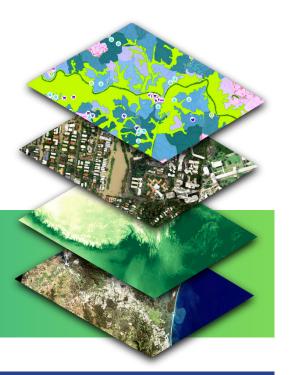# GEOINFORMATICS CENTER

NEWSLETTER

October 2024

Project Kick-off: Pilot testing of AI-CCTV in the Gulf of Thailand

GIC officially kicked off the project to pilot test the possibility on the utilisation of CCTV for plastic monitoring at the river mouth of the Gulf of Thailand " on 31 July 2024. This project is a joint collaboration between DMCR, Japan International Cooperation Agency (JICA), and Geoinformatics Center of the Asian Institute of Technology.

In this issue

Highlighted Events

Knowledge Sharing: Technical and General

Outreach Collaboration

Geospatial Product

GIC, AIT–UNEP Partnerships in Tackling Plastic Pollution

The Asian Institute of Technology, Thailand, has a prolonged partnership with the UN Environment Programme's Regional Asia Pacific Office to deliver the region's best practices for plastic pollution. In this opportunity, GIC is the technical expert for plastic monitoring discussions.

GIC Research Specialist (Dr. Kittiphon Boonma) presenting on pLitter

CCTV demonstration at Bang Bua

In the section with the training on use of pLitter CCTV, GIC presented in-depth on pLitter AI-CCTV for plastic monitoring in rivers followed by field demonstration for its CCTV unit at Bang Bua. This event was organised by Mahidol University and UNEP on 9 August 2024.

SEA of Solutions 2024

GIC team at SoS 2024

GIC team at field demonstration of SoS 2024 at Public Park

GIC team participated at the Sea of Solutions (SoS 2024) conference organized by SEA circular, a joint initiative by the UN Environment Programme and the UNEP COBSEA supported by the Government of Sweden on 18-20 August 2024. Our team set up a booth showcasing our innovative technologies pLitter CCTV and a mobile app. A field demonstration for the pLitter CCTV was conducted on the last day of the conference.

InSAR Ground Displacement Monitoring & Cloud SEOS Workshop

A Cloud-based Satellite Earth Observation Services (Cloud SEOS) and Geohazard Exploitation Platform (GEP) training sessions was successfully conducted in collaboration with the National Research and Innovation Agency (BRIN) and the Asian Development Bank (ADB) from 28 July to 2 August 2024.

In this training series, GIC facilitated training to the participants from BRIN on the Cloud SEOS and GEP services and led hands-on training, familiarizing participants with earth observation data, especially from the EU's Copernicus constellation.

GIC Research Associate, Swun Wunna Htet (centre) training on Cloud SEOS

GIC Director, Dr Manzul Hazarika (left) with BRIN executives and ADB representatives

PyAEZ Training for Crop Suitability

Mr. Swun Wunna Htet and Dr. Htet Yamin Ko Ko from our GIC team were invited by FAO, in collaboration with GIC-AIT and IIASA, to a two-week training on "User-specific PyAEZ Extensions for Assessing Crop Suitability and Potential Production at a Local Scale" as part of the SoilFER project.

GIC team at FAO, Italy

During the visit, GIC presented the revision and validation status of PyAEZ Modules 2, 3 and 4, focusing on addressing algorithmic and knowledge gaps in align with standard AEZ framework. Additionally, GIC collaborated with FAO on the SoilFER project and explored digital soil mapping techniques with the FAO Soil Team.

GLOBIO-based Biodiversity Intactness Index (BII) Training

GIC Research Associate, Thanaphol Boodchuang (left) presenting on Google Earth Engine

GIC team with Prof. Rajendra Shrestha (centre) and FAO participants

GIC conducted an advance training program on GLOBIO-based Biodiversity Intactness Index (BII) and how to work with satellite-derived flood-related data products on Google Earth Engine on 19-20 August 2024 for FAO delegates from Afghanistan. This was a part of the project "Assessment of Natural Resources, Land Degradation, Biodiversity and Climate Change Impacts Using Geospatial Technologies and Building Capacities". The training aimed at enhancing the capacities of the participants in the assessment of natural resources, land degradation, biodiversity, and climate change impacts in Afghanistan by using modern geospatial data and tools.

GLOF Mapping Training using Earth Observation Satellite Data

GIC Research Specialist, Syams Nashrrullah was the resource person for the Sentinel Asia training on "Glacial Lake Outburst Flood (GLOF) Mapping using Earth Observation Satellite Data" on 19-21 August 2024 at the National Center for Hydrology and Meteorology (NCHM), Bhutan. In this training, participants gained valuable insights and hands-on experience with satellite data and remote sensing.

Mr. Syams led an exercise on calculating glacier velocity using Sentinel-1 data and SNAP software, concentrating on Thorthormi Glacier Lake in Bhutan.

GIC Research Specialist, Syams Nashrrullah (right) awarding certificate of participation

AIT's New President Visit to GIC

AIT President Prof. Pai-Chi Li (centre) with GIC team

GIC welcomed the newly appointed president of AIT, Prof. Pai-Chi Li, visited the Geoinformatics Center (GIC) on 12 September 2024. During the visit, Dr. Manzul K. Hazarika, GIC Director , warmly welcomed him and delivered a presentation about the center, its areas of focus and ongoing projects. A brief tour of the centre was provided to President Li by our director.

Hohai University and Chulangkorn University-BAScii Visits

Hohai University visit to GIC on 1 July 2024

Chulalongkorn BAScii students visit to GIC on 31 July 2024

Korea-Mekong Water Center Training

The Korea-Mekong Water Center (KOMEC) organized 2nd technical workshop for the water resource management-related MKCF projects. As one of the grantees under the MKCF, which focuses on plastic waste management, GIC shared overview on the Plastic Flow Mekong project. The workshop took place from 3-4 September at Vientiane, Lao PDR where implementing partners discussed on project's technical challenges and how the best practices from Korea can contribute to the solutions.

Group photo during the 2nd Technical workshop in Lao PDR

Flooding in Chiang Rai, Thailand

Sentinel Asia Field Survey

Drone image of flooded agricultural areas in Mae Chan District, Chiang Rai

Typhoon Yagi made landfall on 10 September 2024 in landfall in the northern province of Thailand, Chiang Rai, which caused heavy rainfall and high winds. The event triggered floods that damaged several areas submerging homes and riverside villages in Chiang Rai.

GIC conducted a field survey from September 24-25, 2024, to validate flood analysis results derived from satellite imagery in Chiang Rai province under Sentinel Asia. A total of 348 sq. km land in Chiang Rai and 84 sq. km land in Nong Khai province was inundated by the typhoon.

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