

NEAR-GOOS

(North East Asian Regional Global Ocean Observing System)

Oleg SOKOLOV

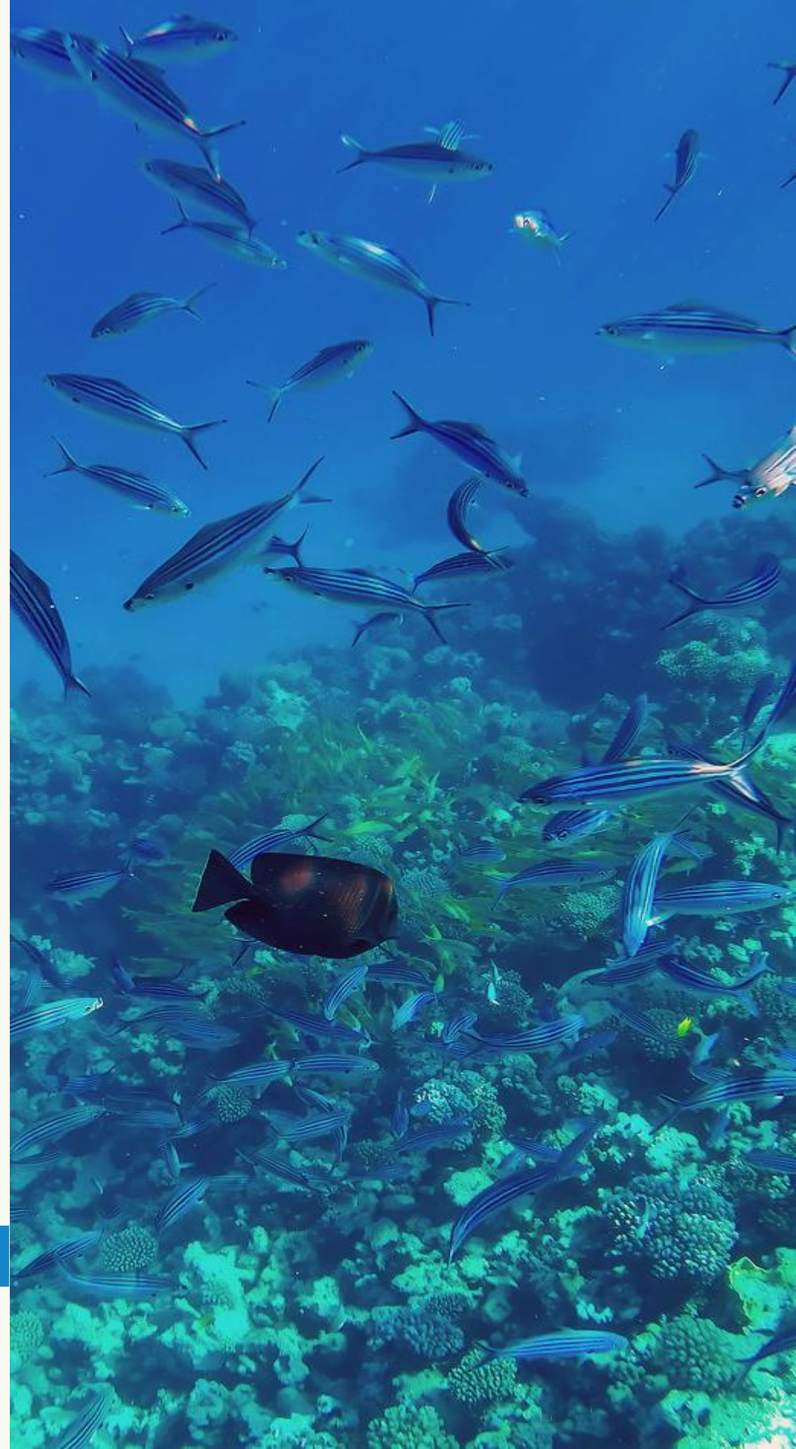
Chair, IOC/WESTPAC Coordinating Committee for NEAR-GOOS

Far Eastern Regional Hydrometeorological Research Institute, Vladivostok, Russia

Sixteenth Intergovernmental Session of the
IOC Sub-Commission for the Western Pacific (WESTPAC-XVI)
Hangzhou, China, 10-12 November 2026

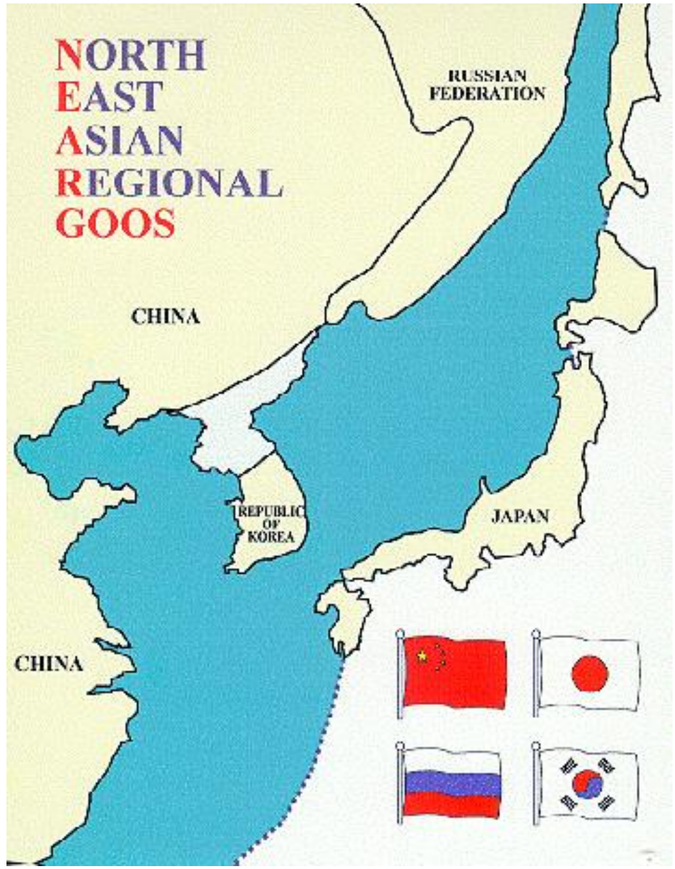
Summary Outline

1. **Justification** and project **duration**
2. Project **objectives**
3. **Major activities and outputs** (accomplished during 2025-2026)
4. **Anticipated activities and outputs** in 2027
5. **Biennial workplan and budget** for 2028-2029, structured around the IOC HLOs
6. **Strategic recommendations** for future development



1. Justification and project duration

- Brief overview of the project's origin, relevance, context, and duration



- NEAR-GOS is a regional pilot project of GOOS for a long-term operation, implemented by China, Japan, the Republic of Korea and Russia as one of IOC/WESTPAC activities.

- It was initiated in 1996 for promotion of free real time oceanographic data exchange in support of daily mapping of sea conditions, benefiting a wide range of marine users.

- In its 2nd Phase NEAR-GOOS moved from a pilot experiment to the operational system that brings products and services meeting the needs of users, providing information on the past, present and future of marine environment, ecosystem and climate .

2. Project objectives

- Clear articulation of project objectives (specific, measurable, attainable, relevant and time-bound)

The first phase objectives:
To facilitate the sharing of oceanographic data gathered by agencies of the partner countries using the internet, to support the daily mapping of conditions in the marginal seas bordered by the partner countries. To develop a comprehensive and sustained ocean observing network in the North-East Asian regional seas and coastal regions, especially focused on observations, monitoring and other activities that cannot be easily implemented by the independently acting countries.

The second phase objectives:
To develop a basic integrated ocean observing and operational forecasting system in the NEAR-GOOS area adhering to the GOOS Principles and build on the data management and exchange mechanisms developed in the first phase through the inclusion of additional parameters, increased coverage in space and time, the generation of a generic suite of data products and adequate quality control and quality assurance procedures.

3. Major Activities and Outputs 2025-2026- 1

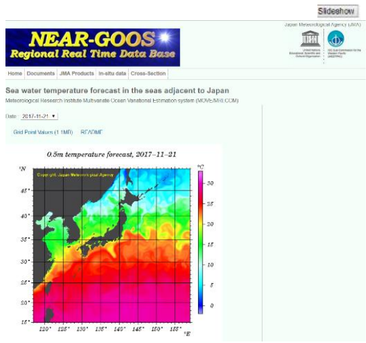
- (Particular those accomplished during 2025-2026)

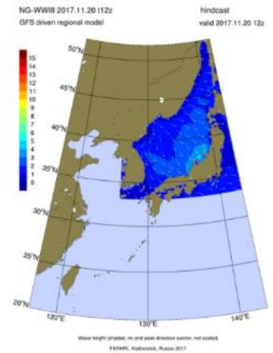
• **Regional and National Data Bases:** Oceanographic data from observation stations, buoys, ships and forecasting products of currents, waves, sea surface temperature, and sea surface height have been provided in real-time and delayed mode through databases from 4 Member States of NEAR-GOOS

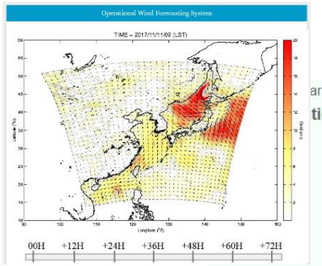
• **Working Groups:** WGs on Data Management, on Products, on Development of Operational Ocean Forecasting have been continuing their activity

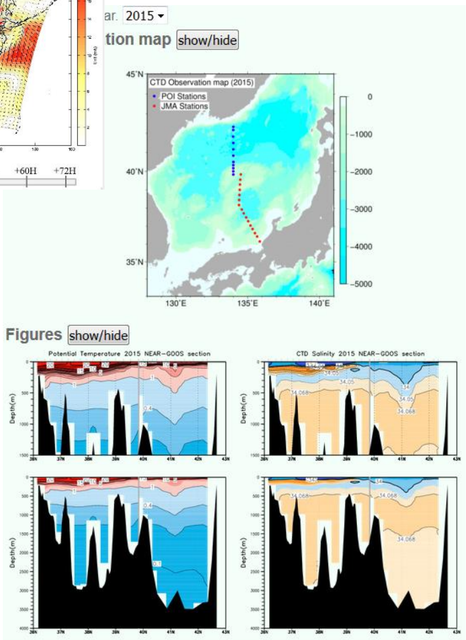
• **Pilot projects:** Climate monitoring section between Japan and Russia has been implementing since 2011 with a break in 2022-2024 and continued in 2025

• **NEAR-GOOS gateway website** was designed to serve as a hub for real-time and forecast data from the four member states and currently is seeking for funding for operational maintenance.









3. Major Activities and Outputs 2025-2026- 2

- (Particular those accomplished during 2025-2026)

• Scientific/Technical Workshop on Oceanographic Data Management was held on July, 7, 2026 in Vladivostok

• Special 30th Anniversary Celebrating Session, July 8, 2026, Vladivostok

• These developments were presented and discusses at the 22nd CC meeting in May 2025 in Tokyo, Japan and the 23rd CC meeting in July 2026 in Vladivostok, Russia

• Oleg SOKOLOV from the Russian Federation was elected as the new chairperson for 2026-2028.



22nd Session of NEAR-GOOS CC, JHOD, Tokyo, Japan, March 10, 2025



23rd Session of NEAR-GOOS CC, Vladivostok, Russia, July 7-9, 2026

4. Anticipated activities and outputs in 2027

- Continue activities of Regional and National data bases, NEAR-GOOS WGs and Pilot Project
- Start of operation of the NEAR-GOOS Portal as integrated gateway of regional and national databases
- UN Decade Incubator on “From Ocean Observations to Climate Actions and Solutions: Charting the Future of GOOS for a Resilient Western Pacific” at the 3rd UN Decade Regional Conference, April 2027, Manila, the Philippines
- A Study Group on develop of the strategy meeting modern challenges for NEAR-GOOS
- Annual Meeting of the NEAR-GOOS Coordinating Committee in 2027 in China (place and dates will be announced)

5. Biennial Workplan for 2028-2029-1

- Detailed outline of planned activities, and deliverables for the next intersessional period

No.	Activity / Output Description	Expected Result / Output	Y1-1st H	Y1-2nd H	Y2-1st H	Y2-2nd H	IOC RP Budget (USD)	XB Required (USD)	Lead Responsibility
HLO 1 — HEALTHY OCEAN AND SUSTAINED OCEAN ECOSYSTEM SERVICES									
Expected Result 1.1 (Sub-obj. 1.1): Regional ocean biodiversity and ecosystem observations and FAIR data strengthened									
1.1.1	**Operation and Maintenance of the NEAR-GOOS Data Bases and the Gateway Portal:** - Operational support for regional data access - Provide operational and archived data and data sets - Launch and maintenance of NEAR-GOOS Gateway Portal	• Strengthened regional provision of marine data and products • Full operationalization of the Gateway Portal • Unified access to regional datasets and metadata (Ocean Decade: UN23)	●	●	●	●	10000	30000	NEAR-GOOS CC

5. Biennial Workplan for 2028-2029-2

- Detailed outline of planned activities, and deliverables for the next intersessional period

No.	Activity / Output Description	Expected Result / Output	Y1-1st H	Y1-2nd H	Y2-1st H	Y2-2nd H	IOC RP Budget (USD)	XB Required (USD)	Lead Responsibility
HLO 2 — EFFECTIVE WARNING SYSTEMS AND PREPAREDNESS FOR TSUNAMIS AND OTHER OCEAN-RELATED HAZARDS									
Expected Result 2.1 (Sub-obj. 2.1+2.3): Regional ocean observations and multi-hazard early warning systems maintained and strengthened									
2.1.1	**Strengthen ocean observations and real-time data provision for marine hazard forecasting and early warning:** - Support WESTPAC MS to engage in and advance ocean observations for monitoring ocean-related hazards through NEAR-GOOS observing system - Facilitate access to data and information products underpinning hazard forecasting, including sea level rise, marine heatwaves, HABs and harmful species - Support regional ocean research aimed at improving forecasting for hydrometeorological hazards	• Exercises conducted • Improved hazard readiness (Ocean Decade: UN22)	●	●	●	●	0	50000	NEAR-GOOS CC

5. Biennial Workplan for 2028-2029-3

- Detailed outline of planned activities, and deliverables for the next intersessional period

No.	Activity / Output Description	Expected Result / Output	Y1-1st H	Y1-2nd H	Y2-1st H	Y2-2nd H	IOC RP Budget (USD)	XB Required (USD)	Lead Responsibility
HLO 3 — RESILIENCE TO CLIMATE CHANGE AND CONTRIBUTION TO ITS MITIGATION									
Expected Result 3.1 (Sub-obj. 3.1+3.2): Regional ocean-climate observations, data and scientific knowledge enhanced									
3.1.1	**Provide regional data and information for ocean-climate research and knowledge products on climate change impacts** • Support regional scientific partnerships on ocean-climate nexus, marine heatwaves, ocean acidification and ocean-based climate solutions • Produce regional ocean-climate assessments and knowledge products on impacts and vulnerabilities • Disseminate scientific knowledge on ocean-based climate mitigation opportunities (blue carbon, renewable energy)	• Support for regional climate modelling • Contribution to IPCC, GCOS, UN46 (Ocean Decade: UN46)	●	●	●	●	10000	30000	NEAR-GOOS CC

5. Biennial Workplan for 2028-2029-4

- Detailed outline of planned activities, and deliverables for the next intersessional period

No.	Activity / Output Description	Expected Result / Output	Y1-1st H	Y1-2nd H	Y2-1st H	Y2-2nd H	IOC RP Budget (USD)	XB Required (USD)	Lead Responsibility
HLO 4 — SCIENTIFICALLY FOUNDED SERVICES FOR THE SUSTAINABLE OCEAN ECONOMY									
Expected Result 4.1 (Sub-obj. 4.1+4.2): Scientific evidence base and knowledge dissemination for the sustainable ocean economy enhanced									
4.1.1	**Provide oceanographic data and information products to scientific based social and economic marine related activity:** - Data and products for pollution monitoring - Information for development of Marine Spatial Planning (MSP) - Oceanographic products and consulting for other social and economic activity.	• Transboundary MSP processes supported • Regional pollution monitoring harmonized; • SDG 14 indicators reported; pollution data informing economic sector governance • Strengthened regional cooperation (Ocean Decade: UN39)	●	●	●	●	10000	20000	NEAR-GOOS CC

5. Biennial Workplan for 2028-2029-5

- Detailed outline of planned activities, and deliverables for the next intersessional period

No.	Activity / Output Description	Expected Result / Output	Y1-1st H	Y1-2nd H	Y2-1st H	Y2-2nd H	IOC RP Budget (USD)	XB Required (USD)	Lead Responsibility
HLO 5 — FORESIGHT ON EMERGING OCEAN SCIENCE ISSUES									
Expected Result 5.1 (Sub-obj. 5.1+5.2): Regional foresight capacity on emerging ocean science issues strengthened and communicated									
5.1.1	**AI for ocean data quality control and curation to strengthen marine hazard forecasting:** - Apply AI-assisted "Vibe Coding" to develop lightweight, reproducible tools for automated CTD and ocean-observational data quality control and historical dataset curation, leveraging the latest AI developments - Convene the next NEAR-GOOS Technical Workshop on CTD data quality control - Use the quality-controlled, FAIR-compliant and AI-ready datasets to strengthen marine hazard (e.g., storm surge, wave) forecasting and early warning - Build regional capacity through training and knowledge exchange on AI/ML for ocean data	• AI-assisted data quality-control and curation tools prototyped and shared regionally • Historical datasets curated into FAIR-compliant, AI-ready archives • Improved use of NEAR-GOOS data in marine hazard forecasting and early warning	●	●	●	●		10000	30000	NEAR-GOOS CC

6. Strategic recommendations for future development

• The NEAR-GOOS first-phase objective of facilitating oceanographic data sharing has been implemented through the RTDB and DMDB websites operated by the Member States. However, continued funding is essential for maintaining the operation of an integrated gateway. While significant progress has been made towards establishing a comprehensive and sustained ocean observing network in the North-East Asian region, further improvements are needed.

• The second-phase objective of developing an integrated ocean observing and operational forecasting system remains ongoing. Three working groups and one pilot project have been established within NEAR-GOOS to address this objective, fostering continuous technological cooperation.

• Encourage broader participation of experts through organizing technical/science workshops and public outreaches etc.

• Develop the strategy meeting modern challenges for NEAR-GOOS; a Study Group to be be established in 2027

• Strengthen ongoing collaboration with other WESTPAC projects and other relevant organizations as GOOS/GRA, PICES, NOWPAP etc. through active participation in their activities.