



The Regional Network Office for Urban Safety (RNUS)

Monthly Report (November 2024)

Report to STE/SET

Prepared by RNUS

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1.1 Summary

This report summarizes the activities done in RNUS office during the month of November 2024. Progress has been summarized in the following orders:

- 1) RNUS Outreach Activities
- 2) Progress on Research Activities
 - Satellite-based flood map (support in RIMES's project)
 - Water level measurement with low-cost device for CH4 emission mitigation in Thailand
 - Structural Health Monitoring with remote sensing techniques
 - Study on post-disaster recovery dynamics
 - Study on Development of Land-use Optimization tool
- 3) Plans

1.2 RNUS Outreach Activities

The RNUS Seminar series 3/2024 was held Online on 29th November 2024 (14:00~15:00) with lectures by Prof. Miho Ohara (Professor, IIS, UTokyo) with the topic “How can online environment enhance flood disaster risk reduction?”; and Dr. Seree Supharatid (Director, Rangsit University's Centre on Climate Change and Disaster) with the topic on “Flood situation in Thailand”.

Attendance of 55 members were recorded.

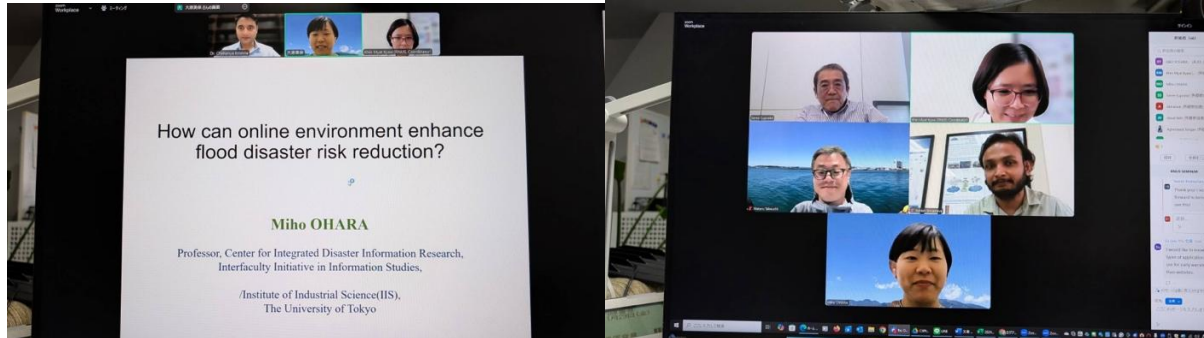


Figure-1 RNUS Seminar Series 3 webinar

Delegates from Ochanomizu University, including president and vice-president, visited RNUS office to enquire about the ongoing research activities at RNUS.



Figure-2 Hosting delegates from Ochanomizu university

1.3 Progress on Research Activities

1.3.1 Satellite-based flood map (support in RIMES's project)

On November 7th, 2024, a meeting was held at the RNUS office with the RIMES team. The agenda included discussing the procedures for drone operations, finalizing the exact date and time for the survey flight, obtaining the necessary permissions from the Department of Disaster Prevention and Mitigation (DDPM), and addressing other essential details. A series of flights using LiDAR-equipped drones is scheduled to take place from December 3rd to December 4th, 2024, in Ta Chang municipal area. The purpose of these flights is to create a Digital Elevation Model (DEM) with higher resolution and greater detail.

1.3.2 Water level measurement with low-cost device for CH₄ emission mitigation in Thailand

Water level sensors which were installed inside RID paddy field in Nakhon Pathom, were regularly checking for their functionalities. Regular checks revealed that two out of four water level sensors were malfunctioning. The RNUS team is in ongoing communication with the manufacturing company to arrange for the necessary repairs.

1.3.3 Structural Health Monitoring with remote sensing techniques

No update for this month.

1.3.4 Study on post-disaster recovery dynamics

Progress on research on sub-model development of post-disaster recovery dynamics was presented at the 17th Asian Planning Schools Association (APSA) Conference held in Chulalongkorn University, Bangkok in November. The work titled “Modeling the Post-disaster Financing Process for Housing Recovery in Japan,” is based on the ongoing work which attempts to model the process of attaining financing for housing recovery in the disaster aftermath. Current detailed models which look at the differing outcomes in recovery due to limitations in access to resources are scarce and existing models are focused on the American financing system. This research focuses on modelling the financing process of affected people in the 2011 Great East Japan Earthquake, and therefore the Japanese financing system. The eventual aim is to include this sub-model as part of the ABM recovery model.



Figure-1 Presentation by Dr. Yasmin at APSA

1.3.5 Study on Development of Land-use Optimization Tool

No update for this month.

1.4 Plans

Dr. Yasmin will be out of RNUS office from 11th December~13th November 2024 for International Symposium on 20th Anniversary Indian Ocean Tsunami in Khao Lak, Thailand.

Dr. Khin will be out of RNUS office from 18th December 2024~20th January 2025 during semester break. In this semester, Dr. Khin serves as a committee member for one student in the Civil Engineering and Infrastructure Management (CEIM) program. In this role, Dr. Khin provides guidance, evaluates the student's progress, and participates in decision-making processes related to the student's academic and research activities.