GEOINFORMATICS CENTER
NEWSLETTER
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IPPIN Incubator Program 2025

GIC was selected as one of the 31 teams from Thailand, Laos, Vietnam, and Indonesia for the IPPIN Incubator Program for its innovative technology, **pLitter CCTV**. The team was led by Ms. Ushnish Tuladhar, alongside Mr. Karun Mooksrisai and Mr. Hau Nguyen, and successfully completed the five-week program. Ms. Ushnish presented the technology at the Plastic Innovation Spotlight held on 17 June 2025.

In this issue

Highlighted Events

Outreach Activities

Knowledge Sharing

Geospatial Product

3rd TNDR Conference

Mr. Karun (left) presenting his poster at TNDR conference and being awarded Best Poster Presenter (right)

The 3rd National and International Academic Conference, organized by the Interdisciplinary Program in Risk and Disaster Management, Chulalongkorn University, in collaboration with the Thai Network for Disaster Resilience (TNDR), was held on 13 June 2025.

Mr. Karun Mooksrisai, Research Associate at GIC, received the Best Poster Presenter award for his study titled "**Flood Risk from Plastic Accumulation in the Drainage System: A Case Study of Bang Bua, Bangkok.**" The research examined the impact of plastic waste on urban flooding using GIS mapping, field surveys, and community-sourced data.

Regional Project M&E Training Program

Ms. Tuladhar (center) awarded participation certificate by MI team; presenting our project during peer review session at the training (right)

Ms. Ushnish Tuladhar, Research Associate at GIC, participated in a training program held at the Mekong Institute (MI) from 9–13 June 2025 as part of the PlasticFlow Mekong Project, funded by the Mekong–Republic of Korea Cooperation Fund (MKCF). The training provided hands-on experience with PRIME-developed M&E tools, including Logical Frameworks, RBM, risk management, indicator development, and sustainability strategies.

International Forums and Workshops

GIC, AIT-ADB Partnerships

Mr. Nashrrullah (left) at ADB workshop in Singapore

GIC Director, Dr. Manzul presenting at ADB workshop

Mr. Syams Nashrrullah, Senior Research Specialist at GIC, was invited to speak at the event "From Roots to Revenue: Securing Finance and Climate Solutions Through Agroforestry – The Case of Bamboo" in Singapore. He presented on "**Earth Observation and GIS Solutions: Potential Use Cases for the Bamboo Industry**," sharing insights from geospatial applications in high-value commodity sectors such as coffee.

Dr. Manzul Hazarika, Director of GIC, presented at the Asia Pacific Digital Transformation Forum held at ADB Headquarters in Manila, Philippines on 22 April 2025. His talk, "**Potential Applications of EO Data in Various Sectors**," highlighted the use of EO in disaster risk assessment, urban mapping, crop monitoring, and air quality monitoring.

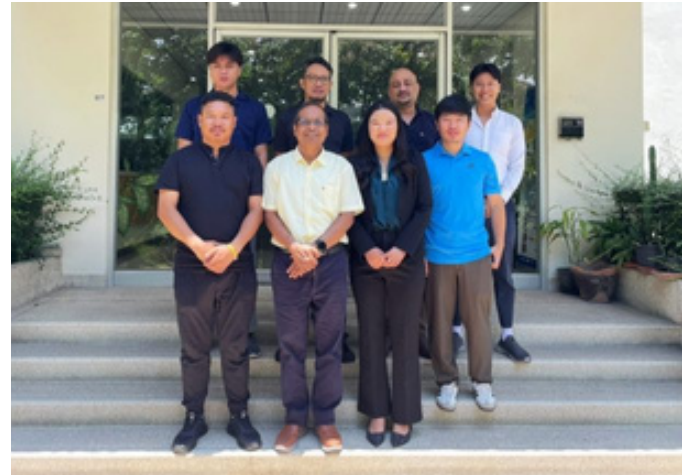## Mekong ROK Forum Participation

Dr. Boonma presenting on PlasticFlow Mekong project

Dr. Kittiphon Boonma joined the **Mekong−ROK Advancing Regional Development and Partnership Forum** as a delegate of the MKCF team in Hanoi, Viet Nam. He presented the PlasticFlow Mekong Project, discussing its implementation, challenges, and lessons learned from a regional development perspective.

Trainings

Drone Image Processing and Analysis for Glacier Monitoring

GIC conducted a two-week training program on "**Drone Image Processing and Analysis for Glacier Monitoring**" from 28 April to 9 May 2025 for participants from the National Centre for Hydrology and Meteorology (NCHM), Bhutan. The course covered drone survey planning, image processing, and high-resolution glacier mapping through classroom and hands-on sessions.

GIC team with participants from NCHM, Bhutan

Multi-Hazard Risk Assessment Training

Ms. Salsabila facilitating practical session on RiskChanges

Ms. Salsabila R. Prasetya, Research Associate at GIC, led hands-on sessions on Multi-Hazard Risk Assessment, introducing the RiskChanges platform and its features, which is being developed by GIC and ITC, University of Twente.

Dr. Manzul Hazarika, Director of GIC, joined virtually to present on "Leveraging ICT for Disaster Response," highlighting GIC's work through Sentinel Asia and the International Charter on Space and Major Disasters.

Hydro-Meteorological Forecasting using Python and GEE

GIC participated as trainers in the workshop under the **Thailand Hydrometeorological Seasonal Forecasts (THSF) project**, funded by Thailand's Agricultural Research Development Agency (ARDA) on 5–6 June 2025.

Dr. Kittiphon Boonma led sessions on Python-based data processing via Google Colab, and Mr. Thanaphol Boodchuang conducted training using Google Earth Engine (GEE) for THSF data.

Dr. Boonma facilitating practical session on Python

Sentinel Asia Training at Indonesia

This training was jointly organised by the Badan Riset dan Inovasi Nasional (BRIN), Japan Aerospace Exploration Agency (JAXA), and Geoinformatics Center (GIC) in Jakarta, Indonesia on 16-18 June 2025 under the Sentinel Asia Project. This training aimed to strengthen national capacity in disaster response by equipping participants with the knowledge and practical skills to use Synthetic Aperture Radar (SAR) data for disaster mapping and damage assessment.
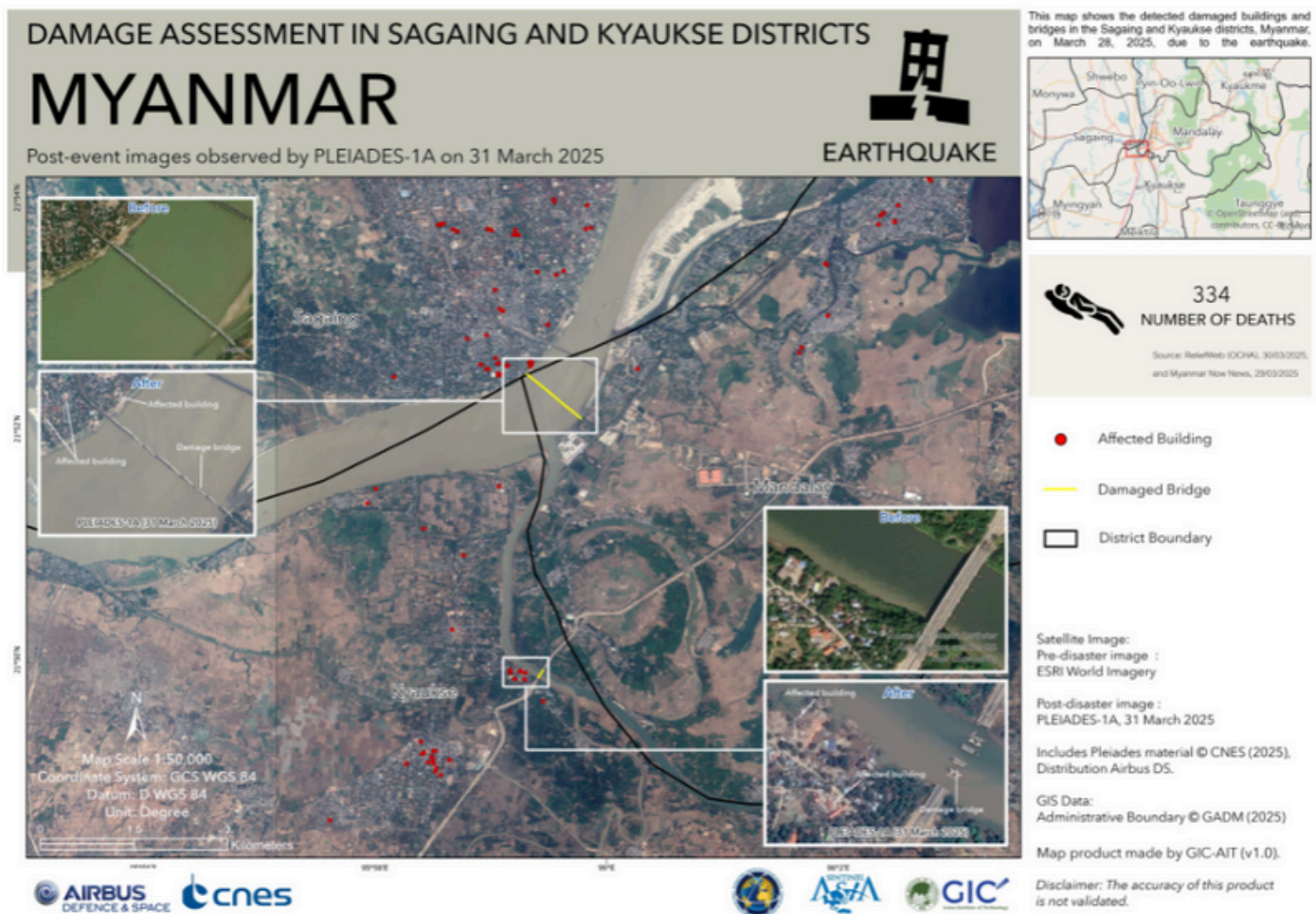

Mr. Nashrrullah (left) at Sentinel Asia training

Mr. Thanaphol (left) at Sentinel Asia training

Mr. Syams Nashrrullah and Mr. Thanaphol Boodchuang, were invited as lead trainers and facilitators for the training program. Mr. Nashrrullah led sessions on the ***SAR-based flood mapping***, while Mr. Boodchuang delivered a presentation on "***Remote Sensing Applications for Damage Assessment.***" Hands-on sessions on ALOS-2 and Sentinel-1 data processing using SNAP, QGIS, and Google Earth Engine (GEE) were also conducted as a part of the training.

Earthquake in Mandalay, Myanmar

(Sentinel Asia Activation, 573)

Map of pre and post earthquake of Mandalay, Myanmar

Following the magnitude 7.7 earthquake near Mandalay, Myanmar on 28 March 2025, GIC produced post-disaster satellite-based maps for the affected regions, including Sagaing and Kyaukse districts.

Using pre-disaster imagery from ESRI (30 cm) and post-disaster imagery from Airbus PLEIADES-1A (50 cm), GIC analyzed damage extent and delivered two Value-Added Products (VAPs) on 31 March 2025 to support rapid response and impact assessment.