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e-ASIA JRP

The e-ASIA Joint Research Program

14th ANNUAL ACTIVITY REPORT

Summary of the 14th annual activities from September 2025 to August 2026

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Basic Information

This yearly report summarizes the activities of the e-ASIA Joint Research Program during the period from the 14th Annual Board Meeting on September 11, 2025 to August 31, 2026.

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1. Program
Administration

1. Program Administration

1.1 The 14th Annual Board Meeting

1.1.1 The 14th Annual Board Meeting was held in a hybrid format during September 10–11, 2025, both virtually via the Zoom platform and onsite at National Institute of Science, Technology and Innovation (NISTI) in Phnom Penh, Cambodia. The meeting was moderated by Ms. Reiko Yuguchi, Secretary General, and Mr. Hideyuki Asano, e-ASIA Special Program Coordinator, in collaboration with Dr. Socheat Keo, Director General of the NISTI, Cambodia. Board Members and representatives of the e-ASIA Joint Research Program participated, including delegates from 17 out of 27 Member Organizations across 12 of the 15 member countries.

1.1.2 During the meeting, the Board reviewed and discussed various improvements in program management and operations. Key topics included enhancing international collaboration in the application process, results of the impact assessment survey, and refinement of the eligibility criteria and requirements for calls for applications.

1.1.3 The Secretariat presented the proposed schedule for the 15th Call for Proposals, which was subsequently approved by the Board during the Voting Session held on September 11, 2025.

Events	**Date**
Board's Decision on Next Call Topics	September 11, 2025
Submission of Letter of Intent from MOs	November 24, 2025
Launch Call for Proposals	December 17, 2025
Closing of Call for Proposals	March 31, 2026
Eligibility Check and National Review by MOs	April 1 – August 17, 2026
Joint Review Meeting and Board Meeting	9–10 September 2026
Official Announcement to Applicants	December 1, 2026
Start Funding	January 2027*

**Depending on each MO's policy*

1.1.4 Reports were presented from three candidate Fields of Cooperation, namely Health, Alternative Energy, and Agriculture. Two of the three FoC reflected the discussion during the Call Development Workshop sessions held on September 9, 2025—one day prior to the Annual Board Meeting Following the presentations, the Board approved the proposal for Member Organizations to further explore these potential call topics, with NHMRC, PMU-B, and BRIN serving as the Main Member Organization (MMO) for each respective area.

1.2 The 43rd Ad Hoc Board Meeting

1.2.1 The 43rd Ad Hoc Board Meeting was conducted via email on October 1, 2025.

1.2.2 As of October 13, 2025, the following matters were approved during the 43rd Ad Hoc Board Meeting:

1.2.2.1 **Draft Minutes of the 14th Annual Board Meeting:** The minutes have been approved with minor revision suggested by DOST, Philippines. Considering the minor revision outlined.

1.2.2.2 **On-hold Candidate Proposals for the 14th Call for Proposals:** Proposals HE14106, AE1413, and HE1472 were approved for selection without any objections raised.

2. Membership
& Participation

2. Membership and Participation

2.1 Current Member Organizations

2.1.1 The list of the current 27 Member Organizations from 15 countries, along with their Board Members and representatives, is presented in alphabetical order by country as of August 2026, as follows:

No	Country	Organization	Board Member
1	 Australia	National Health and Medical Research Council (NHMRC)	**Mr. Christopher Scott Jennaway** *Executive Director* *(Interim Board Member)*
2	 Cambodia	Ministry of Industry, Science Technology and Innovation (MISTI)	**Dr. Socheat Keo** *Director General*
3	 Cambodia	Ministry of Health (MOH)	**Dr. Kheng Sim** *Deputy-Director*
4	 China	National Science Foundation of China (NSFC)	**Dr. Yingjie Fan** *Director-General*
5	 Indonesia	Ministry of Higher Education, Science, and Technology (KEMDIKTISAINTEK)	**Professor M. Faiz Syuaib** *Director of Research, Technology, and Community Services*
6	 Indonesia	National Research and Innovation Agency (BRIN)	**Professor Agus Haryono** *Deputy Chairman for Facilitation of Research and Innovation*
7	 Japan	Ministry of Education, Culture, Sports, Science and Technology (MEXT)	**Mr. Shinsuke Okada** *Director for International Cooperation (Representative)*
8	 Japan	Japan Science and Technology Agency (JST) (as the agent of MEXT)	**Dr. Kazuhito Hashimoto** *President*
9	 Japan	Japan Agency of Medical Research and Development (AMED)	**Mr. Yukihiro Hisanaga** *Director, Department of International Strategy*
10	 Lao PDR	Ministry of Health (MOH)	**Dr. Rattanaxay Phetsouvanh** *Director General of the Department of Communicable Diseases Control*
11	 Lao PDR	Ministry of Education and Sports (MOES)	**Mr. Southiphong Vongxaiya** *Director of Research and Development Management Division*
12	 Malaysia	Ministry of Science, Technology Innovation (MOSTI)	**Dr. Balamurugan A/L Nallamuthu** *Undersecretary of International Division*

No	Country	Organization	Board Member
13	 Malaysia	Academy of Sciences Malaysia (ASM) (as the agent of MOSTI)	**Ms. Kausaalya Nagaraja** *Analyst, Malaysia Science Endowment (MSE) (Representative)*
14	 Myanmar	Ministry of Science and Technology (MOST)	**Dr. Phyu Phyu Win** *Director General*
15	 New Zealand	Health Research Council (HRC)	**Professor Hannah Buckley** *Chief Executive*
16	 New Zealand	Ministry of Business, Innovation and Employment (MBIE)	**Mr. Hugo Bussell** *Manager, International Science Partnerships*
17	 Philippines	Department of Science and Technology (DOST) joined by the following DOST Councils *1) Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD)* *2) Philippine Council for Health Research and Development (PCHRD)* *3) Philippine Council for Industry, Energy, and Emerging Technology Research and Development (PCIEERD)*	**Dr. Leah J. Buendia** *Undersecretary for Research and Development*
18	 Russian Federation	Russian Centre for Science Information (RCSI) (former Russian Foundation for Basic Research)	**Mr. Alexander Usoltsev** *Head of International Relations*
19	 Russian Federation	Russian Science Foundation (RSF)	**Mr. Andrey Blinov** *Deputy Director General*
20	 Singapore	Agency for Science, Technology and Research (A*STAR)	**Professor Andy Hor** *Deputy Chief Executive (Research)*
21	 Thailand	Agency for Agriculture Research Development Agency (ARDA)	**Ms. Kunvara Chotiphansophon** *Deputy Director*
22	 Thailand	Program Management Unit for Frontier Brainpower and Future Industries (PMU-B)	**Professor Nirawat Thammajak** *Director*
23	 Thailand	Thailand National Science and Technology Development Agency (NSTDA)	**Dr. Uracha Ruktanonchai** *Executive Vice President*
24	 Thailand	National Research Council of Thailand (NRCT)	**Dr. Wiparat De-ong** *Executive Director*

No	Country	Organization	Board Member
25	Thailand	Thailand Science Research and Innovation (TSRI)	**Professor Vissanu Meeyu** *Vice President*
26	United States of America	National Institute of Allergy and Infectious Diseases (NIAID)	**Ms. Joyelle Kalei Dominique** *Director, Office of Global Research*
27	Viet Nam	Ministry of Science and Technology (MST)	**Ms. Le Thi Viet Lam** *Deputy Director General*

2.2 Guest Partner Organization

2.2.1 The National Science Foundation (NSF) of Sri Lanka has been a Guest Partner organization in the Program since October 2017.

2.3 Proposal for a New Member Organization

2.3.1 In August 2026, the Ministry of Science and Technology (MST) of Viet Nam proposed the participation of the National Foundation for Science and Technology Development (NAFOSTED), Viet Nam, in the e-ASIA JRP as an independent Member Organization. MST confirmed its proposal to the Secretariat on August 25, 2026, and NAFOSTED subsequently submitted its duly signed Letter of Intent (LoI) on August 31, 2026.

2.3.2 In accordance with the LoI, NAFOSTED designated the following representatives:

- Assoc. Prof. Dr. Dao Ngoc Chien, Executive Director, NAFOSTED — designated Board Member
- Dr. Nguyen Ngoc An, Deputy Head, NAFOSTED — designated Staff

2.3.3 The admission of NAFOSTED as a new Member Organization will be submitted to the e-ASIA JRP Board for consideration at its upcoming meeting.

3. Joint Calls for **Proposals**

3. Joint Calls for Proposals

3.1 The 14th Joint Calls for Proposals

Field of Cooperation in Disaster Risk Reduction and Management

3.1.1 The 14th Joint Call for Proposals in the field of Disaster Risk Reduction and Management was open from December 16, 2024, to March 31, 2025. Out of 72 proposals submitted, the Board approved the following four projects for support.

- **Project 1:** "Risk Reduction Research of Marine Environmental Disasters Associated with Extreme Anomalous Climate Events in the Eastern Asian Seas"

  Countries: *China, Japan, and Indonesia*

- **Project 2:** "AI-Science of Deformation Anomaly Detection for Forecasts and Early Warnings of Volcanic Eruptions and Earthquakes"

  Countries: *Japan, Philippines, and Indonesia*

- **Project 3:** "Developing Rapid Detection Technologies to Mitigate Risks Associated with the Occurrence and Toxicity of Domoic Acid-Producing Diatoms"

  Countries: *China, Malaysia, and Singapore*

- **Project 4:** "Regional Infrastructure Seismic Resilience Enhancement through a Spatial-Temporal Data-Driven Approach"

  Countries: *Japan, China, Indonesia, and Singapore*

Project 1: "*Risk Reduction Research of Marine Environmental Disasters Associated with Extreme Anomalous Climate Events in the Eastern Asian Seas"*

Project Investigator & Affiliation:

Country	**Project Investigators**
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

Funding Modality:

Country	**Funding Agency**	**Funding Modality**
China	National Natural Science Foundation of China (NSFC)	New Fund
Japan	Japan Science and Technology Agency (JST)	New Fund
Indonesia	National Research and Innovation Agency (BRIN)	New Fund

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.

Project 2: "*AI-Science of Deformation Anomaly Detection for Forecasts and Early Warnings of Volcanic Eruptions and Earthquakes*"

Project Investigator & Affiliation:

Country	Project Investigators
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

Funding Modality:

Country	Funding Agency	Funding Modality
Japan	Japan Science and Technology Agency (JST)	New Fund
Philippines	Department of Science and Technology, Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD)	New Fund
Indonesia	National Research and Innovation Agency (BRIN)	New Fund

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 to eruption/earthquake trigger mechanisms. Additionally, the project aims to develop a long-standing partnership for talent development and collaborative research.

Project 3: *"Developing Rapid Detection Technologies to Mitigate Risks Associated with the Occurrence and Toxicity of Domoic Acid-Producing Diatoms"*

Project Investigator & Affiliation:

Country	Project Investigators
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

Funding Modality:

Country	Funding Agency	Funding Modality
China	National Natural Science Foundation of China (NSFC)	New Fund
Malaysia	Ministry of Science, Technology and Innovation (MOSTI), and Academy of Sciences Malaysia (ASM)	New Fund
Singapore	Agency for Science, Technology and Research (A*STAR)	In-Kind

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.

Project 4: *" Regional Infrastructure Seismic Resilience Enhancement through a Spatial-Temporal Data-Driven Approach"*

Project Investigator & Affiliation:

Country	Project Investigators
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

Funding Modality:

Country	Funding Agency	Funding Modality
Japan	Japan Science and Technology Agency (JST)	New Fund
China	National Natural Science Foundation of China (NSFC)	New Fund
Indonesia	National Research and Innovation Agency (BRIN)	New Fund
Singapore	Agency for Science, Technology and Research (A*STAR)	In-Kind

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.

Field of Cooperation in Alternative Energy

3.1.2 The 14th Joint Call for Proposals in the field of Alternative Energy was open from December 16, 2024, to March 31, 2025. Out of 61 proposals submitted, the Board approved the following five projects for support.

- **Project 1:** "Analysis of Multi-Scale Ion Transport Behaviors and Synergistic Regulation Strategies for Quasi-Solid-State Lithium-Ion Batteries"
  Countries: *China, Singapore, and Indonesia*

- **Project 2:** "A Novel Integrated Biomass Gasification and Electrochemical Process to Produce High-Purity, Carbon-Negative and Cost-Effective Hydrogen"
  Countries: *Thailand, China, Japan, and Singapore*

- **Project 3:** "Catalyst and Process Design for Green Selective Oxidation of Renewable Methane to Methanol"
  Countries: *China, Japan, and Indonesia*

- **Project 4:** "Novel Clathrate-based Hydrogen Storage Towards a Sustainable Hydrogen Economy: Mechanisms and Process Integration"
  Countries: *China, Thailand, and Singapore*

- **Project 5:** "Empowering Next-Generation Batteries: A Data-Driven Approach to High-Performance Composite Solid Electrolyte Design"
  Countries: *Japan, China, Singapore, and Indonesia*

Project 1: *"Analysis of Multi-Scale Ion Transport Behaviors and Synergistic Regulation Strategies for Quasi-Solid-State Lithium-Ion Batteries"*

Project Investigator & Affiliation:

Country	Project Investigators
China	**Peng Tan** Professor, University of Science and Technology of China
Singapore	**Derrick Wen Hui Fam** Assistant Professor, Nanyang Technological University
Indonesia	**Anne Zulfia Syahrial** Professor, University of Indonesia

Funding Modality:

Country	Funding Agency	Funding Modality
China	National Natural Foundation of China (NSFC)	New Fund
Singapore	Agency for Science, Technology and Research (A*STAR)	In-Kind
Indonesia	National Research and Innovation Agency (BRIN)	New Fund

This project focuses on the ion transport and regulation mechanisms in next-generation quasi-solid-state lithium-ion batteries, aiming to enhance both safety and performance. Guided by the chain of "material design – mechanistic analysis – strategy optimization – device integration", this research integrates experiments, modeling, and simulations to conduct multi-scale investigations spanning materials, interfaces, and full-cell architectures. The anticipated outcomes include high-impact publications, invention patents, and comprehensive technical reports, which will advance joint technological breakthroughs and industrial ecosystem development of cutting-edge electrochemical energy storage technologies.

Project 2: "*A Novel Integrated Biomass Gasification and Electrochemical Process to Produce High-Purity, Carbon-Negative and Cost-Effective Hydrogen*"

Project Investigator & Affiliation:

Country	Project Investigators
Thailand	**Chularat Wattanakit** Associate Professor, Vidyasirimedhi Institute of Science and Technology
China	**Huanhao Chen** Professor, Nanjing Tech University
Japan	**Shinya Furukawa** Professor, The University of Osaka
Singapore	**Haobo Li** Assistant Professor, Nanyang Technological University

Funding Modality:

Country	Funding Agency	Funding Modality
Thailand	National Research Council of Thailand (NRCT)	New Fund
China	National Natural Foundation of China (NSFC)	New Fund
Japan	Japan Science and Technology Agency (JST)	New Fund
Singapore	Agency for Science, Technology and Research (A*STAR)	In-Kind

The cooperative innovation (BioGecH2) aims to develop a hybrid thermochemical-electrochemical system for carbon-negative biohydrogen production. The novel system integrates catalytic biomass gasification/reforming (CGR using CO2 as the oxidant) and electrochemical water-gas shift (EWGS) systems, both are underpinned by novel high-entropy alloys (HEAs). The novel technology removes longstanding technical barriers in thermochemical biomass valorization, such as poor catalyst stability and cost-effectiveness, delivering enhanced operational efficiency and >99.99% pure H2 with negative carbon emissions.

Project 3: *"Catalyst and Process Design for Green Selective Oxidation of Renewable Methane to Methanol"*

Project Investigator & Affiliation:

Country	Project Investigators
China	**Wenting Wu** Professor, China University of Petroleum
Japan	**Kei Ohkubo** Professor, The University of Osaka
Indonesia	**Renanto Handogo** Professor, Institut Teknologi Sepuluh Nopember

Funding Modality

Country	Funding Agency	Funding Modality
China	National Natural Foundation of China (NSFC)	New Fund
Japan	Japan Science and Technology Agency (JST)	New Fund
Indonesia	National Research and Innovation Agency (BRIN)	New Fund

This cooperative research project aims to selectively oxidize renewable methane (gas) into green methanol (liquid) via photocatalysis under mild conditions, providing a clean and practical technology for low-quality and dispersed methane utilization. We integrate high-performance catalysts, the mechanisms study of C-H activation and product desorption, the tail gas treatment process, and optimization of process to improve conversion efficiency and selectivity in gas-solid phase methane conversion. This approach offers a decentralized and distributed solution for renewable methane utilization.

Project 4: *"Novel Clathrate-based Hydrogen Storage Towards a Sustainable Hydrogen Economy: Mechanisms and Process Integration"*

Project Investigator & Affiliation:

Country	Project Investigators
China	**Zhenyuan Yin** Associate Professor, Tsinghua Shenzhen International Graduate School
Thailand	**Pramoch Rangsunvigit** Professor, Chulalongkorn University
Singapore	**Praveen Linga** Professor, National University of Singapore

Funding Modality

Country	Funding Agency	Funding Modality
China	National Natural Foundation of China (NSFC)	New Fund
Thailand	National Research Council of Thailand (NRCT)	New Fund
Singapore	Agency for Science, Technology and Research (A*STAR)	In-Kind

This cooperative research project aims to revolutionize the hydrogen ecosystem by proposing an innovative application of clathrate hydrates for effective hydrogen storage. By integrating multi-scale experimental mechanistic studies, numerical modelling, process simulations, and techno-economic analysis, the project seeks to develop efficient and sustainable hydrogen storage solutions tailored to the multiple hydrogen production scenarios, i.e., offshore wind to H2 for China and biomass to H2 for Southeast Asia nations. This project advances sustainable, cost-effective strategies for hydrogen storage and transportation, strengthening a resilient and integrated hydrogen economy from production to end-use.

Project 5: *"Empowering Next-Generation Batteries: A Data-Driven Approach to High-Performance Composite Solid Electrolyte Design"*

Project Investigator & Affiliation:

Country	Project Investigators
Japan	**Hiroshi Kakinuma** Assistant Professor, Tohoku University
China	**Jie Zhao** Associate Professor, Fudan University
Singapore	**Pengfei Ou** Assistant Professor, National University of Singapore
Indonesia	**Sudaryanto** Senior Researcher, National Research and Innovation Agency

Funding Modality

Country	Funding Agency	Funding Modality
Japan	Japan Science and Technology Agency (JST)	New Fund
China	National Natural Foundation of China (NSFC)	New Fund
Singapore	Agency for Science, Technology and Research (A*STAR)	In-Kind
Indonesia	National Research and Innovation Agency (BRIN)	New Fund

This research project unites leading scientists from Japan, China, Singapore, and Indonesia to develop next-generation batteries by integrating data mining, simulations, experimental validation, and iterative refinement with the Dynamic Database of Solid-State Electrolytes (DDSE)—the largest SE database to date—we aim to achieve room-temperature ionic conductivity of 5 mS/cm and electrochemical window of 4.8 V vs. Li/Li+. This initiative accelerates (SSE) innovation Asia's carbon neutrality goals and sustainable energy storage advancements.

Field of Cooperation in Health Research

3.1.3 The 14th Joint Call for Proposals in the field of Health Research was open from December 16, 2024, to March 31, 2025. Out of 127 proposals submitted, the Board approved the following seven projects for support:

- **Project 1:** "Precision Response to Unexplained Infections by Metagenomic Enrichment and Detection"
  Countries: *Japan, Indonesia, and USA*

- **Project 2:** "The Importance of Targeting Plasmodium Vivax for Elimination of Malaria in the Philippines in the Context of an Ongoing Resurgence and a Diverse Ecological Setting"
  Countries: *Australia, Philippines, and USA*

- **Project 3:** "Broad-Spectrum Antiviral Effects and Immune Regulation Mechanisms of Cold Atmospheric Plasma Based on Immunotheranostics"
  Countries: *China, Singapore, and Australia*

- **Project 4:** "Development of an Integrative Multiplexed Barcoded Antigen and Single-Cell Multi-Omics Profiling Platform to Investigate Antigen-Specific Systemic Immune Responses to Dengue Virus Infection and Vaccination"
  Countries: *Thailand, Japan, and Australia*

- **Project 5:** "Nanoparticle-Enhanced Rapid Tuberculosis Diagnostics and Drug Resistance Identification"
  Countries: *Australia, Malaysia, and Indonesia*

- **Project 6:** "Integrating One Health Framework and Control Strategies to Mitigate Antimicrobial Resistance Risk Escalated by Climate Change"
  Countries: *Australian, Indonesia, USA, and Singapore*

- **Project 7:** "Advancing Broad-Spectrum Antivirals, Diagnostics and Viral Pathophysiology for Encephalitic Flaviviruses"
  Countries: *Australia, Singapore, Thailand, Indonesia, and Malaysia*

Project 1: *"Precision Response to Unexplained Infections by Metagenomic Enrichment and Detection"*

Project Investigator & Affiliation:

Country	Project Investigators
Japan	**Yu Nakagama** Associate Professor, University Public Corporation Osaka
Indonesia	**Muhammad Miftahussurur** Professor/Vice Rector, Universitas Airlangga
USA	**Melissa Nolan** Associate Professor, University of South Carolina

Funding Modality:

Country	Funding Agency	Funding Modality
Japan	Japan Agency for Medical Research and Development (AMED)	New Fund
Indonesia	National Research and Innovation Agency (BRIN)	New Fund
USA	National Institute of Allergy and Infectious Diseases (NIAID)	New Fund

The project aims (i) to discover novel/underappreciated pathogens, synergistic viral interplay, and functional virus-host interactions through metagenomic sequencing (mNGS), and (ii) to verify their pathogenic potential through in vitro disease-modeling. The clinical implementation of mNGS will enable detection of bona fide pathogens, including coinfecting helper viruses, thereby not only advancing precision medicine approaches for complex infections, but also reshaping our understanding of the pathogenesis underlying fulminant infections. Our approach is translatable to a next-generational molecular diagnostic, strengthening our pandemic preparedness.

Project 2: "*The Importance of Targeting Plasmodium Vivax for Elimination of Malaria in the Philippines in the Context of an Ongoing Resurgence and a Diverse Ecological Setting*"

Project Investigator & Affiliation:

Country	Project Investigators
Australia	**Rhea Longley** Dr./Laboratory Head, The Walter and Eliza Hall Institute of Medical Research
Philippines	**Maria Lourdes Macalinao** Dr./Senior Research Specialist II, Research Institute for Tropical Medicine – Department of Health
USA	**Gillian Stresman** Associate Professor, Tenured, University of South Florida

Funding Modality:

Country	Funding Agency	Funding Modality
Australia	National Health and Medical Research Council (NHMRC)	New Fund
Philippines	Department of Science and Technology (DOST-PCHRD)	New Fund
USA	National Institute of Allergy and Infectious Diseases (NIAID)	New Fund

This project aims to generate an evidence-based Plasmodium vivax-inclusive strategy to achieve the national goal of malaria elimination by 2030. This will be achieved through use of novel P. vivax serological markers that can detect hidden P. vivax infections, for both surveillance and for use as an intervention. Key outcomes include updated data on the extent and spatiotemporal variation of P. vivax transmission, ecological risk factors, feasibility and usability of novel point-of-care serological tools, and community acceptability of the intervention.

Project 3: *"Broad-Spectrum Antiviral Effects and Immune Regulation Mechanisms of Cold Atmospheric Plasma Based on Immunotheranostics"*

Project Investigator & Affiliation:

Country	Project Investigators
China	**Gang Liu** Professor, Xiamen University
Singapore	**Xiaoyuan Chen** Professor, National University of Singapore
Australia	**Erik Thompson** Professor, Queensland University of Technology

Funding Modality:

Country	Funding Agency	Funding Modality
China	National Natural Science Foundation of China (NSFC)	New Fund
Singapore	Agency for Science, Technology and Research (A*STAR)	In-Kind
Australia	National Health and Medical Research Council (NHMRC)	New Fund

Our collaborative research project proposes pioneer Cold Atmospheric Plasma (CAP) as a broad-spectrum, mutation-independent antiviral therapy against influenza and SARSCoV-2 respiratory viruses. Utilizing the Plasma-Activated Nasal Dispersed Aerosol (PANDA) system for targeted delivery, we will leverage multimodal immune imaging in parallel with cellular and molecular phenotyping to characterize anti-viral CPA therapy and decode the CAP-driven macrophage dynamics, optimize treatment parameters, and enhance plasma-activated media (PAM) stability—advancing a clinically translatable, pandemic ready antiviral strategy.

Project 4: *"Development of an Integrative Multiplexed Barcoded Antigen and Single-Cell Multi-Omics Profiling Platform to Investigate Antigen-Specific Systemic Immune Responses to Dengue Virus Infection and Vaccination"*

Project Investigator & Affiliation:

Country	Project Investigators
Thailand	**Ponpan Matangkasombut Choopong** Associate Professor, Mahidol University
Japan	**Yukinori Okada** Dr., RIKEN
Australia	**Alistair Forrest** Associate Director, Harry Perkins Institute of Medical Research

Funding Modality:

Country	Funding Agency	Funding Modality
Thailand	Program Management Unit for Frontier Brainpower and Future Industries (PMU-B)	New Fund
Japan	Japan Agency for Medical Research and Development (AMED)	New Fund
Australia	National Health and Medical Research Council (NHMRC)	New Fund

This cooperative project aims to model the immune response to dengue virus and vaccine, leveraging a longitudinal Thai cohorts to profile serotype-specific CD8 T and B cells via single-cell multi-omics. Experts from Thailand, Japan, and Australia will integrate transcriptomic, receptor, and regulatory data to uncover key drivers of severe disease and vaccine response. Insights will guide predictive, targeted, and immunologically informed strategies for dengue treatment and vaccine design.

Project 5: "*Nanoparticle-Enhanced Rapid Tuberculosis Diagnostics and Drug Resistance Identification*"

Project Investigator & Affiliation:

Country	Project Investigators
Australia	**Mark Blaskovich** Professor, The University of Queensland
Malaysia	**Chee Wei Ang** Dr., Monash University Malaysia
Indonesia	**Anggia Prasetyoputri** Dr., National Research and Innovation Agency

Funding Modality:

Country	Funding Agency	Funding Modality
Australia	National Health & Medical Research Council (NHMRC)	New Fund
Malaysia	Ministry of Science, Technology and Innovation (MOSTI), and Academy of Sciences Malaysia (ASM)	New Fund
Indonesia	National Research and Innovation Agency (BRIN)	New Fund

The project will develop nanotechnologies to identify and characterize Tuberculosis (TB) from clinical samples, making it quicker to diagnose drug-resistant TB (DR-TB) in Southeast Asian countries. These technologies will capture and sequester TB from clinical samples, then use novel chemical probes to rapidly identify DR-TB, with further verification by DNA sequencing. This combined approach will avoid the current time-consuming culture step required for diagnosis, enabling a quick and convenient turnaround to enable more effective treatment.

Project 6: *"Integrating One Health Framework and Control Strategies to Mitigate Antimicrobial Resistance Risk Escalated by Climate Change"*

Project Investigator & Affiliation:

Country	Project Investigators
Australia	**Jianhua Guo** Professor, The University of Queensland
Indonesia	**Sunarno** Professor, National Research and Innovation Agency
USA	**Angela Harris** Associate Professor, North Carolina State University
Singapore	**Karina, Yew-Hoong Gin** Professor, National University of Singapore

Funding Modality:

Country	Funding Agency	Funding Modality
Australia	National Health and Medical Research Council (NHMRC)	New Fund
Indonesia	National Research and Innovation Agency (BRIN)	New Fund
USA	National Institute of Allergy and Infectious Diseases (NIAID)	New Fund
Singapore	Agency for Science, Technology and Research (A*STAR)	In-Kind

This cooperative project aims to evaluate how extreme weather events due to climate change affect the development and spread of antimicrobial resistance (AMR) across Asia-Pacific countries, including Australia, Indonesia, Japan, the U.S., and Singapore. Employing a One Health framework, we will quantitively investigate the spatial and temporal dynamics of climate change in shaping AMR patterns and identify intervention strategies to mitigate its impact. Outcomes of this project will inform policies and develop practical approaches to minimize the spread of AMR.

Project 7: *"Advancing Broad-Spectrum Antivirals, Diagnostics and Viral Pathophysiology for Encephalitic Flaviviruses"*

Project Investigator & Affiliation

Country	Project Investigators
Australia	**Suresh Mahalingam** Professor, Griffith University
Singapore	**Justin Jang Hann Chu** Associate Professor, National University of Singapore
Thailand	**Siwaporn Boonyasuppayakorn** Associate Professor, Chulalongkorn University
Indonesia	**Triwibowo Ambar Garjito** Dr./Senior Research Fellow, National Research and Innovation Agency
Malaysia	**Sazaly Abu Bakar** Professor, Universiti Malaya

Funding Modality:

Country	Funding Agency	Funding Modality
Australia	National Health and Medical Research Council (NHMRC)	New Fund
Singapore	Agency for Science, Technology and Research (A*STAR)	In-kind
Thailand	Program Management Unit for Frontier Brainpower and Future Industries (PMU-B)	New Fund
Indonesia	National Research and Innovation Agency (BRIN)	New Fund
Malaysia	Ministry of Science, Technology and Innovation (MOSTI), and Academy of Sciences Malaysia (ASM)	New Fund

BSAFE addresses the urgent need for treatments and diagnostics for flavivirus encephalitis, focusing on dengue and Japanese encephalitis—major threats in Asia-Oceania. Collaborating across five countries, we will develop diagnostics, investigate disease mechanisms, and discover antivirals. Molecular tools, antiviral platforms, cell culture, animal models, and Omics-based approaches will provide pathogenesis insights and guide therapeutic development. Outcomes include better diagnostics, new therapeutic targets, reduced disease burden, enhanced outbreak readiness, and strong international partnerships—supporting therapeutic licensing and training early-career researchers to strengthen global flavivirus response.

3.2 The 15th Joint Call for Proposals

3.2.1 The 15th Joint Call for Proposals was open from December 17, 2025 to March 31, 2026, with participation from the following Member Organizations, listed in alphabetical order. The Call covered three Fields of Cooperation and the following topics:

3.2.1.1 **Agriculture:** Post-harvest and Agro-industrial Innovation, Smart and Climate-Resilient Farming

3.2.1.2 **Alternative Energy:** Sustainable and Renewable Fuels (Net-Zero Emission Policy), Sustainable and Renewable Fuels (Sustainable Aviation & Marine Fuels)

3.2.1.3 **Health Research:** Infectious Diseases and Immunology, Advanced Medical Research & Enabling Technologies

3.2.2 As of March 31, 2026, a total of 257 applications had been submitted under the 15th Call for Proposals, comprising 29 applications in Alternative Energy, 120 applications in Agriculture, and 108 applications in Health Research.

3.2 Participating Member Organizations and Their Funding Modalities for the 15th Joint Call for Proposals

Participating Member Organizations	Field of Cooperations / Research Call Topics					
	Alternative Energy		**Agriculture**		**Health Research**	
	Sustainable and Renewable Fuels (Net-Zero Emission Policy)	*Sustainable and Renewable Fuels (Sustainable Aviation & Marine Fuels)*	*Post-harvest and Agro-industrial Innovation*	*Smart and Climate-Resilient Farming*	*Infectious Diseases and Immunology (incl. Antimicrobial Resistance)*	*Advanced Medical Research & Enabling Technologies*
NHMRC (AUS)					New	New
NSFC (CHN)	New	New	New	New	New	New
BRIN (IDN)	New and In-kind	New and In-kind	New and In-kind	New and In-kind	New and In-kind	New and In-kind
JST (JPN)			New	New		
AMED (JPN)					New	
MOSTI – ASM (MYS)			New	New		
DOST-PCAARRD (PHL)				New		
DOST-PCHRD (PHL)						New
DOST-PCIEERD (PHL)	New	New				
A*STAR (SGP)						In-kind
PMU-B (THA)	New	New				
NIAID (USA)					New and In-kind	

3.3 Preparatory Discussion for the 16th Joint Call for Proposals

3.3.1 One month after the launch of the questionnaire survey for the 16th Joint Call for Proposals on May 25, 2026, a total of 12 Member Organizations had submitted their research interests. These submissions collectively covered all seven Fields of Cooperation. However, the survey results indicated potential for cross-field integration, with several proposed topics overlapping across multiple fields. Notably, intersections were observed between Advanced Interdisciplinary Research and both Health Research and Environment, as well as clear linkages between Materials, Disaster Risk Reduction and Management, Alternative Energy, and Environment, and Advanced Interdisciplinary Research, Disaster Risk Reduction and Management, Materials, and Health Research.

3.3.2 Accordingly, the first online discussion meeting was held on July 10, 2026, to review the survey results and consider proposed research topics for the 16th Call. Based on the discussion, four candidate Fields of Cooperation were identified: Advanced Interdisciplinary Research Toward Innovation (AR), Agriculture (AG), Environment (EN), and Health Research (HR). This was followed by the second online meeting, held on July 24, 2026, which focused on finalizing research call topics, identifying lead Member Organizations, and preparing for the next step of Call Development Workshop (CDW).

3.3.3 In the second online meeting, NRCT, Thailand withdrew from the AR Field of Cooperation (FoC), MOSTI-ASM, Malaysia withdrew from the Health Research FoC, and MISTI, Cambodia confirmed its withdrawal from all call topics and subtopics under the Environment FoC. As a result, fewer than three participating countries remained in AR FoC, falling short of the program's minimum establishing requirement. The meeting noted that the designation of Main MOs for the Health Research (HR), Agriculture (AG), and Environment (EN) Fields of Cooperation will be finalized following the confirmation of participation by the supporting Member Organizations.

3.4 Agreed Call Topics and Subtopics for the 16th Call for Proposals

Field of Cooperation	Call Topic	Research Subtopic	Current Supporting MOs
Health Research (HR)	HR01	HR01-A: Emerging Infectious Diseases, Surveillance and Pandemic Preparedness	NIAID, NHMRC, AMED
		HR01-B: Immunology, Host-Pathogen Interactions, Antimicrobial Resistance, Tuberculosis Vaccines, and One Health	NIAID, NHMRC, DOST-PCHRD, AMED, BRIN
Agriculture (AG)	AG01	AG01-A: Climate-Smart Agriculture and Resilient Crop Production	JST, BRIN, MISTI, MOSTI-ASM
		AG01-B: Advanced Crop Improvement and Sustainable Crop Management	JST, BRIN, MISTI, MOSTI-ASM
	AG02	Sustainable Food Value Chains and Post-Harvest Innovation (merged AG02-A and AG02-B)	JST, BRIN, MISTI, MOSTI-ASM
	AG03	AG03-B: Sustainable Aquaculture, Fisheries and Blue Food Innovation	JST, BRIN, MISTI, MOSTI-ASM
	AG04	AG04-B: Digital Agriculture and Data-Driven Sustainable Farming Systems	JST, BRIN, MISTI, MOSTI-ASM
Environment (EN)	EN01	Climate Change Adaptation, Resilience and Environmental Monitoring, and Climate-Resilient Infrastructure and Nature-Based Solutions (with DM inclusion)	JST, PMU-B, DOST-PCAARRD, BRIN
	EN02	Sustainable Water, Air and Environmental Pollution Management *(with Nanotechnology for Environmental Protection and Remediation embedded as a key technological concept)*	JST, DOST-PCIEERD, BRIN, PMU-B
	EN03	Circular Economy, Resource Recovery and Green Technologies (with AE inclusion)	DOST-PCIEERD, BRIN, NRCT

4. Stakeholder Outreach & **Engagement**

4. Stakeholder Outreach and Engagement

4.1 Overview and Implementation of the Webinar

4.1.1 This 15th Call for Proposals Webinar: Comprehensive Guide to Research Priorities, Eligibility Criteria, and Common Application Challenges aimed to provide prospective applicants with clear, practical guidance on the national eligibility requirements for the 15th Call for Proposals and the application process. The session will introduce the e-ASIA JRP framework, outline research priorities across the fields of cooperation, and highlight important points to consider before submission.

Based on experiences from previous calls, the webinar will address common eligibility issues and missteps, clarify key national requirements, and share practical tips to help applicants strengthen their proposals and avoid avoidable disqualification. Participants will gain:

- A clear understanding of eligibility criteria and country-specific differences
- Insight into common issues that have resulted in ineligibility in past calls
- Practical advice to improve proposal compliance and overall quality

4.1.2 The workshop was held on February 12, 2026, via the Zoom platform, and was co-organized by the following Member Organizations:

- National Health and Medical Research Council (NHMRC)
- National Natural Science Foundation of China (NSFC)
- National Research and Innovation Agency (BRIN)
- Japan Science and Technology Agency (JST)
- Japan Agency for Medical Research and Development (AMED)
- Ministry of Science, Technology and Innovation (MOSTI) and Academy of Sciences Malaysia (ASM)
- Department of Science and Technology, Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD)

- Department of Science and Technology, The Philippine Council for Health Research and Development (DOST-PCHRD)
- Program Management Unit for Frontier Brainpower and Future Industries (PMU-B)
- Agency for Science, Technology and Research (A*STAR)
- National Institute of Allergy and Infectious Diseases (NIAID)
- e-ASIA Secretariat

4.1.3 The workshop was divided into three main sessions:

- Introduction to the e-ASIA JRP Framework and Program
- Research Priorities Under the 15th Call for Proposals
- Eligibility Criteria and Common Challenges in Applications

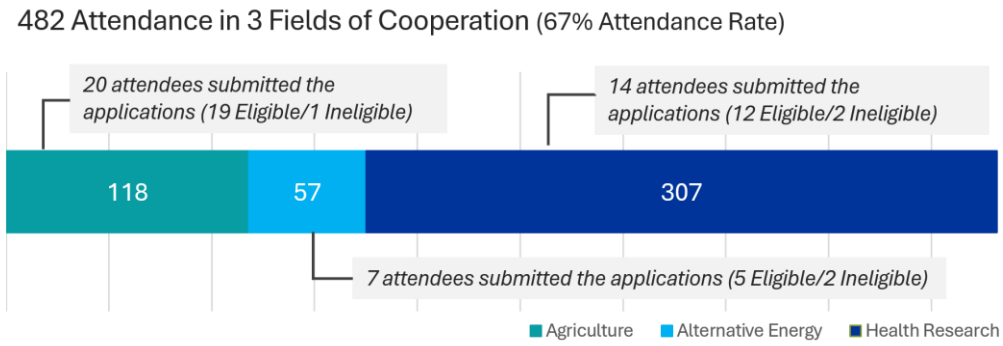
4.1.4 Each research area was introduced by the Main Member Organizations, and the common eligibility requirement was presented by the e-ASIA Secretariat. Unlike previous e-ASIA JRP workshops for the last Call for Proposals, this webinar is fully focused on guidance and clarification, ensuring participants leave with the understanding needed to prepare and submit a compliant, well-prepared proposal.

4.2 Webinar Participation and 15th Call Applications

4.2.1 A total of 718 participants registered for the webinar, including 710 registrants from the 11 participating countries and 8 registrants from 7 non-participating countries. Of the 718 registrants, 482 attended the webinar, representing an overall attendance rate of approximately 67%.

Participation across the three research areas was as follows:

- **Health Research:** 307 participants
- **Agriculture:** 118 participants
- **Alternative Energy:** 57 participants



Health Research recorded the highest participation, followed by Agriculture and Alternative Energy. The registration of participants from both participating and non-participating countries indicates interest in the 15th Call for Proposals and the wider reach of the information sessions.

4.2.2 The webinar participation records were cross-referenced with the application data to identify applicants who had attended the webinar and subsequently applied under the 15th Call for Proposals. Of the 800 applicants, 41 attended the webinar, comprising 20 applicants in Agriculture, 14 in Health Research, and 7 in Alternative Energy. These applicants represented approximately 5.1% of all applicants to the 15th Call. By FoC, webinar-attending applicants represented 5.3% of applicants in Agriculture (20 of 376), 4.2% in Health Research (14 of 337), and 8.0% in Alternative Energy (7 of 87).

4.3 Webinar Participation and Eligibility Outcomes

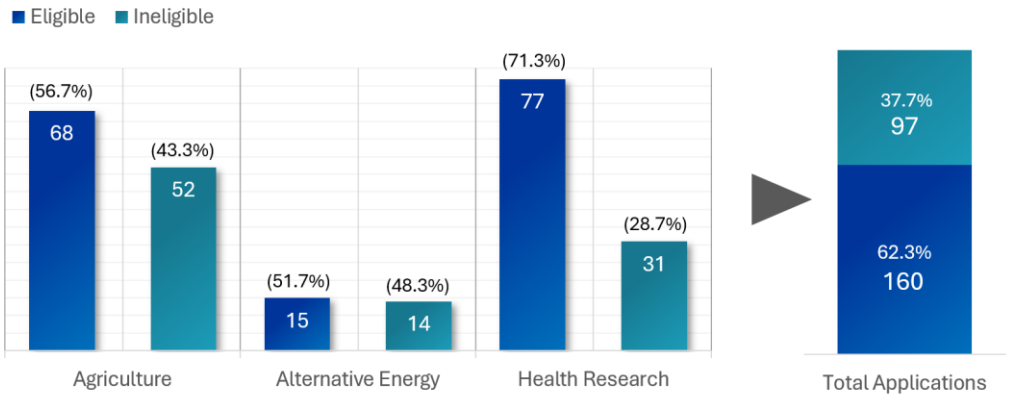
4.3.1 The eligibility outcomes of applicants who attended the webinar and subsequently applied under the 15th Call were examined in relation to the overall eligibility results and those of applicants who did not attend the webinar.

A total of 257 applications involving 800 applicants were received under the 15th Call for Proposals across the three Fields of Cooperation. Of these, 108 applications involved 337 applicants in Health Research, 29 applications involved 87 applicants in Alternative Energy, and 120 applications involved 376 applicants in Agriculture. As each application involves applicants from

at least three different countries, the number of applicants is higher than the number of applications. Eligibility outcomes are assessed at the application level and are therefore presented separately from the number of individual applicants.

4.3.2 Of the 257 applications received, 160 (62.3%) were assessed as eligible and 97 (37.7%) as ineligible. Health Research recorded the highest overall eligibility rate at 71.3%, followed by Agriculture at 56.7% and Alternative Energy at 51.7%.

These figures represent the overall eligibility outcome for the 15th Call for Proposals and include applications involving both applicants who attended the webinar and those who did not.



4.3.3 Among the 41 applicants who had attended the webinar and submitted applications, 36 (88%) were assessed as eligible by the respective Member Organizations. According to FoC, the eligibility rates among webinar-attending applicants were 95% in Agriculture (19 of 20), 86% in Health Research (12 of 14), and 71% in Alternative Energy (5 of 7).

To provide additional context, the eligibility outcomes of webinar-attending applicants were compared descriptively with those of applicants who did not attend the webinar.

- **Agriculture:** 19 of 20 webinar-attending applicants (95%) were eligible,

compared with 275 of 356 non-attending applicants (77%). A notable difference was observed, with a higher eligibility rate among webinar-attending applicants.

- **Health Research:** 12 of 14 webinar-attending applicants (86%) were eligible, compared with 287 of 323 non-attending applicants (89%). The eligibility rates were broadly similar.

- **Alternative Energy:** 5 of 7 webinar-attending applicants (71%) were eligible, compared with 64 of 80 non-attending applicants (80%). The eligibility rate was higher among non-attending applicants.

4.3.4 Overall, the eligibility comparison showed different patterns across the three fields of cooperation. Agriculture had a higher eligibility rate among webinar-attending applicants, while Health Research showed similar rates between the two groups and Alternative Energy had a higher rate among non-attending applicants.

4.3.5 In brief, the webinar provided an opportunity to communicate information on the 15th Call for Proposals to a broad group of participants. Among the 800 applicants to the Call, 41 had attended the webinar, of whom 36 (88%) were assessed as eligible. Given the level of participation and the subsequent applications from webinar attendees, it would be reasonable to continue organizing such information sessions as part of the program's outreach activities.

4.3.6 The findings are descriptive and do not establish a causal relationship between webinar participation and eligibility outcomes. The differences observed between webinar attendees and non-attendees may also reflect other characteristics of the applicants or their applications.

<End of the Report>

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