

The e-ASIA Joint Research Program



e-ASIA JRP

Introduction

The e-ASIA Joint Research Program (e-ASIA JRP) is an international joint initiative by public funding organizations in the East Asia Summit member countries. It was inaugurated in June 2012 by 9 member organizations from 8 countries, and is growing steadily.

The member organizations of e-ASIA JRP each play a key role in promoting multilateral international research cooperation on an equal partnership basis with a central focus on the Southeast Asia region. By drawing on strengths of each country and pursuing synergistic effects through collaboration, e-ASIA JRP aims to contribute to strengthen the science and technology community as well as research capabilities in the region. It also aims to create innovation in order to combat common challenges in the region, such as climate change, natural disasters and infectious diseases.

Another key activity of e-ASIA JRP is the promotion of network building in the region through workshops and dialogues with researchers. It also facilitates information exchange among member organizations.

The 2030 Agenda for Sustainable Development, consisting of 17 Sustainable Development Goals (SDGs) and 169 targets, was adopted by the UN on September 2015. In order to contribute to the achievement of the SDGs, e-ASIA JRP supports scientific research for tackling sustainability challenges that humanity is facing today and for making better policy decisions.



Fields of Cooperation



Materials
(Nanotechnology)



Alternative
Energy



Agriculture
(Food)



Health Research
(Infectious Diseases, Cancer)



Disaster Risk
Reduction and
Management



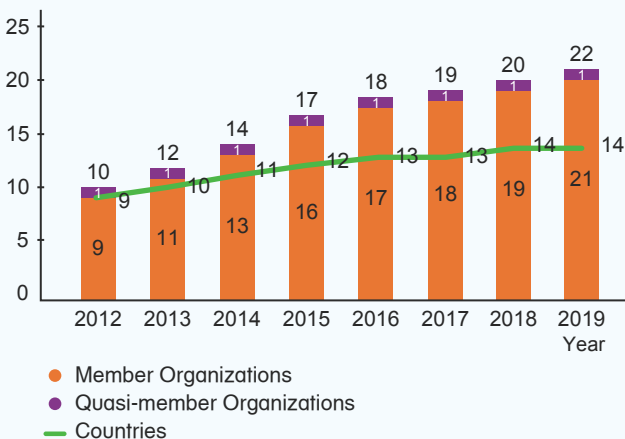
Advanced
Interdisciplinary
Research
towards Innovation



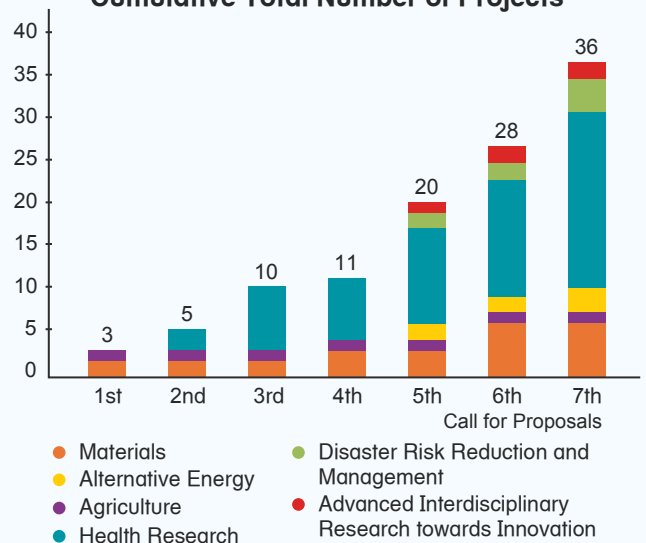
Environment
(Climate Change,
Marine Science)

Stats

Organizations / Countries

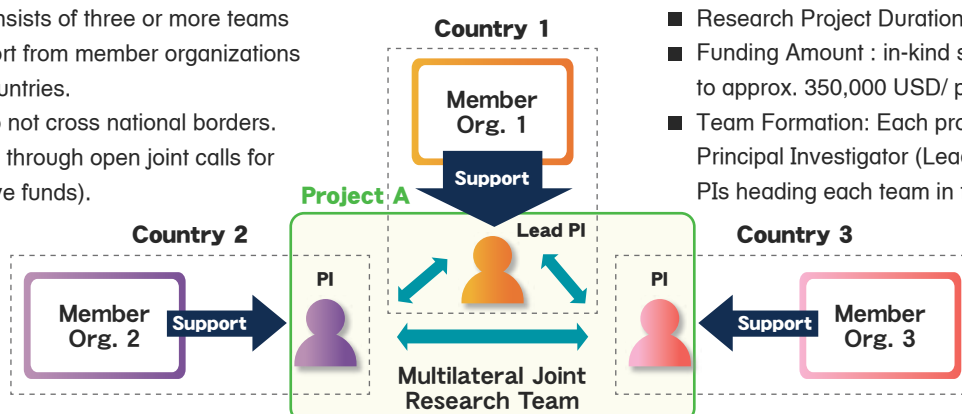


Cumulative Total Number of Projects



Multilateral Joint Research and Support

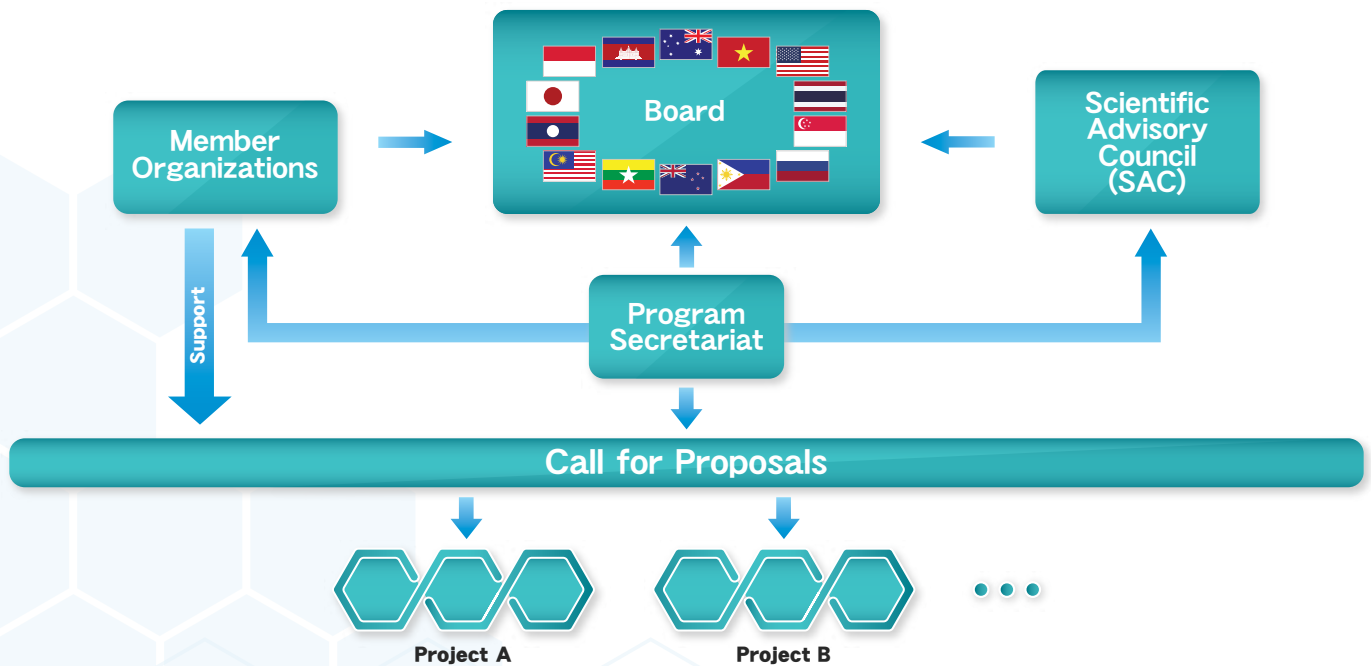
- Research project consists of three or more teams each receiving support from member organizations in their respective countries.
- In principle, funds do not cross national borders. Projects are selected through open joint calls for proposals (competitive funds).



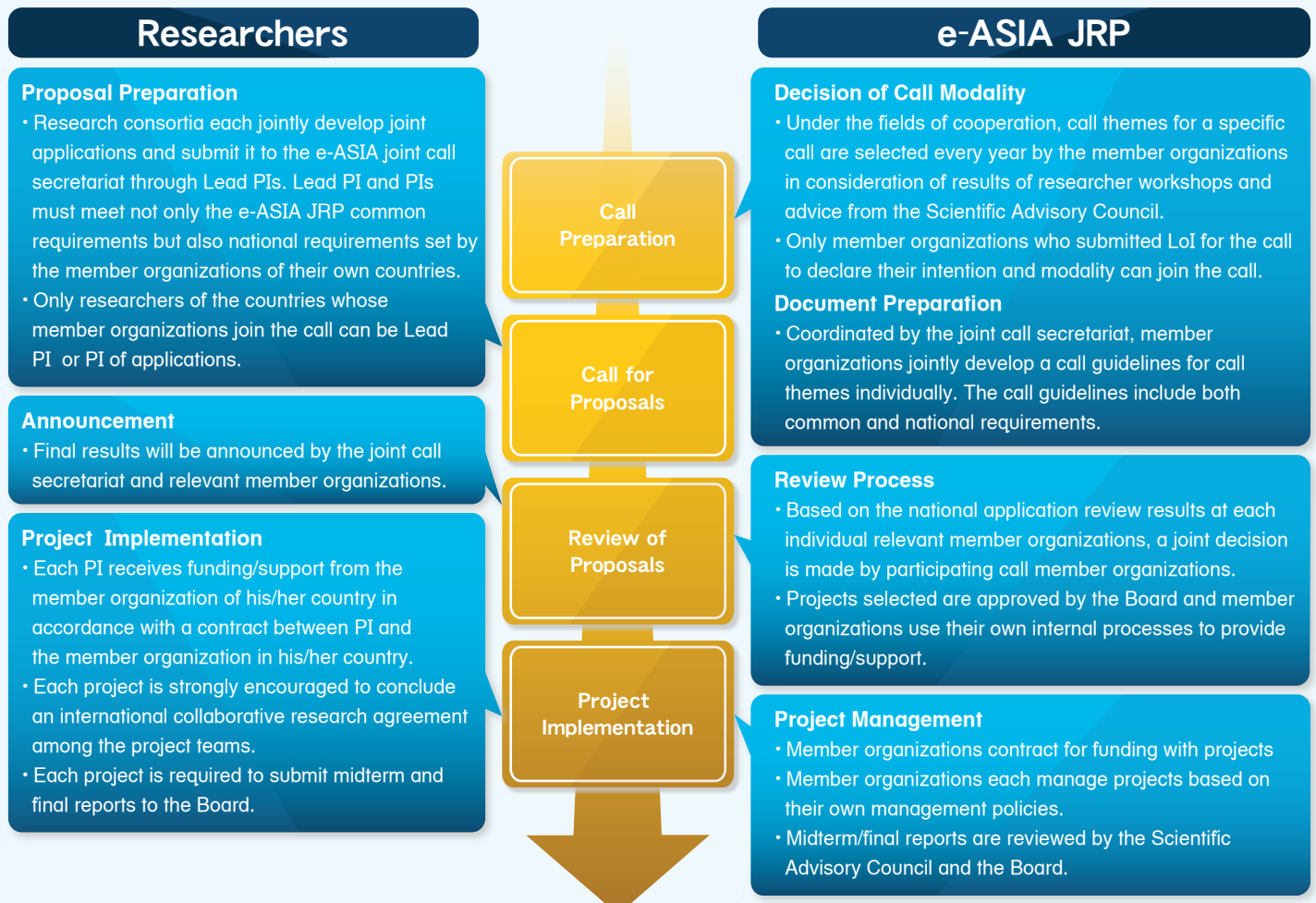
- Research Project Duration : 3 years
- Funding Amount : in-kind support (self-funding) to approx. 350,000 USD/ project(in total)
- Team Formation: Each project is led by a Lead Principal Investigator (Lead PI) specified among PIs heading each team in the project.

Governance and Structure

The Program is managed by the Board, consisting of representatives from each member organization, with advice from the Scientific Advisory Council and coordination by the Program Secretariat.



From Call for Proposals to Project Implementation





Materials (Nanotechnology)

2012 ↓	Nanotechnology and Materials (1st call) 	<ul style="list-style-type: none"> ➤ Corrosion Mapping of Structural Materials in Asian Area with Understanding Effects of Environmental Factors ➤ Plasmonic Bio-Sensor for Detecting Serious Diseases in Southeast Asia
2014 ↓	Functional Materials (4th call) 	<ul style="list-style-type: none"> ➤ Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion Processes
2017 ↓	Functional Bio-Nanotechnology for Innovative Materials System (6th call) 	<ul style="list-style-type: none"> ➤ Development of Nano-Visualization for Structural Analyses of Genetic Materials and Early Infection Process for Further Innovation of Functional Bio-Nanotechnology
2018 ↓	Functional Bio-Nanotechnology for Innovative Materials System (6th call) 	<ul style="list-style-type: none"> ➤ Generation of Selenium Nanoparticles and Investigation of Their Bioavailability on Laboratory Animals and Plants ➤ Fundamental Study of the Physical Properties of Metal-Oxide Single Nanowires and Nanoparticles for Bio-Nano-Sensing

Alternative Energy

2017 ↓	Bioenergy (5th call) 	<ul style="list-style-type: none"> ➤ Development of New Processes with Thermotolerant Microbes for Bio-Refinery Including Biofuels, Towards Utilization of ASEAN Biomass ➤ Feasibility Study on Social Implementation of Bioenergy in East Asia
2018 ↓	Bioenergy (7th call) 	<ul style="list-style-type: none"> ➤ Integrated Biorefinery of Sugarcane Trash ➤ Development of Algal Bioenergy Systems for Green and Sustainable ASEAN Region

Agriculture (Food)

2012	Biomass and Plant Science (1st call) 	<ul style="list-style-type: none"> ➤ Advancement of Asian Cassava Molecular Breeding by Cutting-Edge Technologies
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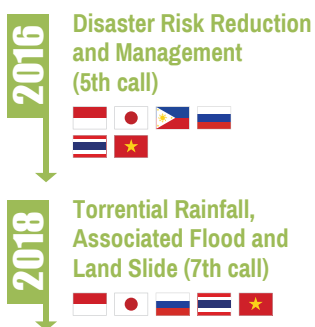
Health Research

2013 ↓	Infectious Diseases (2nd call) 	<ul style="list-style-type: none"> ➤ International Study on Pulmonary Diseases Infected with Influenza Virus and Mycobacterium tuberculosis ➤ Comprehensive Study on Virus Quasi-Species and Vascular Permeability Factors in Severe Dengue Infection in Humans for Innovative Epidemic and Clinical Managements
2015	Infectious Diseases (3rd call) 	<ul style="list-style-type: none"> ➤ Whole-Genome Sequencing of Drug-Resistant Mycobacterium tuberculosis Strains ➤ An Integrated Research for the Development of a Scheme to Control Emerging Vector-Borne Viral Diseases in Asia ➤ Evaluation of the Pandemic Potential of H5N1 Highly Pathogenic Avian Influenza Viruses Circulating in Indonesia ➤ Development of an Innovative Diagnostic System Against Liver Fluke Infection in Southeast Asian Countries



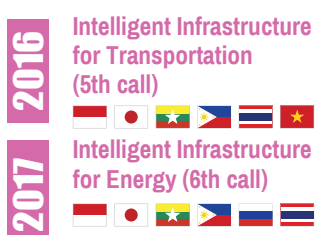
- Antigenicity to Humans and Gene Polymorphism of the New Malaria Vaccine Candidate, TAM (Trans-Amidase Like Molecule) of Asian Malaria
- Characterization of Multidrug Resistance Gram-Negative Bacteria Carrying Antibiotics-Resistance Gene Which Have Been Inserted to Chromosome
- Dengue Viral Genetic Diversity in Selected Populations in Myanmar
- Health Impact of Opisthorchiasis Infection in Cambodia and Vietnam : Prevalent Surveillance of Opisthorchiasis and Risk Surveillance for Liver Cancer
- Collaborative Fever Etiology Research in Southeast Asia
- Elucidating the Contribution of HBV/HDV Co-/Super-Infection to Hepatocellular Carcinoma Genome and Biology
- Genetic and Molecular Basis of Resistance and Drug Action in Vivax Malaria
- Surveillance of Specific Cancer Incidence and Mortality in South East Asia, by Developing a Standard Population-Based Cancer Registry System
- A Study of Latitudinal Viral Gene Migration and Reassortment of Potentially Zoonotic Avian Influenza Viruses Along Wild Bird East Asian - Australasian Flyway in Pacific Rim
- Development of New Diagnostic Tools for Detecting Malaria Parasites Resistant to Drugs Used in Artemisinin-Based Combination Therapy
- Investigating the Sylvatic Transmission and Reservoir Potential of Zika, Dengue, and Chikungunya Viruses of Long-Tailed Macaques Proximal to Human Populations of Thailand and Cambodia
- Randomised Trial of an Intervention to Increase Tuberculosis Notifications by Private Practitioners in Indonesia, Plus Sequencing and Susceptibility Sub Studies
- Construction of Liver Fluke Biliary Cancer PDX Library Aiming at Development of Personalized Medicine

Disaster Risk Reduction and Management



- Development of Information Gathering and Utilization Systems Using Small UAV for Disaster Risk Assessment, Monitoring and Response
- Monitoring and Prediction of Extreme Weather Using Lightning Detection Network and Micro-Satellites
- Establishment of a Landslide Monitoring and Prediction System
- Informational System for Management of Flood and Land Slide Disaster Areas Using a Distributed Heterogeneous Robotic Team

Advanced Interdisciplinary Research towards Innovation



- IITSL : Intelligent Integrated Transport for Smart Life
- Research of Expandable Cluster-Based Energy Infrastructure in e-ASIA Countries

Researcher Interaction and Workshops



"Renewable Energy" Workshop
Jul - Aug, 2013 @ Vientiane
Lao PDR



"Green and Renewable Energy
Technology" Workshop
Oct-Nov, 2016 @ Vientiane, Lao PDR



"Intelligent Infrastructure" Workshop
Dec, 2013 @ Yangon, Myanmar



"Emerging Infectious Diseases
and Cancer Research" Workshop
Aug, 2015 @ Yangon, Myanmar



e-ASIA JRP Project Workshop
Final Report on "Material /
Nanotechnology" "Plant Science"
projects
Oct, 2015 @ Thailand Science Park,
Thailand



"Genetic Conservation and Utilization
of Indigenous / Native Animal Species
in Asia" Workshop
Mar, 2018 @ Bangkok, Thailand



"Disaster Prevention" Workshop
Jun, 2013 @ Jakarta, Indonesia



"Cancer Research" Workshop
Aug, 2018 @ Vladivostok, Russia



"2nd Intelligent Infrastructure"
Workshop
Dec, 2014 @ Tokyo, Japan



"Green and Bio Nanotechnology"
Workshop
Jan, 2016 @ Tokyo, Japan



"Strategy for Conservation and
Utilization of Animal Genetic
Resources in Asia" Workshop
Oct, 2018 @ Tokyo, Japan



"Disaster Risk Reduction and
Management" Workshop
Apr, 2015 @ Manila, the Philippines



"Intelligent Infrastructure for Water"
Workshop
Feb, 2019 @ Hanoi, Vietnam



Symposium on "Infectious Diseases",
"Disaster Prevention" and "Advanced
Interdisciplinary Research towards
Innovation"
Dec, 2012 @ Singapore



"Asia - Pacific Scientific" Workshop
Mar, 2019 @ Singapore

Dr. Amnuaysak Chianpairot

National Metal and Materials Technology Center (MTEC), Thailand

“ I took a role of Principal Investigator of Thai team for the e-ASIA project "Corrosion mapping of structural materials in Asian area with understanding effects of environment factors" (Thailand, Vietnam, Japan) in 2013 – 2016. The international project team could successfully establish a comprehensive metal corrosion database to help designing optimum materials for construction and automobile industries. For me personally, it was the first experience to lead multilateral international collaborative research, which made me take a positive step out of "my comfort zone". By working with researchers with different cultures, I could improve my communication skills significantly and became confident in many things. Participation in this project has opened the door for encounters with many people. In the future, I hope this project can be a good platform example for industry-academia collaboration. ”

Prof. Jaime C. Montoya,

MD, PhD, University of the Philippines

“ I was given the wonderful opportunity to be involved in a multi-country research under e-ASIA JRP on a research area which is tuberculosis that I have worked on since I graduated from medicine. Through the networking made possible by the said project with the Research Institute of Tuberculosis in Japan and research groups in Vietnam, I was able to expand our current research group in terms of technical knowhow and research capabilities to further describe the molecular and genotypic characterization of the EA2_Manila Strain which is the predominant M. tuberculosis strain circulating in the Philippines. Not much is yet known about this particular strain and understanding more about its molecular biology, behavior and interaction with a variety of host and environmental factors may help us develop more effective diagnostic and management strategies for tuberculosis control in the country. ”

Current Member Organizations (as of September.2019)

22 Member Organizations from 14 Countries

	AUSTRALIA		National Health and Medical Research Council (NHMRC)
	CAMBODIA	 	Ministry of Health (MOH) Ministry of Industry and Handicraft (MIH)
	INDONESIA		Ministry of Research, Technology and Higher Education (RISTEKDIKTI)
	JAPAN	  	Ministry of Education, Culture, Sports, Science and Technology (MEXT) Japan Science and Technology Agency (JST as the agent of MEXT) Japan Agency for Medical Research and Development (AMED)
	LAO P.D.R.	 	Ministry of Science and Technology (MOST) Ministry of Health (MOH)
	MALAYSIA		Ministry of Energy Science, Technology Environment and Climate Change (MESTECC)
	MYANMAR		Ministry of Education (MOE)
	NEW ZEALAND		Health Research Council (HRC)
	THE PHILIPPINES		Department of Science and Technology (DOST)
	RUSSIAN FEDERATION		Russian Foundation for Basic Research (RFBR)
	SINGAPORE		Agency for Science, Technology and Research (A*STAR)
	THAILAND	    	National Science and Technology Development Agency (NSTDA) Agricultural Research Development Agency (ARDA) Thailand Center of Excellence for Life Sciences (TCELS) Thailand Science Research and Innovation (TSRI) National Research Council of Thailand (NRCT)
	THE UNITED STATES OF AMERICA	 	National Institute of Allergy and Infectious Diseases (NIAID) National Cancer Institute (NCI)
	VIETNAM		Ministry of Science and Technology (MOST)

Organizations Eligible for Membership

Ministries, agencies or other public governmental bodies that have competitive funding mechanism of EAS member countries, namely ASEAN 10 Member countries + 8 (Australia, China, India, Japan, Korea, New Zealand, Russia and the U.S.)



Secretariat Contact Information

Program Secretariat

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