INUCoST
Indonesia-Netherlands Universities Consortium for Sustainable FuTures

Call for Expression of Interest INUCoST Batch 3



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The INUCoST Program in Collaboration with the Indonesian Ministry of Higher Education, Science, and Technology & with the Indonesian Endowment Fund for Education| 2026

University member:

Universitas Indonesia
Universiteit Leiden
TU Delft
Erasmus University Rotterdam

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Call for Expression of Interest for Joint Research Cooperation: Indonesia–Netherlands Universities Consortium on Sustainable FuTures (INUCoST)

1. About INUCoST: A Joint Research Cooperation on Sustainable Futures

The Indonesia-Netherlands Universities Consortium for Sustainable FuTures (INUCoST) is a long-term initiative involving three Dutch leading universities and five Indonesian universities with the financial support based on matching principle by Leiden-Delft-Erasmus Universities Alliances (LDE) and the Ministry of Higher Education, Science, and Technology (MoHEST). The matching funds will be provided by LPDP, the Indonesian Endowment Fund for Education and Research.

This consortium collaboration encompasses three modalities: research, education, and community development. The collaboration has resulted in 18 on-going collaborative research projects since 2024. This year marks the third round of the strong collaboration with our partner universities in Indonesia. The consortium members are invited to submit an Expression of Interest for the INUCoST Batch 3 research proposals. The programme offers mobility funding for LDE researchers, with additional support available for PhD students.

In 2012, Leiden University, Delft University of Technology, and Erasmus University Rotterdam (LDE) established a strategic alliance. The Alliance is a scientific powerhouse in a knowledge-intensive region of South Holland Province that also includes important universities of applied sciences, innovative companies, various science parks, ESA-ESTEC, world class museums, libraries and archives, and many important national and international institutions. In 2021 the LDE universities decided to also collaborate together internationally to strengthen networks and to create more impact.

In 2023 the LDE Alliance established a strategic partnership with a consortium of five Indonesian universities. This consortium is formed by Universitas Indonesia in Depok, Institut Teknologi Bandung, Universitas Gadjah Mada in Yogyakarta, Universitas Airlangga in Surabaya, and Universitas Mulawarman in Samarinda. These are five leading Indonesian universities working in the same and complementary fields as Leiden University, TU Delft, and Erasmus University Rotterdam. This collaboration has led successfully to the establishment of 18 research projects and the establishment of the LDE Centre in Indonesia in 2025.

2. Objectives

INUCoST aims to establish a strong and sustainable partnership between three leading Dutch universities and five Indonesian universities. This collaboration is expected to create a structural foundation for long-term cooperation. By combining expertise from both countries, the research initiatives will address urgent societal challenges through interdisciplinary collaboration and based on the development priorities set by the Indonesian government.

3. Research Topics

Aligning with the Indonesian government's priority areas, the collaboration within the Indonesia-Netherlands Universities Consortium will focus on Sustainable Futures**.** We invite LDE and Indonesian partner universities scholars to conduct joint and multidisciplinary research on the following sub-themes:

a. Life Science & Health
b. Sustainable Food Systems
c. Energy Transition in Remote Areas
d. Urban Resilience

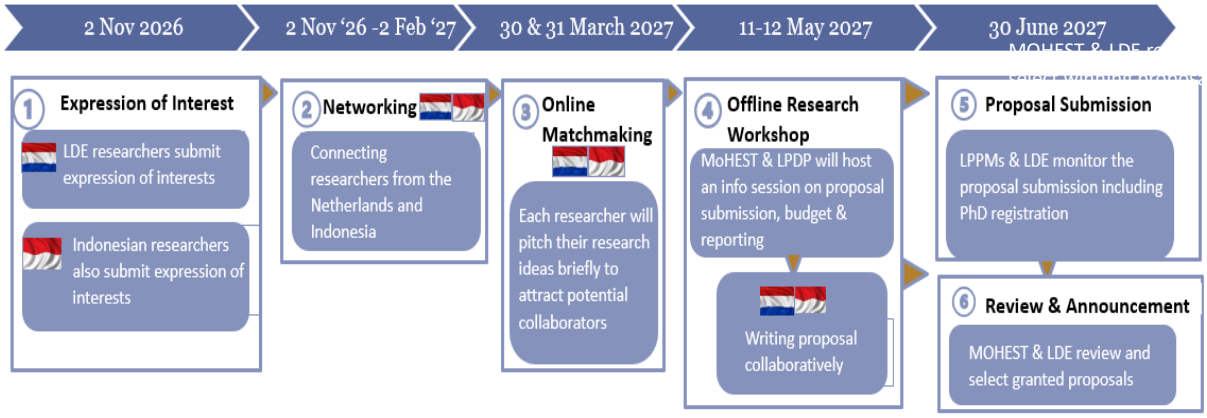
4. Eligible Candidates

In light of those pressing issues, we invite permanent contract researchers employed by one of the INUCoST partner universities to express their interest and participate in collaborative efforts aimed at addressing those challenges. The applicants need to possess a formal appointment from the member universities during the period of research. We seek multidisciplinary research collaborations that will be translated into concrete implementation such as contribution to the needs of cutting-edge innovation in industry, policy development, or community-based interventions to shape the sustainable futures. It is required to form a research team consist of a representative of at least 1 LDE university research and representatives of minimum **2 Indonesian member universities** to submit a proposal.

5. Application Process

Uploading your Profile to the shared folder is the first step to participate in the INUCoST Batch 3 application process. This folder will serve as the initial networking platform where you can find potential collaborators and potentially connect with them via e-mail provided in their Profiles. The LDE Centre in Indonesia will review the eligibility of applicants and will invite only eligible candidates for an online matchmaking session scheduled between 30 and 31 March 2027. Following the matchmaking sessions, participants who have identified suitable collaborators and established a research team will receive an invitation from the LDE team to register for a research proposal writing workshop. The workshop will be held at Universitas Gadjah Mada (UGM) in Yogyakarta, Indonesia on 11-12 May 2027.

For an overview of the timeline and key milestones, please refer to the diagram below:



6. Important Dates

Step	Description	Timeline
1. Submission of Expression of Interest	Individual researchers from LDE, partner universities in Indonesia and (if applicable) representatives from the private sector submit an Expression of Interest (EoI) separately by uploading a maximum two-page Profile template which contains personal details, a brief summary of your profile, **research interests,** and **5 most relevant** publications. Please fill out the required information and upload it **to the** shared folder**.**	2 Nov 2026 - 2 Feb 2027
2. Networking & Online Matchmaking	To facilitate networking and initial communication, LDE provides a shared folder where potential collaborators can explore each other's research interests. Researchers are invited to proactively connect with other potential partners. Additionally, Zoom meetings will be organized to facilitate discussions for online match making session scheduled between 30 and 31 March 2027.	30 & 31 March 2027
3. Collaborative Research Workshop	Once teams are established, LDE & the Ministry of Higher Education, Science, and Technology (MoHEST) will host an information session on budget allocation and proposal requirements**.** This session will provide guidance on structuring proposals effectively. Each team is also expected to discuss and write extended outline for the proposed research project.	11-12 May 2027
5. Proposal Submission	The final proposal must be submitted by 30 June 2027**.** Please see previous awarded proposals in the Annex for your reference.	30 June 2027
6. Proposal Review & Announcement	Reviewers from MoHEST and LDE will review all submitted proposals and announce the successful applicants in September 2027.	September 2027

7. Evaluation Process

Reviewers appointed by MoHEST and LDE will assess proposals based on their alignment with the Indonesian Government's priorities in advancing the down streaming of research results. Given the complexity of this initiative, proposals must demonstrate innovative approaches, such as frugal innovation, to develop impactful solutions that benefit the government, industry, and/or local communities.

To ensure practical value, proposals will be evaluated on their ability to actively engage relevant stakeholders throughout the research process. This includes mechanisms for facilitating the adoption and implementation of research findings at the project's conclusion.

The evaluation will consider the following key criteria:

1. Relevance
    - Alignment with the national government priority programs and broader societal challenges.
    - Potential to support the Indonesian government's down streaming *(hilirisasi*) efforts.
2. Innovation and Feasibility
    - Application of frugal innovation or other novel approaches.
    - Clear methodology and realistic implementation plan.
3. Stakeholder Engagement
    - Active involvement of government, industry, and/or local communities to ensure societal impact.
    - Strategies for knowledge transfer, if appropriate.
4. Research Output
    - Contribute to the practical implication for sustainable development and meaningful societal change.
    - Potential for adoption by local government, industry, and/or local communities.

By integrating these evaluation criteria, the selection process aims to identify proposals that drive real societal impact, ensuring research efforts translate into practical, sustainable, and transformative solutions.

The keywords are down streaming, frugal innovation, and sustainability.

8. Project Duration and Execution

Selected research projects will be funded by:

a. Dutch applicants: Leiden, Delft, Erasmus Universities Alliances (LDE)
b. Indonesian applicants: the Indonesian Endowment Fund for Education and Research (LPDP)

Each awarded research team will be supported up to three years, but the support for the second and third year is subject to the first- and second-year review. Typical a-3-year research project will be funded up to 800 million Indonesian Rupiah (about 40.000 euro). LDE contribution will be calculated by the time invested in the collaboration using 1st research funding stream and 1-time annual international mobility out of pocket costs provided by LDE Centre in Indonesia (subject to availability).

Contact Person

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9. Annex: Example of Previous Awarded Joint projects INUCoST Batch 2

Topic A: Health

I. **Pharmacist-Led Digital Intervention to Improve Medication Adherence and Clinical Outcomes in Primary Healthcare and Community Pharmacy Settings**
Principal investigators: Rani Sauriasari – Universitas Indonesia Niels H. Chavannes – LUMC/Leiden University
Abbreviated **Project Description**: **Summary**: the context, goal and societal impact/(inter)national importance of the proposed plan. If applicable, the details of potential private or public partners. If applicable, the details of potential follow up activities in education, research development, and/or forms of impact. (do not exceed the maximum of 800 words). **Context** Medication adherence amongst patients with COPD and Asthma remains a persistent issue1,2. Poor adherence amongst this population causes significant deterioration of their well-being by increasing the risk of exacerbations which affect their physical health as well as their psychological health3-5. Non-adherence can have various reasons amongst which, that patients do not initiate the medication that has been prescribed, the medication is not being used as intended, or they are not complying with their therapy6. The correct use of medication and adherence to treatment is the responsibility of both the patients as well as the healthcare professional (HCP) such as, physician, pharmacists, or nurse. Additionally, it has been shown that patients who have lower health literacy or digital literacy are often more affected by the lack of medication adherence7-9. Therefore, it is important to assess people's health and digital literacy when aiming to improve medication adherence to ensure interventions are tailored to their needs and abilities. Research suggests that by improving medication adherence, the overall well-being of a patient will improve and that the economical and societal burden of asthma and COPD will decrease. Therefore, this study aims to enhance medication adherence amongst patients with COPD and Asthma through the following research proposal: "Pharmacist-Led Digital Intervention to Improve Medication Adherence and Clinical Outcomes in Primary Healthcare and Community Pharmacy". **Study design** The aim of this study will be achieved by conducting a hybrid type I trial in which the effectiveness of the intervention is tested and preliminary data on implementation (e.g., feasibility, acceptability, barriers) is collected simultaneously through qualitative research activities. The intervention group will make use of an already existing Phar-Care Mobile App (PAMA) covering educational videos with inhaler techniques, a chatbot, and medication adherence monitoring. The app will be further developed with the use of AI to enhance patient-centered-care. Additionally, it will also incorporate the Test Adherence to Inhalers (TAI) test and toolkit10,11. The TAI test and Toolkit will first be translated to Bahasa and validated in Indonesia. The control group will receive care and information about medication usage per the existing care process. Goals, and financial and societal impact (international importance) The goal of this study is to enhance the medication adherence amongst patients with COPD and/or asthma to improve patient outcomes by increasing their overall well-being and quality of life. A lack of medication adherence can prolong or intensify exacerbations, often requiring booster doses and, in severe situations, hospitalization. These hospitalizations have a significant impact on

the healthcare costs and are labour intensive for the healthcare workers12,13. Therefore, the impact of this research stretches beyond improving patient outcomes but also aims to contribute to the decrease of the healthcare burden and economical burden of COPD and asthma.
Many studies about medication adherence have been performed in the Netherlands and other countries in Europe, however, there is still a lack of research conducted in South-East Asia to improve patients' medication adherence. All the learnings that have been collected in the European setting can be utilized to develop a successful study for the Indonesian setting to also help reduce the healthcare costs and burden of COPD and asthma in Indonesia.
Additionally, this study will specifically focus on assessing the health and digital literacy of the patients and the digital literacy of the pharmacists. By assessing literacy, the intervention can be tailored to participants' needs, improving inclusivity and uptake among those who need it most while also addressing sociodemographic and societal impact.
Involvement of private and public partners

The public partners that participate in this project are the Department of Pharmacology and Clinical Pharmacy at the University of Padjadjaran, the Leiden University Medical Center and National eHealth Living Lab. Additionally, PT Kimia Farma Apotek, Jakarta Provincial Health Office, and Indonesian Pharmacists Association will also participate as a public (non-state) partner or public interest organization. There are no private partners involved in this study.
Follow-up activities
The outcomes and learnings of this study can contribute to the improvement of the information and education provision regarding medication use to patients with COPD and asthma when they receive their medication. This information can be provided by pharmacists or other HCPs. Additionally, the learnings and outcomes can be shared with other researchers as educational purposes and can also be translated to other chronic conditions in which non-adherence is a persisting issue. The World eHealth Living Lab, founded by Prof. Niels Chavannes, is a frontrunner in developing and delivering education, and enabling accessibility worldwide.

TOPIC B: **Energy Transition**

I. Integration of Multi-Type Hydropower Plants through Water Balance and Diversion Modelling Framework for Islands Sustainable Green Energy focusing on Remote-Rural Areas

Principal investigators:
Hadi Kardhana – Institut Teknologi Bandung (ITB)
Olivier Hoes – TU Delft

Abbreviated **Project Description**:
Summary: the context, goal and societal impact/(inter)national importance of the proposed plan. If applicable, the details of potential private or public partners. If applicable, the details of potential follow up activities in education, research development, and/or forms of impact. (do not exceed the maximum of 800 words).
Achieving national decarbonization targets and guaranteeing fair access to electricity throughout its geographically dispersed archipelago present two challenges for Indonesia's energy transition. Even though Indonesia's electrification rate has surpassed 99%, there are still large gaps in isolated islands and rural areas where people are still not connected to the national grid. These regions frequently face fewer economic prospects, restricted access to healthcare and education, and diminished resilience to environmental and climate shocks.
still largely depends on fossil fuels, especially coal. Such a dependence worsens climate vulnerability, public health hazards, and environmental degradation. On the other hand, hydropower is a strategically significant renewable energy source for and isolated islands and rural areas, particularly for small to medium scale projects. Although Indonesia is abundant in

hydrological resources, current national hydropower assessments are technically oriented and not integrated with social, spatial, and governance factors. Additionally, most studies treat hydropower schemes, e.g., run-ofriver, storage, and pumped-storage, as distinct options. As a result, these studies are less useful for thorough regional energy planning. Therefore, an integrated, comprehensive planning framework that synchronizes hydrological potential with local development requirements and electrification priorities is urgently needed.

This gap is directly addressed by the proposed project, Integration of Multi-Type Hydropower Plants through Water Balance and Diversion Modelling Framework for Islands Sustainable Green Energy focusing on Remote Rural Areas. The primary goal of the project is to develop an integrated modelling and decision-support framework that combines water balance analysis, diversion algorithms, and spatial-socioeconomic indicators to support equitable hydropower-based energy transition planning. The project aims to identify hydropower opportunities in a variety of island and rural settings with greater flexibility, context sensitivity, and efficiency by combining run-of-river, storage, and pumped-storage schemes into a single analytical framework.

The project prioritizes areas with low electrification levels while incorporating procedural equity and energy justice into technical modelling. To find viable hydropower locations, spatial data on terrain, land use, infrastructure, and population distribution will be integrated with hydrological simulations using SWAT+. In order to ensure that modelling outputs are based on local realities and socially acceptable development pathways, these technical assessments will be supplemented by stakeholder engagement through Focus Group Discussions (FGDs) involving local governments, communities, and energy actors. The final framework is intended to serve as a useful decision-support system for regional and national energy planners in addition to being an academic tool.
From a social standpoint, the project helps underprivileged communities become more resilient and welfare-oriented. Reliable access to electricity boosts the local economy, improves healthcare and education, improves logistic connectivity, and lessens dependency on energy sources that harm the environment. The project also promotes capacity building and long term sustainability by focusing on small-scale and community-relevant hydropower solutions. We aim to incorporate in the framework environmental flow requirements and water balance constraints, so that the solution suggested does not compromise ecosystem integrity or downstream water users. At the national level, the project is in line with strategic development priorities like energy security, the expansion of the green economy, and fair regional development, and it supports Indonesia's Net Zero Emissions 2060 roadmap.

The partnership between TU Delft and Institut Teknologi Bandung (ITB) makes the project significant on a global scale. This partnership enhances bilateral knowledge sharing and adds to international conversations about sustainable energy transitions in socially diverse and data-poor areas. Other nations dealing with comparable geographic and developmental issues can learn a lot from Indonesia's island contexts. The collaboration blends the Netherlands' proficiency in data-driven planning, water resources modeling, and energy. transition governance with Indonesia's contextual understanding of complex sociohydrological systems.
Beyond academia, local and regional governments, national energy agencies, and private sector entities interested in investing in sustainable energy are potential partners. Later on in the project, there will be chances to interact with utility companies, developers of renewable energy, and community cooperatives, especially when it comes to the pilot implementation

and operation of hydropower systems. For the **follow up activities**, the project, especially in partnership with TU Delft, promotes capacity building in education through student participation, cooperative supervision, training programs, and short courses. The framework lays the groundwork for further research on integrated renewable energy systems, business models for rural energy infrastructure, and energy planning on the island scale. Pilot hydropower projects integrated regional energy roadmaps, and scalable tools that practitioners and policymakers can use are all part of the long-term vision. The project advances scientific understanding and practical strategies for Indonesia's and other countries' equitable, inclusive, and sustainable energy transition.

INUCoST Batch 1

TOPIC: **Energy Transition**

II. Towards Democratic, Just, Resilient, and Sustainable Energy Transition in New Capital of IKN and Its Surrounding Areas: Study on Smart Energy System to Support Clean, Democratic, and Just Energy Governance
Principal investigators: Hasrul Hanif – Universitas Gadjah Mada Jaco Quist – TU Delft
Abbreviated **Project Description**: This project adopts a comprehensive research approach by combining both doctrinal and non-doctrinal legal analysis to explore the socio-legal implications of the energy transition. Initially, secondary data, including legal texts, regulations, policy documents, and scholarly literature, will be gathered through desk research to establish a foundational understanding of the existing legal framework. Following this, primary data will be collected through qualitative methods, such as interviews with key stakeholders—affected individuals, policymakers, civil society organizations, and other relevant actors. By incorporating diverse perspectives, this approach allows the research to capture the nuanced social impacts and challenges of the energy transition. The qualitative focus ensures an in-depth understanding of personal experiences, contextual factors, and policy implications, avoiding the limitations of quantitative generalizations and providing rich, detailed insights that are crucial for shaping effective, equitable energy policies. A special case study will be made in the region of South Sulawesi, given the availability of renewable energy sourcing from the region. This project will impact scientifically by providing on-the-ground level state of affairs regarding the implementation of just energy transition in Indonesia. Thus, information and data provided will further create impact for the upcoming scholarship in the similar field. This project holds significant beneficial impacts on society, particularly by addressing pressing societal challenges related to the energy transition. The study of law and governance in this context enables a deep understanding of the complex dynamics and challenges involved, such as regulatory frameworks, societal equity, and environmental sustainability. By producing policy papers, the project provides policymakers with actionable insights, allowing them to make informed decisions that balance economic, social, and environmental needs. This empowers communities and governments to navigate the energy transition more effectively, ensuring that the process benefits society as a whole. In particular, it contributes to meeting societal challenges like reducing carbon emissions, fostering social inclusivity, and promoting long-term energy security.