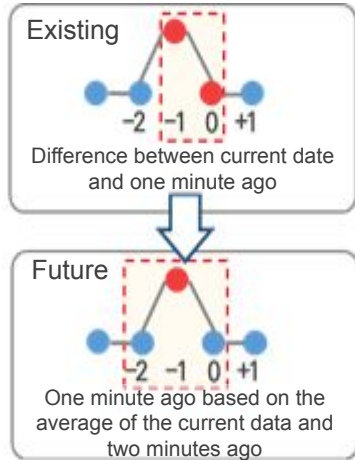
Application of jump value inspection

⇒ Enhancing maintenance stability

• Anomaly detection using AI

⇒ Improved anomaly detection accuracy with AI application

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Thanks!

Any questions?

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