Report on the Working Group on Operational ocean Forecasting System

March 10, 2025

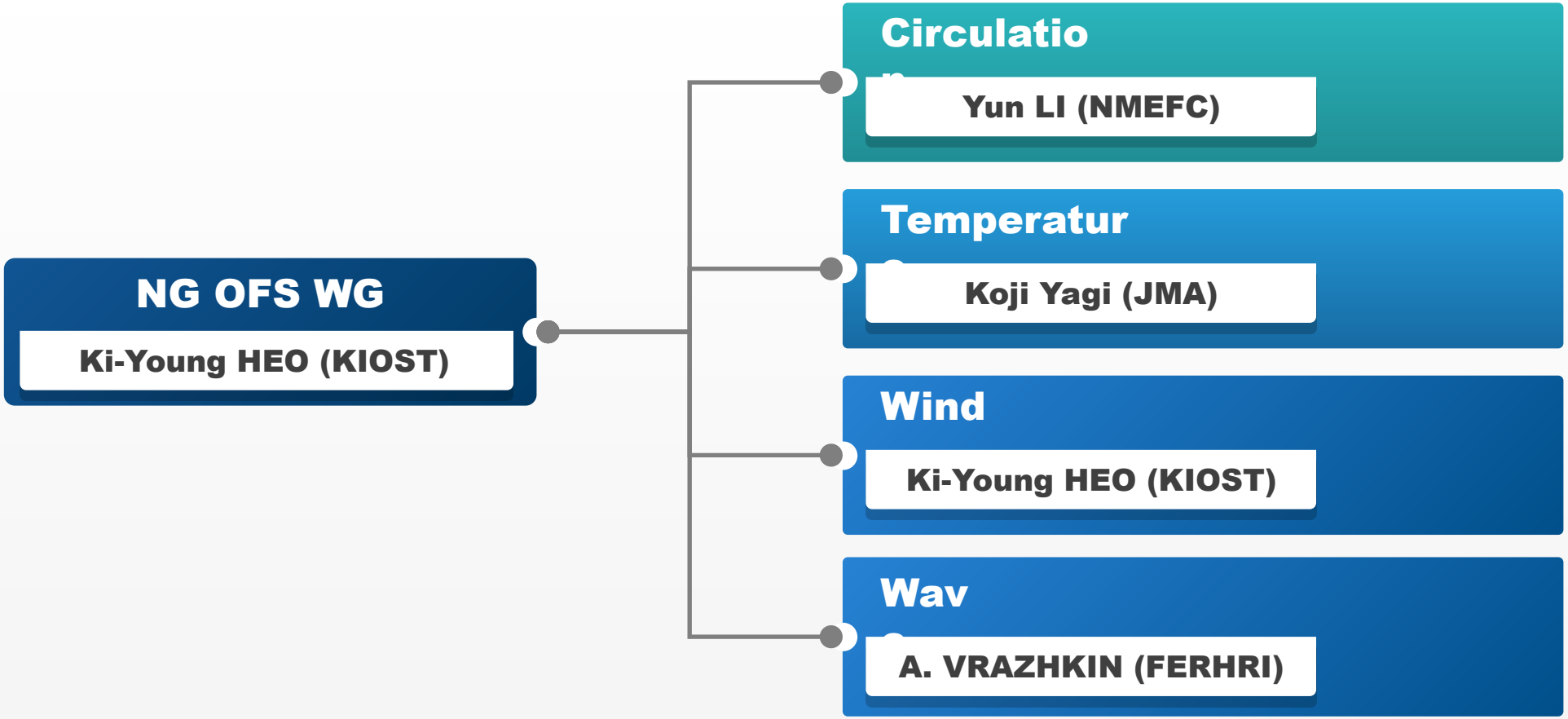
Ki-Young Heo
Yun LI, Alexander VRAZHKIN, Koji Yagi, Jin-Yong CHOI

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

North-East Asian Regional-Global Ocean Observing System (NEAR-GOOS)

Contents

4 Task Force Teams on NG OFS WG



Task Force teams in OFS WG (Mar. 2025)

	Leading Country	Leader	CHINA	JAPAN	KOREA	RUSSIA
Wind	Korea	Dr. Ki-Young HEO	Dr. Jianyong XING	-	Dr. Ki-Young HEO	-
Circulation	China	Dr. Yun LI	Dr. Shuangquan WU	Mr. Masakazu HIGAKI	Dr. Gwang-Ho SEO	-
Temperature (sea)	Japan	Dr. Koji Yagi	Dr. Yun LI	Dr. Mikitoshi HIRABARA	Dr. Jae-Il KWON	-
Wave	Russia	Dr. A. VRAZHKIN	Dr. Zhiyi GAO	-	Mr. Jin-Yong CHOI	Dr. A. VRAZHKIN

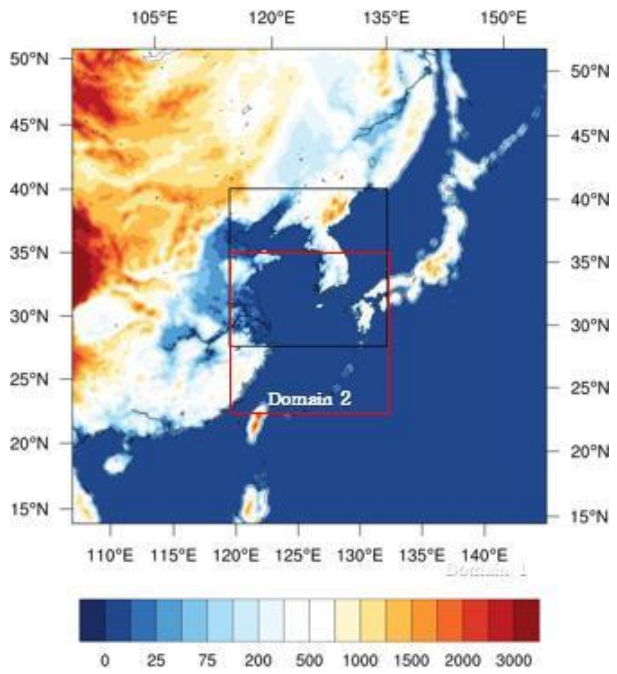
OFS model configurations (Mar. 2025)

	Leading Country	Product	System	Method	Timeline
Wind	Korea	Sea surface wind (U_{10})	KOOS-WRF_ ver.4.2	Images for 72 hours with (3 hours interval) Via Homepage	Operational
Circulation	China	Sea surface Current, Sea surface height	NEMO	Images for 5 days with (1 days interval) Via Homepage	Operational
Temperature (sea)	Japan	Sea surface + 100m temperatures	MOVE/MRI.COM	Images for 30 days with (1 days interval) Via Homepage	Operational
Waves	Russia	Significant wave height and direction	FERHRI-WaveWatch III	Images for 120 hours with (6 hours interval) Via Homepage	Operational

Wind TF - KOREA

KOOS WRF ver. 4.2

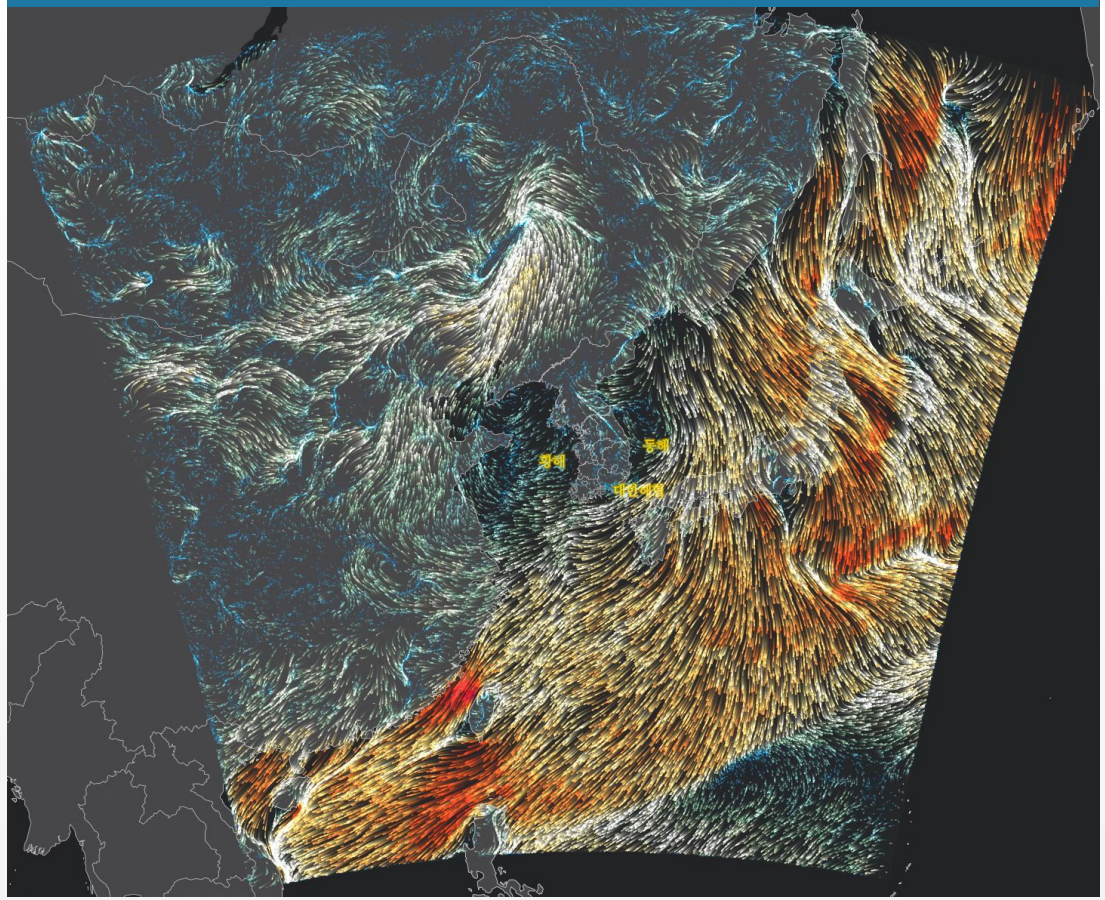
Regional domains



Specifications of WRF run

	Domain1	Domain2
Horizontal Resolution	20 km	4 km
Vertical Levels	60	60
Cumulus Parameterization	Kain-Fritsch	None
Microphysics	WSM6	
Radiation	RRTM/Dudhia	
Land surface	Noah LSM	
PBL	YSU Scheme	
Initial/Boundary condition	NCEP GFS	
Data Assimilation	4DVAR	

Operational Wind Forecasting System



II. Progress on NG OFS WG

Current TF - CHINA

NEAR-GOOS
China Regional Real Time Data Base

Home | About NEAR-GOOS | Observation | Product | Download

ABOUT NEAR-GOOS

NEAR-GOOS as a regional pilot project of the Global Ocean Observing System (GOOS), the North-East Asian Regional GOOS (NEAR-GOOS) is being implemented by ***China, Japan, the Republic of Korea and the Russian Federation****. The NEAR-GOOS China Real-Time Database is operated by National Marine Forecasting Center(NMEFC).*

Learn More About NEAR-GOOS

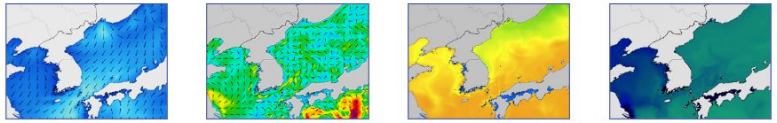
China Regional Real Time Data Base

The NEAR-GOOS is a federation of data professionals bridging nations and scientific disciplines, with the aim of developing data sharing that meet the needs of Ocean researchers. There are fourteen marine station's data sharing from China Regional Real Time Data Base through the NEAR-GOOS Program. ***Anyone who declares that they will not utilize the data for commercial purposes may access the data free of charge****.*

Access Data

Numerical Prediction Products

Anyone who declares that they will not utilize the data for commercial purposes may access the data for free.
NMEFC provides numerical prediction products for the North-East Asian region, including: ***Wave, Sea Surface Current, Sea Surface Temperature and Sea Surface Salinity****.*



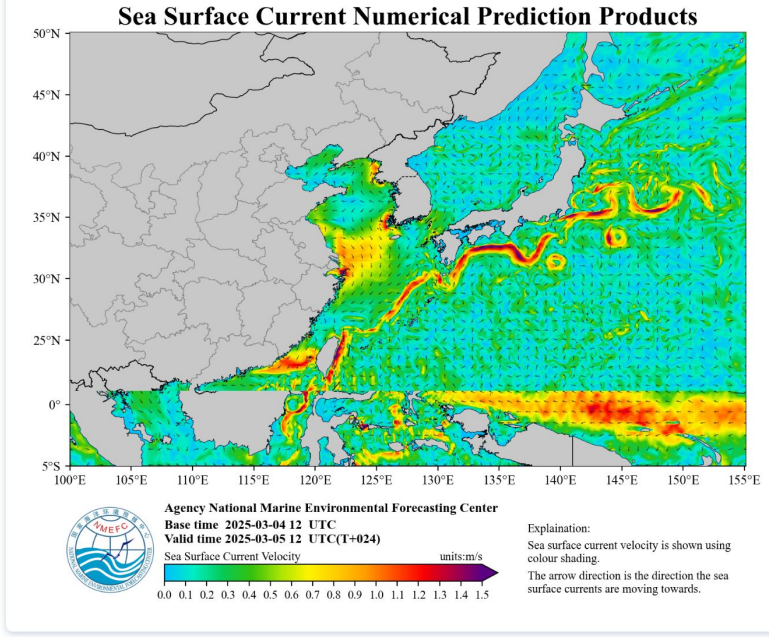
View More Charts

NEAR-GOOS
China Regional Real Time Data Base

Home | About NEAR-GOOS | Observation | Product | Download

Numerical Prediction Product: Current | Base Time (UTC): 2025-03-04 12 | Valid Time (UTC): 2025-03-05 12:00:00

03-05 12H | 03-06 12H | 03-07 12H | 03-08 12H | 03-09 12H | 03-10 12H | 03-11 12H



NEAR-GOOS

Sections
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About NEAR-GOOS
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About
Privacy Policy
Disclaimer

Contact Us
Email: neargoos@nmefc.cn
Contact Number: 0086-010-62105754
Fax: 0086-010-62173620
Address: No.8, Dahuisi Road, Haidian District, Beijing,China
Zip Code: 100081

II. Progress on NG OFS WG

Temperature TF - JAPAN

NEAR-GOOS Regional Real Time Data Base

Japan Meteorological Agency (JMA)

United Nations Educational, Scientific and Cultural Organization

IOC Sub-Commission for the Western Pacific (WESTPAC)

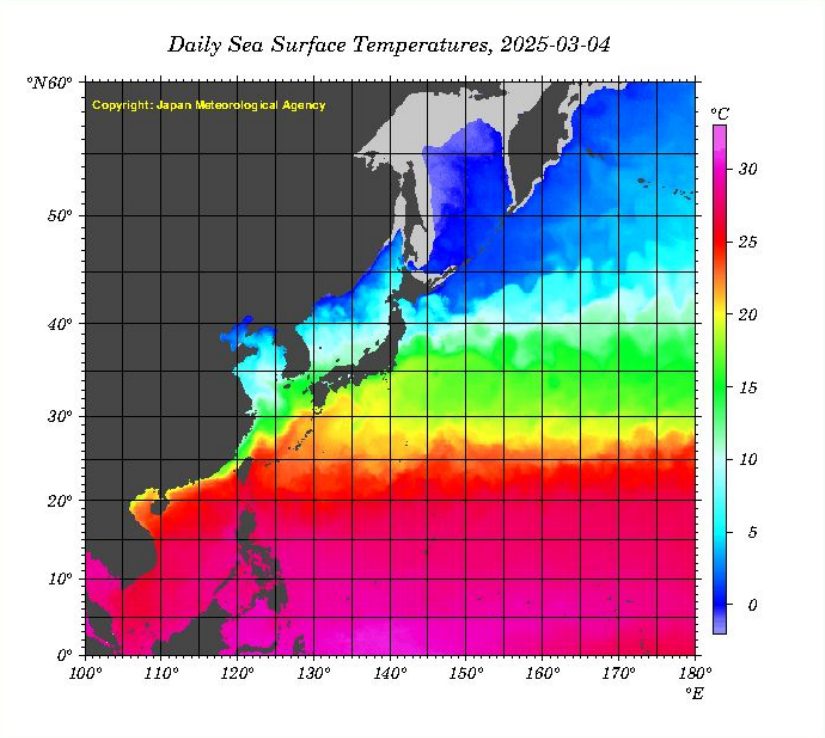
Home | Documents | JMA Products | In-situ Data | Cross-Section

Daily Sea Surface Temperatures in the Western North Pacific

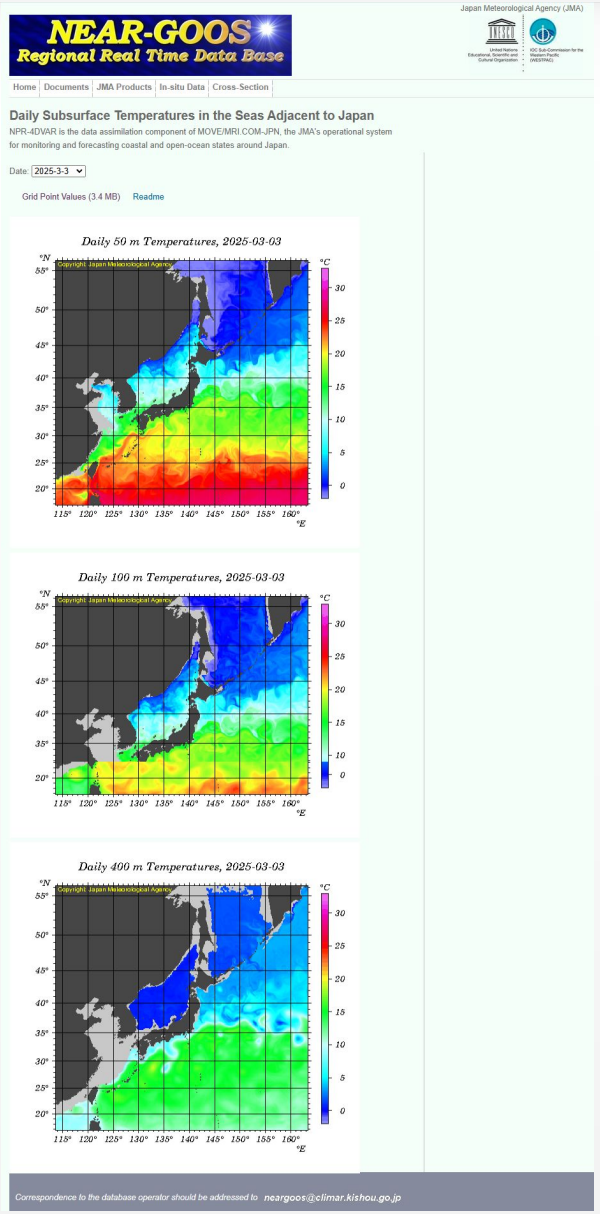
High Resolution Merged Satellite and In-situ Data Sea Surface Temperature (HIMSST)

Date: 2025-3-4

Grid Point Values (1.4 MB) Readme



Correspondence to the database operator should be addressed to neargoos@climar.kishou.go.jp



Wave TF - Russia

FERHRI

RU | EN

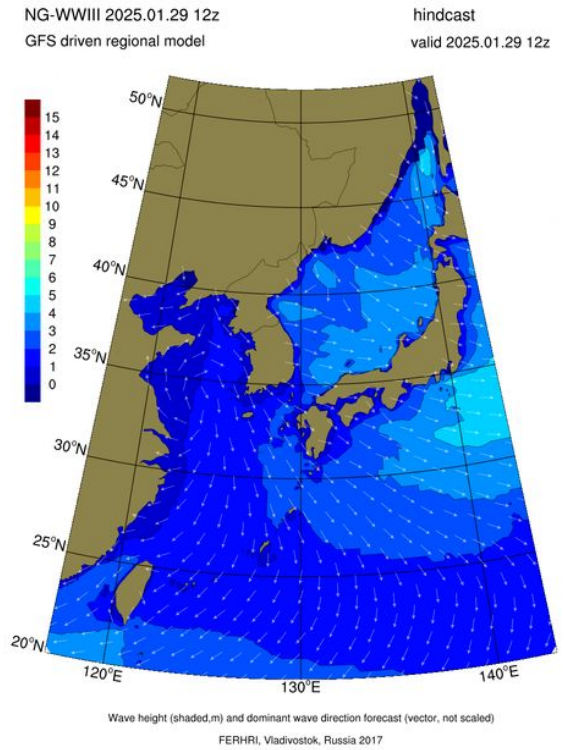
ABOUT FERHRI | OUR FLEET | OUR PUBLICATIONS | OUR PROJECTS

OPERATIVE PRODUCTS

Wave height (shaded,m) and dominant wave direction forecast (Area of NEAR-GOOS)

- Source: FERHRI,Vladivostok, Russia
- Forecast method: WaveWatch III
- The Spherical Multiple-Cell grid: 5-10-20'
- Forecast lead time up to 120 hours

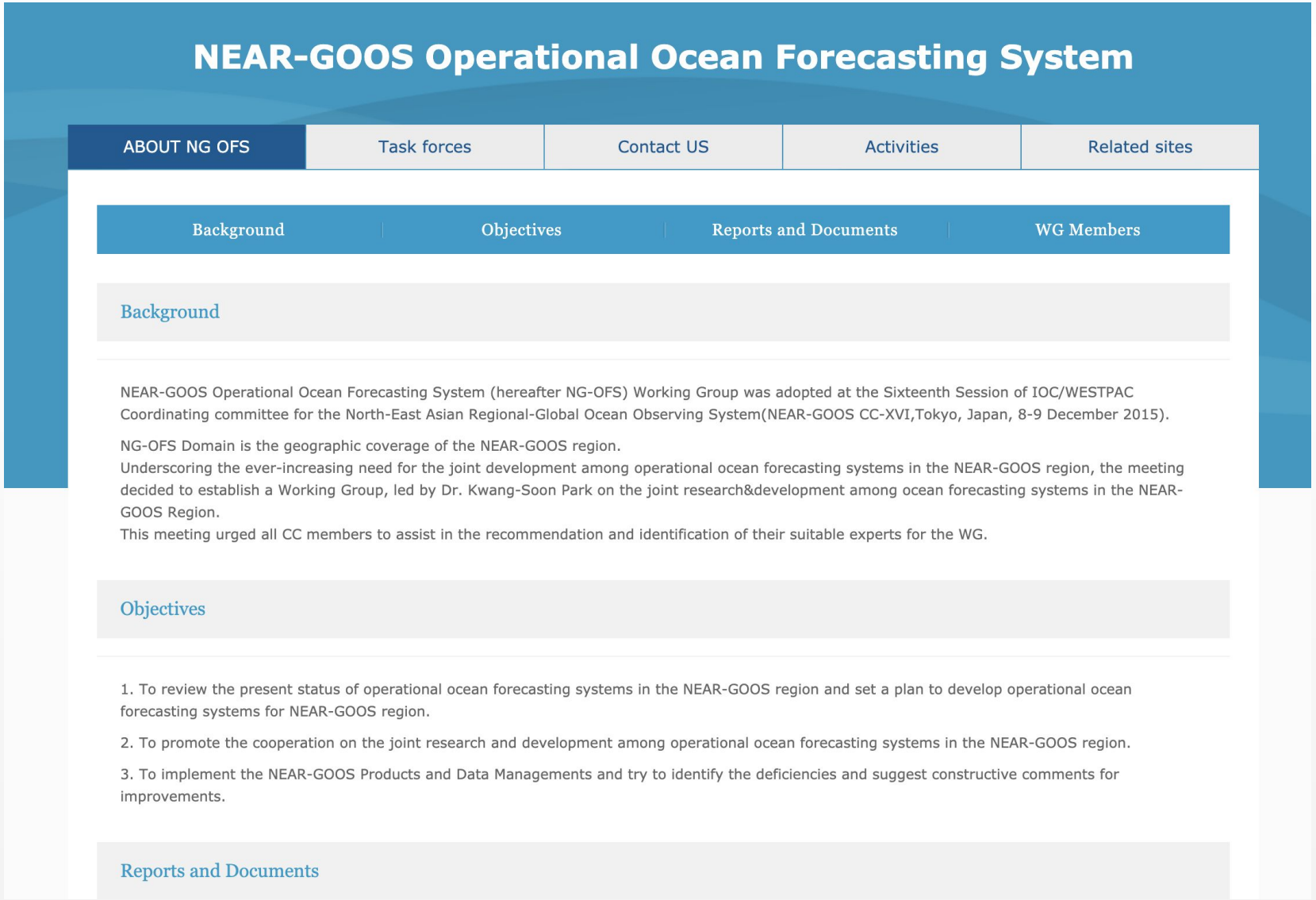
Slideshow



OFS WG Homepage

http://NEARGOOS-OFS.kiost.ac.kr

□ The website is currently down.



OFS WG Homepage

WG Members

The membership will include one or more experts from the participating agencies or organizations based on their expertise in the subject area. Membership can be extended to experts outside the participating agencies or organizations by consensus, if their contributions are deemed necessary for the working group. The working group will select a Chairperson from its members by consensus of them for a the team to mutually agree. The Chairperson will be responsible for representing the working group and reporting to the NEAR-GOOS Coordinating Committee at its regular sessions.

Country	Name	Affiliation	TF member
China	Dakui WANG	National Marine Environmental Forecasting Center (NMEFC)	Delegation
	Jianyong XING	National Marine Environmental Forecasting Center (NMEFC)	Wind
	Yun LI	National Marine Environmental Forecasting Center (NMEFC)	Circulation(Leader)/ Temperature
	Zhiyi GAO	National Marine Environmental Forecasting Center (NMEFC)	Wave
	Shuangquan WU	National Marine Data and Information Service (NMDIS)	Circulation
Japan	Masakazu HIGAKI	Japan Meteorological Agency (JMA)	Circulation
	Koji YAGI	Japan Meteorological Agency (JMA)	Delegation/ Temperature(Leader)
Korea	Ki-Young HEO	Korea Institute of Ocean & Technology (KIOST)	WG Leader
	Ki-Young HEO	Korea Institute of Ocean & Technology (KIOST)	Wind(Leader)
	Jin-Yong CHOI	Korea Institute of Ocean & Technology (KIOST)	Wave
	Gwang-Ho SEO	Korea Hydrographic and Oceanographic Agency (KHOA)	Circulation
	Jae-Il KWON	Korea Institute of Ocean & Technology (KIOST)	Circulation
Russia	Alexander VRAZHKIN	Far East Regional Hydrometeorological Research Institute(FERHRI)	Wave(Leader)

OFS WG Homepage

NEAR-GOOS Operational Ocean Forecasting System

ABOUT NG OFS | Task forces | Contact US | Activities | Related sites

So far we have four task forces (wind, wave, circulation, temperature) after NEAR-GOOS CC-XVII, Vladivostok, Russia, 15-16 December 2016.

Below is the link page.

Circulation(lead by China, Yun LI) Mr. Masakazu HIGAKI (Japan), Dr. Gwang-Ho SEO (Korea)	Wave (lead by Russia, Alexander VRAZHKIN) Zhiyi GAO (China), Jin-Yong CHOI (Korea)
Wind (lead by R. of Korea, Dr. Ki-Young HEO) Jianyong XING (China)	Temperature (lead by Japan, Koji YAGI) Yun LI (China), Dr. Jae-Il KWON (Korea)

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II. Progress on NG OFS WG

OFS WG Homepage

NEAR-GOOS Operational Ocean Forecasting System

ABOUT NG OFS | Task forces | Contact US | Activities | Related sites

1. NEAR-GOOS Workshop on Development of the NG OFS (Vladivostok, 2016)

2. 1st Technical meeting of NEAR-GOOS Operational ocean Forecasting Systems (NGOFS) Working Group (KIOST Ansan campus, Korea, 2017)

3. 2nd Technical meeting of NEAR-GOOS Operational ocean Forecasting Systems (NGOFS) Working Group (Bangkok, Thailand, 2018)

During the 2nd technical meeting, all participants discussed several important topics facing the OFS WG and agreed as below

1. OFS homepage will be linked to IOC/WESTPAC NEAR-GOOS official site within two months after some improvements including modifications, proofreading, and adding forecasting system configurations.
2. It is necessary that each TF collaborates more actively to improve model performances
: comparison of model validation results from each member state. Later, this can be extended to make model validation standards.
: recruiting more experts in each TF.
3. To enhance the impact of OFS WG, 4 TF teams(systems) have to increase model accuracy through model inter-comparisons, if possible.
4. To add new TF for Sea Ice will be discussed at proper time.
5. Continuous cooperation with SEA-GOOS will be considered necessary. To cooperate with SEA-GOOS continuously will be considered necessary.

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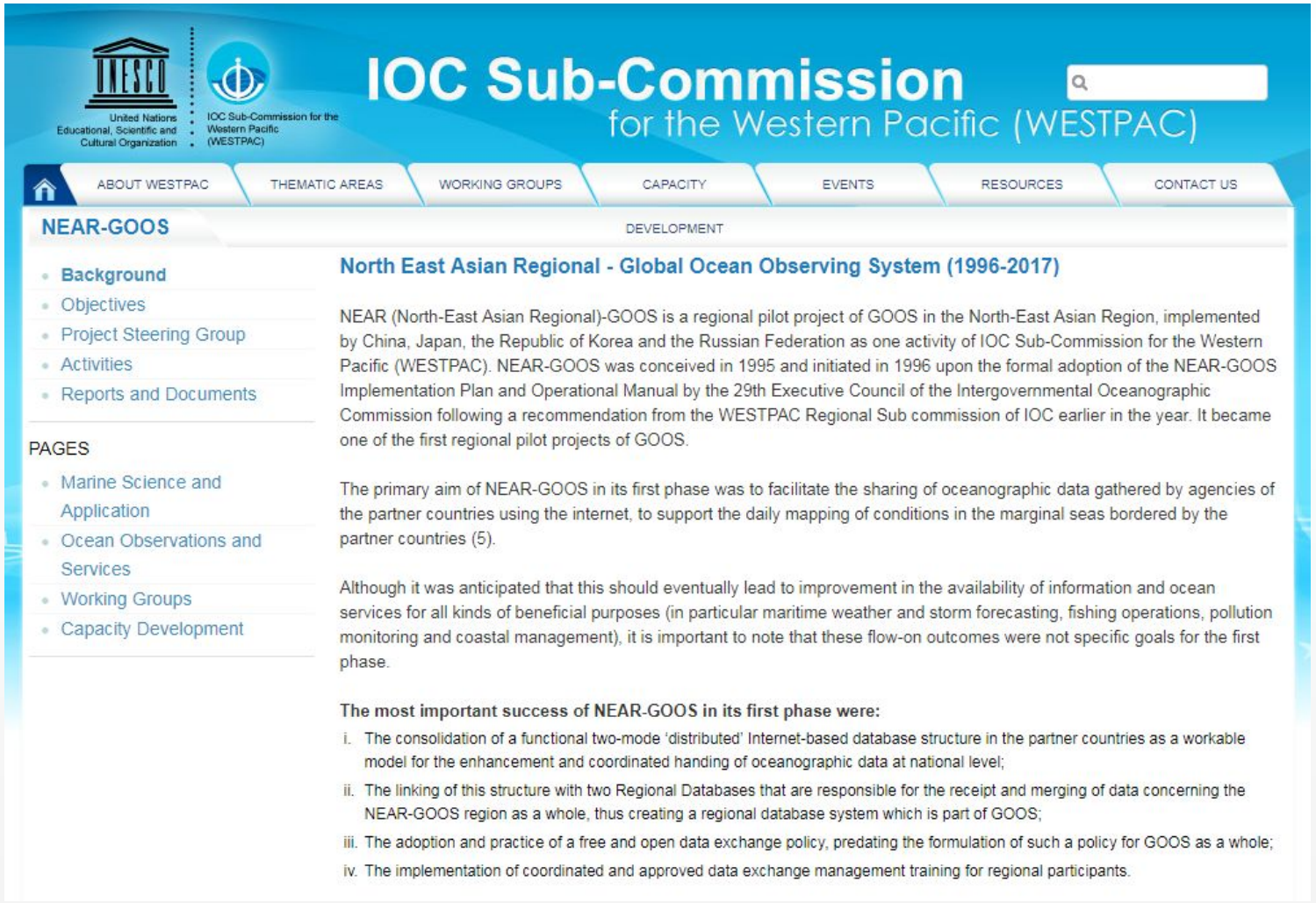
II. Progress on NG OFS WG

OFS WG Homepage Link to NEAR-GOOS Homepage



III. Summary

1. Progress report by the Working Group on Operational ocean Forecasting Systems

- All 4 TFs work (forecasting) very good!
- Lots of updated needed
  1) Let me know if there have been any changes in the Working Group members.
  2) More information about the forecasting models should be added.

2. Future plans

- WG on OFS would like to resume a technical meeting or workshop 1 day before the NG-CC meeting, as usual
  : No technical meeting has been held since the second technical meeting in 2018.
  There have been many improvements in numerical forecasting since then.
- We need to renew the NEAR-GOOS OFS website.
  1) Russia's wave forecasting has not been updated since January 29 of this year.
  2) Korea's NEAR-GOOS OFS website is currently down due to a web server issue.
- **A short announcement:** The **Ocean Predict COSS-TT** will be held **in June in France.**

OceanPredict
Advancing the science of ocean prediction

CONTACT US

ABOUT FOCUS SCIENCE TEAMS UN DECADE EVENTS NEWS DOCUMENTS

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COSS-TT meeting – June 2025

Task Team event | 17 Jun 2025 – 20 Jun 2025, Ifremer, Plouzané, near Brest, France

Overview and meeting objectives

The main goal and central mission of the COSS-TT is international coordination in support of new science and expertise leading to improvements in coastal ocean prediction and forecast systems. COSS-TT works within OceanPredict towards the provision of a sound scientific and expert basis for sustainable multidisciplinary downscaling and forecasting activities in the world's regional and coastal oceans. **The strategic goal of the COSS-TT is to help achieve a truly seamless framework from the global to the coastal/littoral scale.** A major contribution is to address the particular challenges on monitoring and forecasting in coastal areas and regional seas, where the majority of human marine activities take place. As these are also the areas of enhanced exploitation of marine resources, the COSS-TT has a mission well aligned with society's needs and benefits.

International coordination meetings of the OceanPredict Coastal Ocean and Shelf Seas Task Team (COSS-TT) gather a broad community of scientists, engineers and experts around presentations and discussion themes in support of coastal ocean forecasting. The COSS-TT is well-aligned with relevant international initiatives under the UN Ocean Decade, such as the CoastPredict program, the SynObs project, the Decadal Collaborative Center for Ocean Prediction and the Decadal Collaborative Center for Coastal Resilience.

VIEW ALL EVENTS

This event

谢谢

ありがとうございます

Спасибо

감사합니다