

**e-ASIA Joint Research Program (the e-ASIA JRP)
Research Cooperation in the field of
'Environment'
on the topics of 'Low Carbon Society'
12th Joint Call for Proposals to be submitted by 28 April 2023**

The e-ASIA Joint Research Program (hereinafter referred to as the “e-ASIA JRP”) aims to develop a vibrant and collaborative research community in Science and Technology, to promote innovation in the East Asian region, and to contribute to the region’s economic development. As part of the program, the Member Organizations of the e-ASIA JRP listed below have agreed to implement a joint call for proposals of multilateral cooperative research activities.

Participating Member Organizations (listed in alphabetical order)

- 1) Indonesia: Ministry of Education, Culture, Research and Technology
(DIKBUDRISTEK)
- 2) Japan: Japan Science and Technology Agency (JST)
- 3) Lao PDR: Ministry of Education and Sports (MOES)
- 4) Thailand: National Research Council of Thailand (NRCT)
- 5) Thailand: Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B)

I. Aim of Joint Call and Research Area

The recent IPCC’s Working Group 2 Report on “Impacts, Adaptation and Vulnerability” has highlighted that climate change is already causing widespread disruption in every region in the world at current global warming levels, due to past emissions, and further worsening of impacts is inevitable. Many countries have pledged to reduce CO₂ emissions to limit the global temperature rise to a maximum of 1.5 °C by 2050. Advances in carbon capture technologies form keystones in reducing industrial CO₂ emissions amidst the incoming climate crisis. CO₂ emissions are prevalent in the power and manufacturing industry as it is difficult to develop methods that fully strip CO₂ from waste exhaust gases. Decarbonization methods, such as replacing coal with renewable options, have been deployed instead. New technology developments required to reduce costs and capture as much as 99% of CO₂. The developments are essential in reducing overall emission. To solve the climate crisis in the long term, CCS and CCUS

which is technology-based, and nature-based solutions need to be utilized alongside renewable power sources and green technologies to replace the current fossil-fuel dependant power supply system.

The e-ASIA JRP 12nd Call in the field of Environment is aimed to invite research application addressing environmental issues in East Asia and contribute on enhancing regional capacity through multilateral collaboration. Through regional collaborative research, innovative technologies and methodologies will be developed to foster the region toward low carbon society, carbon neutrality and net-zero carbon emissions goals. The topic of the call as follows with possible research topics included, but are not limited to:

Subtopic 1

“Carbon Capture, Utilization and Storage (CCUS)“

Technology-based Solutions

- Carbon Capture & Storage such as Solid absorbent, Porous carbon capture materials, Direct Air Carbon Capture Storage (DACCS) and Bio-Energy with Carbon Capture and Storage (BECCS)
- Carbon Capture & Utilization in the energy and cement sector such as CO₂ to CO₂-based fuels and chemicals, CO₂ curing concrete
- Carbon Capture and its catalyst material for reuse and change CO₂ gas to other carbon base gassed which can be use and more environment friendly

Nature-based Solutions

- Technology and management practices to quantify and increase the carbon sink capacity for carbon sequestration
 - **Blue carbon sequestration** such as carbon stored in coastal and marine ecosystems such as mangroves, tidal marshes, and seagrass meadows
 - **Teal carbon sequestration** such as freshwater (non- tidal) wetlands
 - **Green carbon sequestration** such as natural forest for carbon storage

How CCUS Technology can be implemented cost efficiently in Member Countries.

- CO₂ released from energy and industrial sectors are quite abundant and it can increase the temperature average and cause global warming. In 2021, Japan introduced the concept of AETI (Asia

Energy Transition Initiatives) Program, in which to achieve net zero emission country, several programs must be implemented, including injecting the anthropogenic CO₂, or it is well known as CCS/CCUS. Implementation of CCS/CCUS Project is quite challenging for most developing countries, because the cost of Capital Expenditure (CAPEX) and Operational Expenditure (OPEX) are very high.

- In some member countries, high purity of CO₂ sources is already available. Besides that, the storage locations are available, e.g. the existing depleted oil and gas reservoirs. Thus the implementation of CO₂ injection in the member countries could be cost effective, because the cost injection of every ton of CO₂ to the earth is much smaller than in other countries.
- Each member country can propose an idea on how this cost-effective CCUS project can be implemented. The value chain of CCUS must be included in the proposal, e.g. It can start with the study of CO₂-sources identification, the study on how the pure/almost pure CO₂ can be transported, the study on how the CO₂ is safely injected to the earth, the estimation of CAPEX and OPEX, and how those costs can be reduced using extraordinary ideas.

Subtopic 2

“Systematic understanding the status of environment, and people’s action change”

The concept of low carbon society, how this works and where it will lead the society to have been relatively well defined, whereas implementing this concept at practical level are still difficult and rare. This is considered as one of the key pain points for moving towards the low carbon or net zero emission goals. It is therefore necessary to carry out action research to guide us towards achieving the effective implementation of low carbon society, with aims towards achieving carbon neutrality and net zero emission aligning with national and international policy targets.

Using all or some of following areas continue to emphasize “research utilization at practical level, or research with a clear link to research utilization” are of high priority:

- Research on implementation, determination of protocols and procedures of low carbon development, carbon neutrality and net zero emission package to community and organization levels.
(e.g. Know-how on effectively bring the existing protocols and procedures into practices, Identification of key barriers and suggestions how to overcome such barriers in real situation, Integrating low carbon concept into local ways of life, wisdom, culture and other local context, including lesson learned from best practices across sectors, regions, and countries such as social and economic tools, integration approaches, consideration of local context).
- Countermeasures to support low carbon society concept:
 - Conceptual and social countermeasures such as
Innovations of mechanisms (market and non-market based), incentives, policies, and others to enhance implementation and to achieve low carbon development goals.
(e.g. Innovation output for sharing benefits from various emissions mitigation schemes (carbon credit, carbon foot-printing, pricing schemes, carbon label, carbon trading, taxation, etc.) to communities and grassroot levels are highly desirable).
 - Practical and systematic countermeasures such as
Tools or devices specifically designed to calculate the amount of renewable energy use and reduced emissions in an area, region or country in an integrated and real-time manner via a dashboard. Devices and systems can use state of the art technology.
(e.g. Internet of Things (IoT), Big data Analytic and other Information Technology)
- Alternative technology and policy that can encourage people to abandon conventional energy use.
(e.g. electrification of household equipment (non-fossil), electrification of agricultural equipment)
- Development of technology to enhance the competitiveness of carbon neutral energy (e.g. biofuel, solar, wind, hydro, geothermal, including energy storage/carrier such as battery, hydrogen, and ammonia), as well as to promote energy efficiency deployment in society (residential, offices, industries)

Subtopic 3

“Recycling of batteries and development of alternative materials for batteries, including utilizing natural resources in participating countries”

Energy storage is the key device for electric vehicles and energy storage systems. The development of energy storage leads to the discovery of many types of energy storage system. Nowadays, lithium-ion batteries are popular energy storage as a result of the high demands in portable electronics like phones, power banks, laptops, and electric vehicles. Even though it has been applied in electric vehicles and electronic devices, the battery needs much improvement on the energy density, power density, lifetime, price, and its recyclability. These problems need comprehensive solution which can be done by systematic investigations. Below are the examples of topic area that can be deeply investigated:

(1) Recycling technologies for batteries

Batteries contain a number of heavy metals and toxic chemicals and disposing of them by the same process as regular household waste has raised concerns over soil contamination and water pollution. Recycling plays an important role in the overall sustainability of future batteries and is affected by battery attributes including environmental hazards and the value of their constituent resources. Most types of batteries can be recycled. However, some batteries are recycled more readily than others, such as lead–acid automotive batteries (nearly 90% are recycled) and button cells (because of the value and toxicity of their chemicals). At recent year, rechargeable nickel–cadmium (Ni-Cd), nickel metal hydride (Ni-MH), lithium-ion (Li-ion) and nickel–zinc (Ni-Zn) are very massive used for electric cars or mobile phones. Battery recycling is important and to be a future industry. Disposable alkaline batteries make up the vast majority of consumer battery use, but there is currently no cost-neutral recycling option. A new material to replace some parts of the battery is needed which is environmentally friendly.

Hereby the following topics that can be proposed:

- Machinery or apparatus for effective dismantling and sorting batteries
- Development of processes to effectively extract all metals / minerals in the batteries and the recycling process for extracted materials
- Developing technology for consumer battery recycle
- Comprehensively evaluate battery utilization and recycling from the perspectives of economic feasibility, environmental impact, technology, and

safety

- Developing high efficiency recycle process
- Green oriented process for batteries recycling
- Policy and regulation on battery circular economy
- Application of recycled metals/minerals to be used as battery precursors, etc
- Developing of environmental-friendly process with decreasing the environmental pollution and impact

(2) Development of materials for batteries, including utilizing natural resources in participating countries

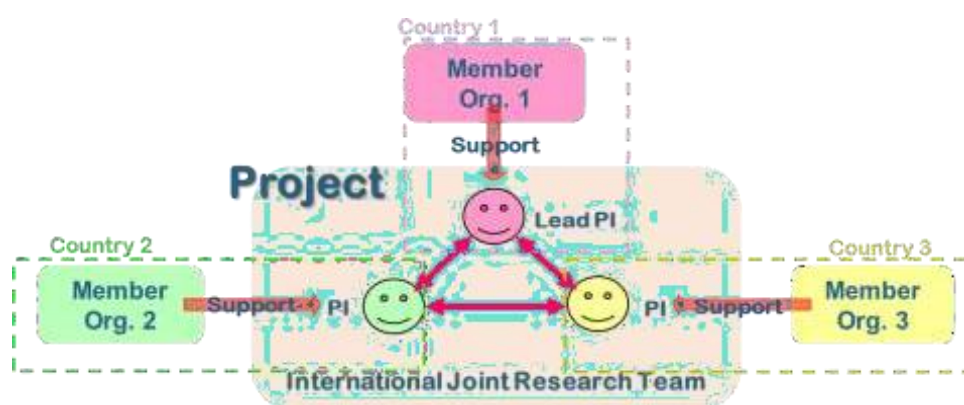
Development of new materials can contribute to improvement on the energy density, power density, lifetime, price of the batteries.

Hereby the following topics that can be proposed:

- Searching new materials which have higher power density
- Developing alternative material based on natural resources, such as new materials for cathode, based on natural resources
- Development of materials for batteries from unconventional resources (urban mine)
- Increasing the performance of recent materials
- Finding new materials for new type of batteries
- Utilizing natural resources such as nickel, aluminum, graphite, titanate, etc for high performance batteries. etc

II. Support/ Funding Modality

In principle, each Member Organization will support its own country's researchers in research projects selected for funding through this joint call with the type of support available as defined under "Funding Modality" in the table below. The duration of a selected research project will be three years (36 months), in total, from the start date. Details of conditions of support will vary by Member Organization. Applicants should carefully consider information included in the Appendix for each Member Organization's rules and regulations.



Participating Member Organizations and Funding Modality

(1) CCUS Technology-based Solutions and Nature-based Solutions

Participating Member Organizations	Funding Modality
1. DIKBUDRISTEK (Indonesia)	New
2. JST (Japan)	New
3. MOES (Lao PDR)	In-kind
4. PMU-B (Thailand)	New

(2) Systematic understanding the status of environment, and people's action change

Participating Member Organizations	Funding Modality
1. DIKBUDRISTEK (Indonesia)	New
2. JST (Japan)	New
3. MOES (Lao PDR)	In-kind
4. NRCT (Thailand)	New

(3) Recycling of batteries and development of alternative materials for

batteries

Participating Member Organizations	Funding Modality
1. DIKBUDRISTEK (Indonesia)	New
2. JST (Japan)	New
3. MOES (Lao PDR)	In-kind
4. NRCT (Thailand)	New

New: Each Member Organization will support a selected project by new funding

Re-budgeting: Funds already allocated to an existing project by each Member Organization will be reallocated to the e-ASIA JRP

In-kind: Each Member Organization does not provide budget for a selected project. A researcher participating in a selected project will use funds that are already available, but no additional fund will be provided by each Member Organization. In principle, at least one country must participate via “new” or “re-budgeting” funding modality. In other words, proposals cannot be accepted if all the applicants intend to participate through an “in-kind” basis.

II. Application

In addition to the following common requirements, there are specific rules clarified by each Member Organization. For specific rules by each Member Organization, please refer to the Appendix or consult the person noted in Section VI.

III-1. Applicant/ Project Consortium

A project consortium must consist of at least three eligible research teams from at least three different participating countries listed above.

Each research team shall be led by a Principal Investigator (PI), and a consortium shall be led by a Lead Principal Investigator (Lead PI) specified among the PIs.

The Lead PI will be responsible for running and managing the project. The Lead PI will be the contact point with the e-ASIA JRP Secretariat on behalf of the whole consortium and is responsible for the administrative management of the complete project, should it be awarded supporting. In addition, the Lead PI is responsible for leading the project activities at his/her own institution. The Lead PI must be affiliated with an institution situated in the home country of one of the Member Organizations participating in this call.

All PIs must fulfil their respective domestic eligibility rules for research application. Researchers from industry are encouraged to participate in the collaboration in accordance with domestic eligibility rules. PIs should contact the person noted in Section VI for information on their respective domestic eligibility rules.

III-2. Proposal Submission

Proposals must be submitted from the Lead PI by e-mail to the e-ASIA JRP Secretariat at the e-mail address specified below. Applications shall be written in English.

Deadline for Submission:

17:00 (Thai Standard Time, UTC+7) 28 April 2023

Please submit the proposal to:



Emi Kaneko (Ms.)

e-ASIA JRP Secretariat

E-mail: easia_secretariat@jst.go.jp

Note1: The e-ASIA JRP Secretariat will send a confirmation email to the Lead PI to confirm receipt of his/her proposal. In case the Lead PI does not receive a confirmation e-mail from the e-ASIA JRP Secretariat within one week, they should contact the e-ASIA JRP Secretariat at the address above. The e-ASIA JRP Secretariat does not assume any responsibility for delay or error in e-mail delivery.

Note2: Application forms sent by any method other than e-mail, such as post, fax or telex will be rejected.

< Important Notice to ALL PIs >

Make sure to submit all necessary application documents requested by each Member Organization of your country, in addition to the application to the e-ASIA JRP Secretariat (submitted by Lead PI only), because each Member Organization may request applicants of its country to submit another form of proposals with another deadline date. Proposals shall satisfy both common requirements written in this call guideline and individual requirements requested by each Member Organization. A research team that does not satisfy individual requirements of the

Member Organization of your country will not be deemed as eligible research team.

For individual requirements by each Member Organization, please refer to the Appendix or consult the person noted in Section VI.

The proposal shall include:

- a) Project description including how the collaboration will be carried out, with clear statements of what roles each country's researchers will play respectively in the project;
- b) Description of the expected outcomes of the proposed project, scientifically as well as in terms of relevance for industry and society;
- c) Description of the ongoing activities and specific advantages of each group respectively, which form the basis for the proposed joint project;
- d) Description of the expected value added from the proposed joint project, including how the competence, technology and other resources in each group complement each other;
- e) Description of how the project is expected to help strengthen multilateral research collaboration over the longer term;
- f) Description of the expected value added from the multidisciplinary approach in the proposed joint project; and
- g) Description of how the proposed joint project interacts with or impacts other comparable activities worldwide.

III-3. Application Forms

Researchers should prepare the following application (proposal) forms in English ("E").

For further requirements by each Member Organization, researchers shall refer to the Appendix or shall consult each Member Organization of his/her country.

- Form 1E Application outline (title, acronym, general description and proposed period of cooperative research project)
- Form 2E Summary of the project
- Form 3E Research leaders' information (their CVs*)
- Form 4E Research team (list of individuals committed to the cooperative research project in each country)
- Form 5E Description of the cooperative research project
- Form 6E Research networking plan
- Form 7E Plan to nurture early career researchers

Form 8E Budget plan for the project

Form 9E Research infrastructures and funds from other sources

** The description of Curriculum Vitae (CV) from each PI shall include basic information on education, past and present positions, membership of relevant organizations/associations and a publication list in the past 5 years.*

In addition to the documents above, all projects must comply with ethical review and requirements of each Member Organization, especially for research activities related to human and animal subjects. PIs shall refer to the Appendix for each Member Organization's ethical requirement.

IV. Evaluation

IV-1. Evaluation Process

A proposal will be evaluated at each relevant Member Organization of the project consortium, according to the evaluation criteria clarified in the following subsection.

Based on the results of the evaluation conducted at each Member Organization, a final decision will be made at the joint panel meeting among the participating Member Organizations, followed by approval at the e-ASIA JRP Board Meeting.

IV-2. Evaluation Criteria

Proposals will be evaluated according to the following common e-ASIA JRP evaluation criteria, incorporated with evaluation criteria clarified by each Member Organization. For the evaluation criteria clarified by each Member Organization, please refer to the respective Appendix or consult each respective Member Organization.

1) Regional Relevance of the Research

The research activity should contribute to:

- The advancement of scientific discovery;
- The development of science and technology in the region; and
- The resolution of significant relevant issues across the region.

2) Mutual Benefits of the Joint Research

Activities of mutual benefit to the collaborators and their institutions are desirable. Mutually beneficial in the sense that the projects utilize unique opportunities the e-ASIA JRP will provide that could not be achieved either through bilateral or

individual research but only through multilateral cooperation.

3) Effectiveness of Exchange

The project should:

- Contain activities to nurture early career researchers through research activities;
- Contain activities to engage female researchers where strengthening capacity is needed; and
- Enhance research capacity in the region.

IV-3. Notification of the Final Decision

The Lead PI will be notified the final decision by the e-ASIA JRP Secretariat as soon as the final decision is taken and approved by all Member Organizations in the e-ASIA JRP. (Approximate implementation of the notification: End of November 2023)

V. Project Implementation

Project reporting will be in accordance with the respective Member Organization's rules. Please contact respective Member Organizations for more details.

In addition to the Member Organization's requirements, the consortia are expected to deliver Progress Reports and Final Reports to the e-ASIA JRP Secretariat, in English, including a description of their collaboration and a publishable summary of the project status. The Progress and Final Reports will be reviewed by the Board and Scientific Advisory Council. It is also encouraged that the project proactively disseminates its achievements to the public.

V-1. Progress Report

In the middle of research period (i.e., after one and a half year), the lead PI shall promptly develop and submit an integrated progress report to the e-ASIA JRP Secretariat on the status of the joint research.

V-2. Final Report

A final report shall be developed and submitted by the Lead PI to the e-ASIA JRP Secretariat within two months after the completion of the joint research period.

V-3. Others

All the researchers/research institutions organizing a consortium are strongly recommended to conclude a Collaborative Research Agreement (hereinafter

referred to as “CRA”) to assure optimal understanding and coordination among the collaborating scientists working on each project before project starts. CRA should, with due respect to the researchers’ institutions and the Member Organizations’ intellectual property and data handling policy, include the treatment of intellectual property rights, handling of confidential information, publication of research results, warranty and indemnification, and access to and transfer of the relevant materials. Applicants shall refer to the Appendix for each Member Organization’s requirement.

VI. Contact information

Applicants should contact the following for information on each Member Organization’s eligibility rules or support conditions:

Also please refer to the Appendix for information of each Member Organization.

Country: Member Organization	Contact Point
(1) Indonesia: Ministry of Education, Culture, Research and Technology (DIKBUDRISTEK)	DRTPM Tel: +62 021 57946104 Email: penelitian.drtpm@kemdikbud.go.id or drtpm@kemdikbud.go.id
(2) Japan: Japan Science and Technology Agency (JST)	Dr. Takumi Katsumata, Ms. Junko Katayama, Mr. Hideaki Kodani, Mr. Shinji Otsuka Tel: +81(0)3-5214-7375 Fax: +81(0)3-5214-7379 E-mail: easiajrp@jst.go.jp
(3) Lao PDR: Ministry of Education and Sports (MOES)	Mr. Souththiphong Vongxaiya/ Mr. Vongthong Xayyapheth Tel: +856 21 243311 Fax: +856 21 243311 Email: souththiphong.vongxaiya@gmail.com / xvongthong@gmail.com
(4) Thailand: Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B)	Dr. Doungkamon Pihusut Tel: +66 2470 7961-4 E-mail: pmub.gp@nxpo.or.th
(5) Thailand: National Research Council of Thailand (NRCT)	Ms. Kwansiri Wanwiwake, Ms. Chontida Tangnara Tel: +66 (0) 2561 2445 ext. 206

E-mail: chontida.t@nrct.go.th
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Applicants should contact the following for general inquiries:



Emi Kaneko (Ms.)

e-ASIA JRP Secretariat / Japan Science and Technology Agency

Room 218 Innovation Cluster1 Building

National Science and Technology Development Agency (NSTDA)

111 Thailand Science Park, Phahonyothin Road

Khlong Nueng, Khlong Luang, Pathum Thani 12120 THAILAND

Tel: +66-2-564-7713 (For urgent contact only)

E-mail: easia_secretariat@jst.go.jp

**e-ASIA Joint Research Program (the e-ASIA JRP)
Research Cooperation in the field of
'Environment'
on the topics of 'Low Carbon Society'
12th Joint Call for Proposals to be submitted by 28 April 2023**

Information about each Member Organization (alphabetical order by country)

- 1) Indonesia: Ministry of Education, Culture, Research and Technology
(DIKBUDRISTEK)
- 2) Japan: Japan Science and Technology Agency (JST)
- 3) Lao PDR: Ministry of Education and Sports (MOES)
- 4) Thailand: National Research Council of Thailand (NRCT)
- 5) Thailand: Program Management Unit for Human Resources & Institutional
Development, Research and Innovation (PMU-B)

1) Indonesia: Ministry of Education, Culture, Research and Technology (MoECRT or DIKBUDRISTEK)

DIKBUDRISTEK in eASIA is supporting the following topics:

- a) environment

DIKBUDRISTEK can support a maximum of 5 applications for environment topic. The following funding modalities will be supported:

- New

Application Materials

Application submitted directly to the e-ASIA Secretariat is required and will be reviewed and evaluated according to the common e-ASIA JRP evaluation criteria. Additional application materials are required to be submitted directly to DIKBUDRISTEK after the awardee list has been announced by the e-ASIA secretariat of the Joint Research Program (the e-ASIA JRP).

Eligibility

The Indonesian PI MUST be from Higher Education Institutions under Ministry of Education, Culture, Research, and Technology (DIKBUDRISTEK).

Other research Institutions may join the project as Co PI. Indonesia PI should contact DIKBUDRISTEK for the proposal submission process, after the awardee list has been announced by the e-ASIA JRP. DIKBUDRISTEK requires the Indonesian Principal Investigator to meet conditions by BIMA Guideline, with minimum requirements as follows:

- Applications only are accepted from PI in University. The Indonesian PI MUST be lecturers from Higher Education Institutions/ University under DIKBUDRISTEK, have a NIDN and have a SINTA account;
- obtained their PhD degree;
- Indonesian citizens and hold a permanent or fixed-term contract in an eligible university or research institute in Indonesia;
- Competent in oral and writing English skills;

The proposed budget submitted must be related to the Minister of Finance Regulation, for each unit/component have a maximum budget at year (standard of special cost, standard of output cost and standard of input cost). The awardee selected proposed funding will be subject to assessment by DIKBUDRISTEK reviewer. The amount of funds will be determined through the evaluation process by the reviewer assigned by DIKBUDRISTEK.

Support

DIKBUDRISTEK will support up to 5 application(s) for environment topic, with a maximum budget using standard of output cost over three years.

Specific Eligible Costs.

Personnel Costs

Costs for student research assistants can be covered if their work is related to the research project, by referring to the Regulation of the Minister of Finance of the Republic of Indonesia, specifically the “Standar Biaya Masukan (Standard of input cost)”.

Mobility of Indonesian and foreign researcher and experts

For Indonesian researcher to the country of research partner:

- Flight to and from destination: economy class flight;
- Visa costs;
- Transfer to and from the airport
- Daily allowance (the amount depends on the destination, check the standard of input cost)
- Insurance fees

For Foreign researcher:

Our research grant is restricted with Indonesian Financial regulation that limits the use for Indonesian researcher only.

Equipment

Indonesian grant could not be used for equipment.

Scientific events and project meetings in Indonesia or country of research partner

- Room rent
- Catering
- Other costs necessary for the implementation
- Publications
- Travel costs and accommodation for external experts based on the regulation above
- The costs for the event must be requested by the project partner in the hosting country

Please adjust the BIMA guidelines as a reference for funding from Indonesia.

How to Apply

Application submitted directly to the e-ASIA Secretariat is required and will be reviewed and evaluated according to the common e-ASIA JRP evaluation criteria.

Additional application materials are required to be submitted directly to DIKBUDRISTEK (bima.kemdikbud.go.id) after the awardee list has been announced by the e-ASIA secretariat of the Joint Research Program (the e-ASIA JRP).

Evaluation

Applications submitted to the e-ASIA Secretariat will be reviewed according to the published e-ASIA JRP evaluation process and criteria.

Publication

Upon completion of the report, all participants are strongly encouraged to publish their research results in high impact factor journals with acknowledgement of the support received.

Intellectual Property (IP), Material Transfer Agreement (MTA), Genetic Resources, Traditional Knowledge, And Traditional Cultural Expression (GRTK&TCE)

1. In the event of joint research cooperation, it is the responsibility of the respective member of the collaborating project partners to determine in

advance how any exploited IP will be divided amongst the partners in accordance with the prevailing laws and regulations of the respective countries of the institutions Participants and the institutions' policies and procedures. Details of this agreement shall be included in the collaborative agreement.

2. To the fullest extent possible, all research activities using materials originating from the country of either participant or project partner shall be done in the country of origin. Should there be any transfer of material and/or sample outside the territory of the country of origin, such material and/or sample shall be transferred using a Material Transfer Agreement (MTA) concluded between the institutions' project partners or their related collaborating project partners in accordance with the prevailing laws and regulations of the country of origin as well as the policies of the institutions' project partners.
3. The collaborating project partners shall recognize the value of genetic resources, traditional knowledge, and traditional cultural expression (GRTK&TCE) and recognize the rights of the holders of GRTK&TCE to effective protection against their misuse and misappropriation by the collaborating project partners.
4. Access to and utilization of the GRTK&TCE by the participants shall be regulated by specific arrangements concluded by the collaborating project partners. Details of this agreement shall be included in the collaborative agreement.

Reporting

Awardees will be responsible for all reporting requirements associated with both the e-ASIA JRP and DIKBUDRISTEK through bima.kemdikbud.go.id.

Contact Information

Ms. Anggun Amalia Fibriyanti / Ms. Rian Afriana/Ms. Erlin Puspaputri
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Directorate of Academic for Vocational Higher Education

Ministry of Education, Culture, Research and Technology

Tel: +62-21-57946104

e-mail: penelitian.drtpm@kemdikbud.go.id or drtpm@kemdikbud.go.id

website: bima.kemdikbud.go.id

2) Japan: Japan Science and Technology Agency (JST)

JST is supporting the following topics: Environment, with particular interest in:

- Carbon Capture, Utilization and Storage (CCUS)
- Systematic Understanding the Status of Environment, and People's Action Change
- Recycling of Batteries and Development of Alternative Materials for Batteries

JST can support a maximum of five (5) applications. The following funding modalities will be supported:

- New

Japan-based applicants must complete all the requirements designated by JST. Information on additional requirements applied to Japan-based applicants are available at the official domestic call announcement on the JST website.

JST's official call announcement:

https://www.jst.go.jp/inter/program/announce/announce_easia_jrp_12th.html

I **Eligibility**

- Any independent researcher personally affiliated with and actively conducting research at a domestic Japanese research institution (or who will fulfil this requirement by the start of the research project), regardless of nationality, is eligible to apply as a Principal Investigator.

Note: "Domestic Japanese research institution" in Japan refers to universities, independent administrative institutions, national/public testing and research institutions, specially authorized corporations, public - service corporations and enterprises, etc. that must satisfy predetermined requirements designated by the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

Japan-based researchers from industry are also eligible to apply as a Principal Investigator in the joint research project in the Japan-based team.

- Early career researchers who completed his/her doctorate in the last 10 years are strongly encouraged to apply.

II Support

II-1. Funding Modality

JST will support each Japan-based team with a “new fund” up to 27 million Japanese Yen as direct cost for 36 months. The overhead cost of 30% of direct cost will be added separately. The budget for a project may differ each year, depending on the content of activities. The amounts will be adjusted each year due to the budgetary limitations for this program.

II-2. Expenditure/costs eligible for funding

This program is designed to support expenses related to cooperation by a Japan based researcher with their counterparts, such as expenses for travel and/or conducting seminars/symposia. Funding provided within this call is intended to enhance the capacity of the applicants to collaborate. Funding will therefore be provided mainly in support of collaborative activities but may also cover some of the local research costs that are necessary for the collaboration. In principle, eligible direct costs are those costs directly necessary for accomplishing the research, indicated below. Please refer to the guidance documents available at the following link for further details of eligible direct costs: <https://www.jst.go.jp/inter/research/contract/contract.html> (in Japanese only).

1. Eligible Direct Costs:

- i) Facilities, Equipment and Consumables: costs of research equipment, spare parts, prototypes,
- ii) Travel Costs: travel costs and associated living expenses of the project members registered in the project plan, and travel costs of inviting external experts.
- iii) Salaries and Honoraria: salaries of the researchers, temporary staff, PhD students, post-docs, etc., who are hired for the research, and other costs such as honoraria for invited lecturers.
- iv) Others: costs for organizing meetings in Japan including rental costs for the venue, food & beverage (excluding alcohol) costs and other costs which are deemed to be necessary for organizing the event. Expenses for creating software, renting or leasing equipment, transporting equipment, etc.

2. Overhead cost shall be 30% of direct costs. Note: Please refer to the following link for the provisions regarding indirect costs:

https://www8.cao.go.jp/cstp/compefund/kansetsu_sikkou.pdf (in Japanese only).

II-3. Payments

Payments will be made according to a contract for commissioned research entered into between JST and a "Domestic Japanese Research Institution". The contract for commissioned research will be renewed each year over the cooperative research period. Since the contract is agreed on condition that all administrative procedures related to this project will be handled within the institution, the PI should consult with the department in charge at his/her institution.

III How to Apply

Applicants of each Japan-based team are required to complete necessary submission as specified below.

III-1. Submission of Application Forms (Form E1-E9) (from the Lead PI)

Proposals must be submitted by e-mail to the e-ASIA JRP Secretariat.

III-2. Additional Application Forms (For Japan-based applicants only)

In addition to the common Application Forms in English (Form E1-E9), Japan based applicants are required to complete and submit additional application forms in Japanese (Forms 1J and 2J) to JST by "e-Rad" (<https://www.e-rad.go.jp/index.html>).

Forms 1J and 2J are available from the JST website:

https://www.jst.go.jp/inter/program/announce/announce_easia_jrp_12th.html (in Japanese only)

The deadline for the "e-Rad" submission: 19:00 (Japan Standard Time) 28th April 2023

IV Evaluation

Independent Committees consisting of experts will evaluate all proposals. Based on the results of the evaluation, a common decision will be decided jointly among Member Organizations participating in the call regarding funding of the selected proposals.

IV-1. Evaluation Criteria

The following evaluation criteria, incorporated with the e-ASIA JRP evaluation criteria (see IV-2. Evaluation Criteria in the Call Guideline), will apply to each

application:

i) Conformity with Program Aims and Designated Research Fields The proposed activity shall conform to the aims of the program and the research fields that the program designates. In addition, the applicants shall already have a good research foundation for their proposed activity.

ii) Capability of Principal Investigators

The principal investigators of collaborating countries shall have the insight or experience for pursuing the activity and the ability to manage the cooperation and reach the project goals during this program's period of support. The call aims to take into account the potential of early career researchers who have completed their doctorate in the last 10 years in this role.

iii) Effectiveness and Synergy of Cooperative Research Project

The proposed research activity shall be eminent, creative and at an internationally high level in an attempt to produce a significant impact on the development of future science and technology or to solve global and regional common issues or to create innovative technological seeds that can contribute to the creation of new industries in the future. Moreover, proposed research activities that can be expected to create synergy through collaborative research with the counterpart institution will be preferred. Such synergy could be attained through, for example, the acquisition and/or application of knowledge, skill and/or know-how of the counterpart researcher.

iv) Validity of Research Plan

The sharing of research activities with the counterpart research institution and the planning of research expenses shall be adequate to realize the proposed research activity.

v) Effectiveness and Continuity of Exchange

Activities characterized by the following examples shall be involved to enhance sustainable research exchange and networking.

Nurturing of researchers through human resource exchange.

Sustainable development of research exchange with the counterpart countries initiated by this activity.

Enhancing the research network between collaborating countries including researchers other than the research leader and members of this activity.

Improving the presence of science and technology in Japan and the counterpart country.

vi) Validity of Exchange Plan

The planning of exchange activities and their expenses with the counterpart research institute shall be adequate to realize the proposed research activity.

V Reporting

VI-1. Progress report to JST

At the end of each fiscal year, the PI of the Japan-based team shall promptly submit an annual progress report on the status of research exchange, and the institution with which the PI is affiliated shall promptly submit a financial report on research expenses to JST.

VI-2. Final report to JST

After completion of the period of joint research, the Japan-based team's PI shall submit within two months a final report on the results of the joint research. The final report shall include a general summary compiled jointly by all members of the Japan-based research group. The institution with which the PI is affiliated shall submit a financial report on research expenses within the same time frame.

VI Contact Information

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3) Lao PDR: Ministry of Education and Sports (MOES)

Eligibility

The applicants must be researchers and/or university professors/instructors who work in public research institute or university in Laos, and are competent in conducting a research with international partners.

Contact Information

Ministry of Education and Sports (MoES)

Cabinet of the National Science Council (CNSC)

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4) Thailand: National Research Council of Thailand (NRCT)

NRCT is supporting the following topics: Environment, with particular interest in:

- Systematic Understanding the Status of Environment, and People's Action Change
- Recycling of batteries and development of alternative materials for batteries

***NRCT can support a maximum of 2 applications of each topic with a "New Fund".

VI Eligibility

The applicants must be researchers and/or university professors/instructors who work in public research institute or university in Thailand, and are competent in conducting research with international partners.

VII Supporta

- NRCT will provide support a maximum of 2 applications on "*Systematic understanding the status of environment, and people's action change*".
 - The total budget for the Thai researcher over a full 3-year period is up to 3,000,000 THB.
- NRCT will provide support a maximum of 2 applications on "*Recycling of batteries and development of alternative materials for batteries*".
 - The total budget for the Thai researcher over a full 3-year period is up to 9,000,000 THB.

***The budget for a project may differ each year, depending on the content of activities

VIII How to Apply

1. Thai applicants who are interested to be granted by NRCT must submit a national proposal to NRCT through NRCT system (NRIIS: <https://nriis.go.th>) no later than 16:30 (Thai time) 26 April 2023.
2. Lead PI must also submit proposal to the e-ASIA JRP Secretariat's e-mail no

later than 17:00 (Thai Standard Time, UTC+7) 28 April 2023.

*****NRCT will not accept the proposal if the applicants fail to submit to NRCT system (NRIIS) and/or e-ASIA JRP Secretariat.**

IX Evaluation

Proposals will be peer-reviewed, and evaluated by a committee according to NRCT internal rules and procedures. The final selection will be done by the international selection committee of e-ASIA.

IV.I Evaluation Criteria

To be funded, proposals must be internationally competitive. It should lead to the advancement of the research field, or novel applications or increase of research capacity.

Key evaluation criteria are:

- Significance, research impact and research utilization;
- Scientific Rationale: novelty, importance and timeliness of the research
- Design and feasibility of the project plan
- Partnership: including strength and clarity of collaborations and opportunities provided, quality of the project management structure proposed;
- Quality and suitability of the research environment and of the facilities;
- Ethical considerations and governance arrangements

X Reporting

1. Thailand PI should submit a progress report on the status of joint research according to NRCT's funding procedures.
2. After completion of the period of joint research, the Thailand PI shall submit within two months a final report on the results of the joint research to NRCT.

VI Contact Information



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5) Thailand: Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B)

Eligibility for Thai applicants

The applicants must be researchers and/or university professors/instructors who work in public/non-profit organization research institute or university in Thailand and are competent in conducting research with international partners.

PMU-B has interests in **Subtopic 1**.

II. Support

The total budget for the Thai researcher over a full 3-year period is up to 5,000,000 THB per project. The budget for a project may differ each year, depending on the content of activities and compliance with PMU-B financial guideline (please find details via PMU-B website: <https://www.nxpo.or.th/B/>).

III. Evaluation of Project Proposals

Proposals will be peer-reviewed and evaluated by a committee. The final selection will be done by the international selection committee of e-ASIA.

III.I Evaluation Criteria

To be funded, proposals must be internationally competitive. It should lead to the advancement of the research field, or novel applications or increase of research capacity.

Key evaluation criteria are:

- Significance and impact of the research
- Scientific Rationale: novelty, importance and timeliness of the research
- Capabilities of the research team
- Design and feasibility of the project plan
- Partnership: including strength and clarity of collaborations and opportunities provided, quality of the project management structure proposed
- Quality and suitability of the research environment and of the facilities
- Ethical considerations and governance arrangements

IV. Reporting

- Every six months, the Thailand PI shall promptly submit a progress report

on the status of joint research to PMU-B

- After completion of the period of joint research, the Thailand PI shall submit within three months a final report on the results of the joint research to PMU-B.

Contact Information



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