PUBLIC ANNOUNCEMENT

The e-ASIA Joint Research Program (e-ASIA JRP)

Review Results of the 14th Call for Proposals in the Field of Cooperation in Disaster Risk Reduction and Management

As of December 15, 2025, the e-ASIA JRP Secretariat together with the participating Member Organizations are delighted to publicly announce the awarded projects from the e-ASIA Joint Research Program (e-ASIA JRP*[1]) in the 14th Call for Proposals in the field of cooperation in Disaster Risk Reduction and Management with a focus on the call topic of Use of Emerging Technologies in Disaster Risk Reduction and Management.

This call received a total of 72 proposals, reflecting significant interest and collaboration in this research area. Following a thorough evaluation process, which included joint reviews conducted by seven funding organizations from seven participating countries*[2], the following four collaborative projects have been selected for support. These projects have been approved by the e-ASIA JRP Board and will receive funding for a duration of three years.

Proposal Number: DM1408

Risk Reduction Research of Marine Environmental Disasters Associated with Extreme Anomalous Climate Events in the Eastern Asian Seas

to be jointly conducted by:

China	**Dongliang Yuan** Full Professor, First Institute of Oceanography/MNR

Japan	**Tomoki Tozuka** Associate Professor, The University of Tokyo
Indonesia	**Augy Syahailatua** Research Professor, National Research and Innovation Agency

The East Asia Summit (EAS) countries face extreme anomalous climate events from the Pacific and Indian Oceans, yet their disaster monitoring and risk reduction research remains limited. Led by a Chinese PI, with Japanese and Indonesian PIs contributing, this cooperative research project leverages emerging technologies, including advanced satellite remote sensing, artificial intelligence (AI), and in situ underwater gliders, to monitor and analyze marine environmental disasters, predict marine heatwaves using AI, and develop contingency plans for risk reduction.

Proposal Number: DM1412

AI-Science of Deformation Anomaly Detection for Forecasts and Early Warnings of Volcanic Eruptions and Earthquakes

to be conducted jointly by:

Japan	**Yo Fukushima** Associate Professor, Tohoku University
Philippines	**John Dale Dianala** Assistant Professor, University of the Philippines
Indonesia	**Herlan Darmawan** Assistant Professor, Universitas Gadjah Mada

This collaborative research aims to develop AI-based methods that automatically detect and interpret subtle anomaly signals in crustal deformation data, which can serve as the core of the next-generation forecast and early warning systems for volcanoes and earthquakes in the Philippines, Indonesia, and Japan. The methods will be tested on archived data for validation, and the detected signals will also be investigated in relation with eruption/earthquake trigger mechanisms. Additionally, the project aims to develop a long-standing partnership for talent development and collaborative research.

Proposal Number: DM1414

Developing Rapid Detection Technologies to Mitigate Risks Associated with the Occurrence and Toxicity of Domoic Acid-Producing Diatoms

to be conducted jointly by:

China	**Nansheng Chen** Dr./Senior Investigator, Institute of Oceanology, The Chinese Academy of Sciences
Malaysia	**Chui Pin Leaw** Associate Professor, Universiti Malaya
Singapore	**Sandric Chee Yew Leong** Senior Research Fellow, National University of Singapore

This collaborative project - DART aims to address the increasing threats of seafood safety by integrating molecular detection toolkits, automated-imaging devices, and artificial intelligence for real-time monitoring of the neurotoxin-domoic acid (DA)-producing diatoms. Through comparative genomics, we unravel the origin and evolution of DA-biosynthesis genes, identify molecular markers for precise and quantitative detection. These advancements will enhance early warning systems, improve risk assessment, and support timely response strategies, ultimately mitigating the impacts of harmful algal bloom and ensuring food security in the region.

Proposal Number: DM1463

Regional Infrastructure Seismic Resilience Enhancement through a Spatial-Temporal Data-Driven Approach

to be conducted jointly by:

Japan	**Mayuko Nishio** Associate Professor, University of Tsukuba
China	**Hua-Ping Wan** ZJU100 Young Professor, Zhejiang University
Indonesia	**Made Suarjana** Professor, Institut Teknologi Bandung

Singapore	**Yuguang Fu** Assistant Professor, Nanyang Technological University

This cooperative research project aims at establishing a framework to integrate multi-scale spatiotemporal data from multiple modalities to enhance the earthquake resilience of infrastructure networks, including critical bridges, buildings, and strategically significant roads. The proposed framework focuses on the efficient allocation and integration of various resources, such as digital twins, satellite and aerial image surveys, and artificial intelligence, across both pre- and post-earthquake phases to optimize regional seismic preparedness and recovery.

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*1 **The e-ASIA Joint Research Program (e-ASIA JRP):**
Through the acceleration of science and technology research exchange and collaboration in the East Asian region, the e-ASIA Joint Research Program (e-ASIA JRP) aims to strengthen research and development capabilities towards resolution of shared challenges across the region, including those associated with materials, alternative energy, agriculture, health research, disaster risk reduction and management, advanced interdisciplinary research towards innovation, and environment. As part of that objective, the e-ASIA JRP intends to support the multilateral collaborative research projects, which must consist of three or more countries.

e-ASIA JRP's Homepage: http://www.the-easia.org/jrp/

*2 **The List of 7 Participating Organizations**
In the 14th Joint Call for Proposals in the Field of Cooperation in Disaster Risk Reduction and Management:

1) China: National Natural Science Foundation of China (NSFC) https://www.nsfc.gov.cn/
2) Indonesia: National Research and Innovation Agency (BRIN) https://brin.go.id/
3) Japan: Japan Science and Technology (JST) https://www.jst.go.jp/
4) Philippines: Department of Science and Technology, Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-

PCIEERD)
https://pcieerd.dost.gov.ph/

5) Malaysia: Academy of Sciences Malaysia (ASM)
https://www.akademisains.gov.my/
6) Singapore: Agency for Science, Technology and Research (A*STAR)
https://www.a-star.edu.sg/
7) Vietnam: Ministry of Science and Technology (MOST)
http://www.most.gov.vn

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