

March 3, 2025 Japan Science and Technology Agency (JST) 5-3, Yonbancho, Chiyoda-ku, Tokyo 102-8666

JST to jointly fund three research projects with MBIE of New Zealand on the theme of Disaster Mitigation, Response and Recovery under the SICORP framework

The Japan Science and Technology Agency (JST) has approved funding for three new collaborative international research projects jointly with the Ministry of Business, Innovation and Employment (MBIE) ^{*1} of New Zealand in the research field of "Disaster Mitigation, Response and Recovery" under the Strategic International Collaborative Research Program (SICORP)^{*2} (Attachment 1).

JST and MBIE received a total of 28 proposals for this call which was open from July to October 2024. Three were selected after evaluation by a panel of experts (Attachment 3). The research period is scheduled to be three years (36 months).

*1 About MBIE http://www.mbie.govt.nz/ *2 About SICORP https://www.jst.go.jp/inter/english/index.html

Attachments

- 1. Outline of Funded Projects
- 2. Call for Proposals Outline
- 3. Experts for the Evaluation (Japan side)

Inquiries

Department of International Affairs, JST K's Gobancho, 7 Gobancho, Chiyoda-ku, Tokyo 102-0076 SUGAWARA Masae Tel: +81-3-5214-7375 Fax: +81-3-5214-7379 E-mail: jointnz[at]jst.go.jp

Outline of Funded Projects

	Project Title	Principal Investigator (Japan)	Affiliation	Passarah Abatraat	
Project Inte		Principal Investigator (New Zealand)	Amilation	Research Abstract	
1	Constraining Hikurangi earthquake scenarios by CAT scanning the Tohoku M9 rupture area	FUJIE Gou	Director (Principal Scientist), Subduction Dynamics Research Center, Research Institute for Marine Geodynamics, Japan Agency for Marine-Earth Science and Technology	This research project aims to investigate the possibility of a giant tsunan in New Zealand by comparing the subsurface structure of the Japan Trench where a giant tsunami was generated during the 2011 Tohoku Earthquake with that of the Hikurangi Trench in New Zealand. The Japanese team will conduct controlled-source seismic surveys in th Japan Trench. Both the Japanese and New Zealand teams will wor together to process the acquired data to reveal the subsurface structura features at the source of a giant tsunami. The New Zealand team will asses the potential for giant tsunami generation in the Hikurangi Trench b comparing the subsurface structural features of the Hikurangi and Japa Trench. The results of this research will contribute to the advancement of seismogenic zone monitoring, earthquake and tsunami simulation, and th assessment of the potential for giant tsunami generation in other subductio zones such as the Nankai Trough.	
		Dan Bassett	Marine Geophysicist Crustal Geophysics GNS Science		

2	Building a Japan Aotearoa Network for Catastrophic Eruption Planning	FUJITA Eisuke	Director, Research Division for Volcanic Disasters, Department of Catastrophic Geohazard Research, National Research Institute for Earth Science and Disaster Resilience	This project will build a shared understanding of ashfall risk mitigation measures employed across Japan and Actearoa, recognizing our unique
		Christina Magill	Senior Risk Scientist, Department of Society and Infrastructure, GNS Science	physical and cultural environments. Our primary aims to enhance preparedness by developing rapid modelling techniques that estimate resource requirements for ashfall response, and apply these to case-study scenarios. We will establish a collaborative network of researchers and stakeholders, enabling each country to support the other in preparing for and responding to future widespread ashfall events.

3	Modular seismic-retrofit system using advanced and sustainable materials	MAEDA Masaki	Professor, Research Center for Green X- Tech, Tohoku University	This research focuses on developing a resilient, modular, earthquake- resistant building system using non-linear elastic connectors made from PXCM (phase-transforming cellular materials) and CLT (cross-laminated timber) panels. Based on results from static tests, the Japanese team will 1) develop a design method for the proposed structural system that considers the unique properties of PXCM and CLT, and 2) create a framework to assess the environmental impact, benefits, and costs of the system. Collaborators in New Zealand will 1) design effective PXCM connectors and
		Hyungsuk Lim	Senior Lecturer, School of Forestry, University of Canterbury	CLT modules through numerical and physical simulations, and 2) contrib to the development of the design method through large-scale shake-ta testing. This research aims to promote more sustainable and resili communities by reducing the impact of earthquakes on buildings throu the combined use of timber, a renewable resource, and PXCM, a no material with the potential to drive innovation in the construction industry

Call for Proposals Outline

Funding Organizations

Japan: Japan Science and Technology Agency (JST) New Zealand: Ministry of Business, Innovation and Employment (MBIE)

Research area

Disaster Mitigation, Response and Recovery

Eligibility

- Any independent researcher personally affiliated with and actively conducting research at a domestic Japanese research institution (or who would fulfil this requirement by the start of the research project), regardless of nationality, is eligible to apply.
- "Domestic Japanese research institution" refers to universities, independent administrative institutions, national/public testing and research institutions, specially authorized corporations, public-service corporations, and enterprises, etc. that must satisfy pre-determined requirements designated by the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

Research period

3 years (36 months)

Amount of funding

Japan: up to 18 million yen from JST to the researchers (Japan side) per project over 3 years, including overhead costs (30 percent of direct costs).

Evaluation method

Based on evaluation by experts from the two countries and discussion between JST and MBIE.

Evaluation criteria

- 1. Compliance with the funding aims and purpose of the announcement as stated in the call for proposals and the thematic requirements.
- 2. Scientific criteria: Topicality, plausibility, and innovativeness of the project approach.
- 3. Scientific criteria: Quality, expertise, and complementarity of the applicant(s) with regard to the objectives of the project, including active participation and involvement of companies and organizations.
- 4. Impact of the project at a scientific, economic, and societal level.
- 5. Compatibility with preconditions for cooperation with the partner country.

Name	Position and Institution	Role
TADOKORO Satoshi	Professor, Graduate School of Information Sciences, Tohoku University	Program Officer
UEDA Naonori	Deputy Director, Center for Advanced Intelligence Project, RIKEN	Advisor
OHZONO Mako	Professor, Institute of Seismology and Volcanology, Faculty of Science, Hokkaido University	Advisor
TAMURA Keiko	Professor, Risk Management Center, Headquarters for Risk Management, Niigata University	Advisor
HISADA Yoshiaki	Professor, Department of Urban Design and Planning, School of Architecture, Kogakuin University	Advisor
HIROI U	Professor, Research Center for Advanced Science and Technology, The University of Tokyo	Advisor

Experts for the Evaluation (Japan side)