GISTDA LCLUC Activities

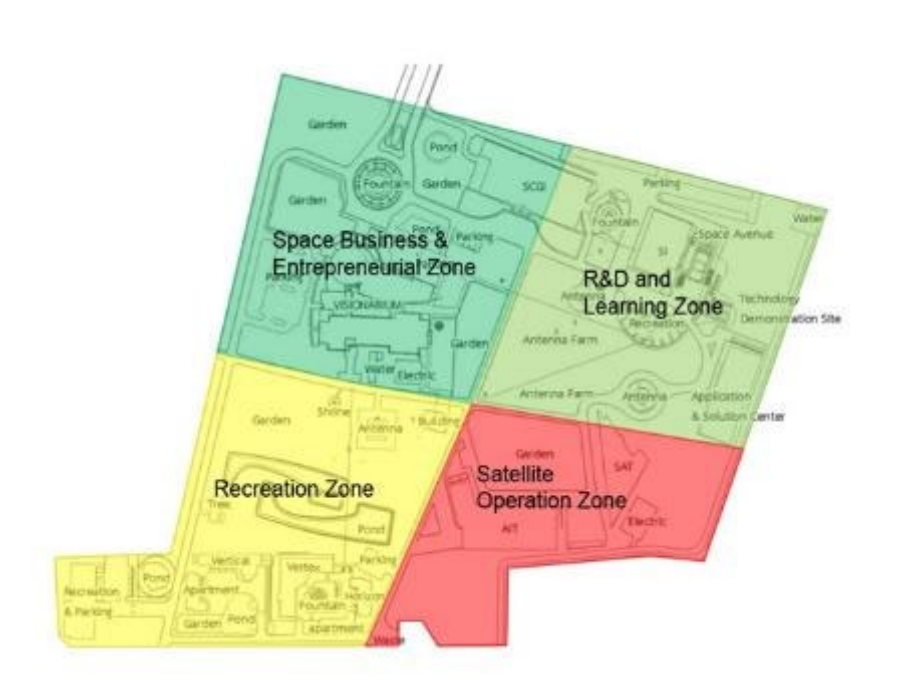
Geo-Informatics and Space Technology Development Agency(GISTDA) Office
of the Ministry of Higher Education, Science, Research and Innovation


SPACE &GEO
For Social
สระบุรี
Saraburi
จุดกลับรถ
U - TURN
305
นครนายก
Nakhon Nayok
1
กรุงเทพ
Bangkok

Space Technology

Ground Station

Space Infrastructure Service



Quasi-Zenith Satellite System (QZSS)

Receiving System

Installation and Operation System

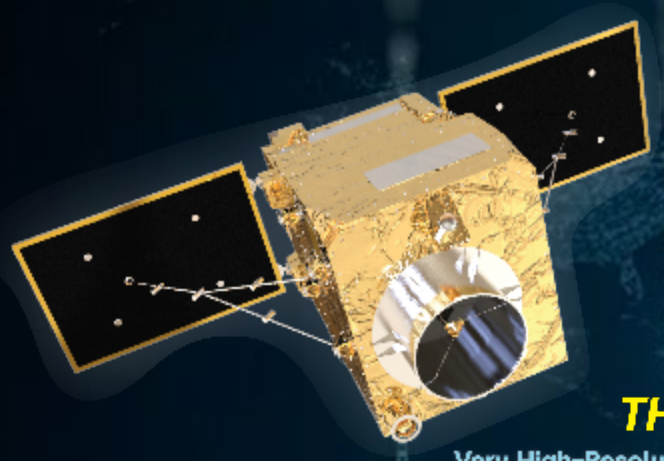
System and Service for Satellite Ephemeris Estimation (S3EE)

National Assembly Integration and Test : AIT

- Thermal Cycling Ambient Temperature cycle testing
- Thermal Vacuum Vacuum Temperature cycle testing
- Attitude Control Test
- Assembly/Integration and Test in Cleanroom
- Vibration & Shock Test
- Moment of Inertia & Center of Mass/ Center of Gravity Measurement

Thailand Earth Observation System

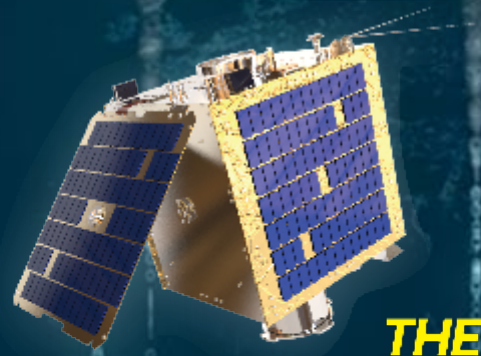
Phase 2



THEOS-2

Very High-Resolution Satellite

The replacement of THAICHOTE satellite, a very high-resolution imager and Pan - Chromatic & Visible Near Infrared (VNIR) Spectral Bands



THEOS-2A

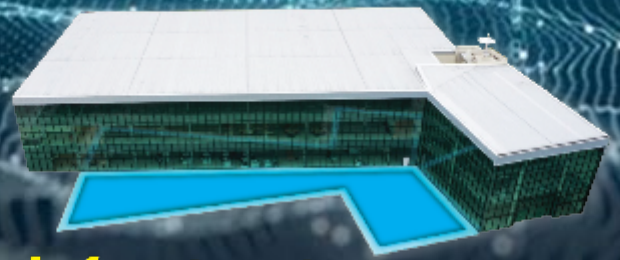
Technology Transfer Program

22 Thai engineers work along with Surrey Satellite Technology Ltd. or SSTL engineers to co-design, develop, build, and test the THEOS-2A satellite. Receiving a SSTL's license to rebuilt the satellite in Thailand

Human Capacity

Thai Satellite Engineer

Training and development of the next generation of satellite engineers to design, manufacture, integrate, and test 100 kg micro satellites in Thailand



Space Infrastructure

National Satellite Assembly, Integration & Test Center (AIT)

Capacity building of the satellite development, assembly, integration and testing at Space Krenovation Park, Thailand

Space Economy

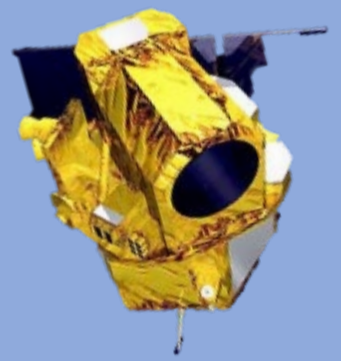
Thailand space parts

Provide opportunities for Thai SMEs and start-ups to enter the space industry business

GISTDA's SATELLITES

Built by SSTL and GISTDA engineers

THEOS (THAICHOTE)



Launch date : Oct 1st 2008

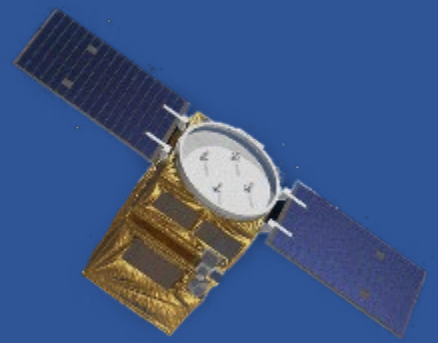
Payload : Imager Full SiC (Silicon Carbide) telescope 2m (PAN), Refractive telescope 15m (MS)

Mass : ~750 kg

Dimensions : 2.1 m x 2.1 m x 2.4 m

Orbit : ~672 km Sun Synchronous - Low Earth Orbit

THEOS-2



Launch date : 2023

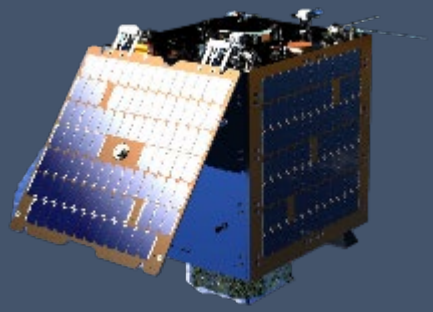
Payload : Very high-res imager (KORSCH Type with 3 SiC mirrors) 0.5m (PAN), 2m (MS)

Mass : ~425 kg

Dimensions : 1.4m x 1.2m x 1.8m

Orbit : ~621 km Sun Synchronous - Low Earth Orbit

THEOS-2A



Launch date :2023

Main Payload : High-res imager with CMOS; 1.18m (RGB), Video Capture

Mass : ~100 kg

Dimensions : 0.62m x 0.72m x 0.95m

Orbit : ~500 km Sun Synchronous - Low Earth Orbit

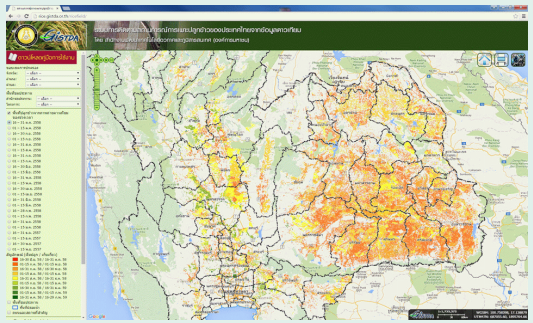
Geo Information & Solution

Applications & Solutions

▲ *Check PM2.5*

▲ *Check Drought*

People



▲ *Disaster*

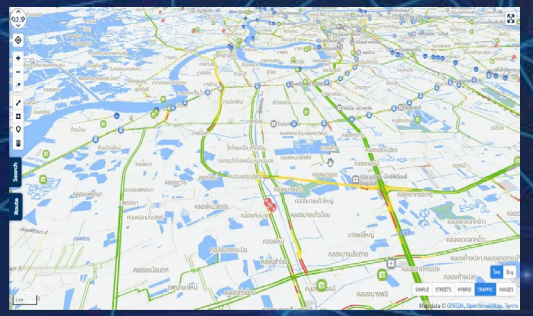
◀ *Argricurture*

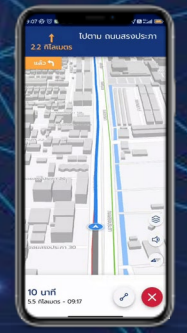
Organization

▲ *ไkhh COVID-19 iMap*

Policy

Mapping & Sharing





◀ *Sphere*

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Download on the App Store

GISTDA Application & Solution: AIP & AIR Pollution

APPLICATION & SOLUTION

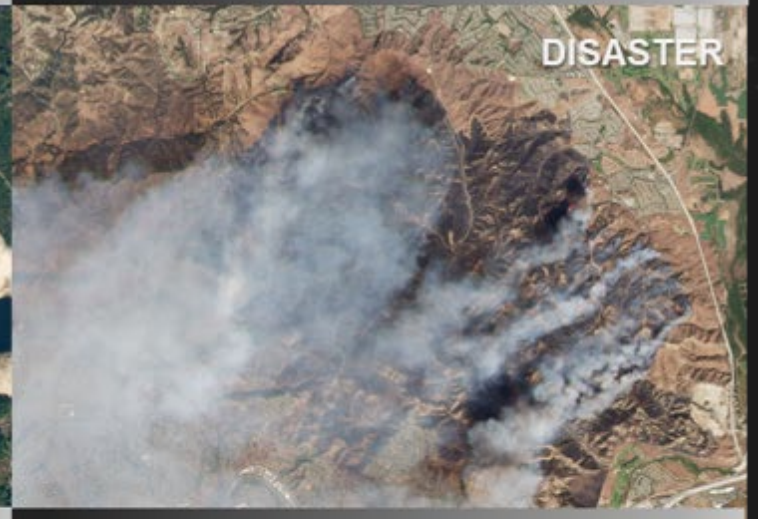
3D building, Urban planning

Forest encroachment, Deforestation, Biomass, Carbon Storage

Satellite base map, DEM/ DSM, 3D mapping

Smart farming (Crop status, Nitrogen recommendation, Yield prediction, Crop classification, Pest and disease risk map, Yield potential zoning map)

Water Storage, Water balance

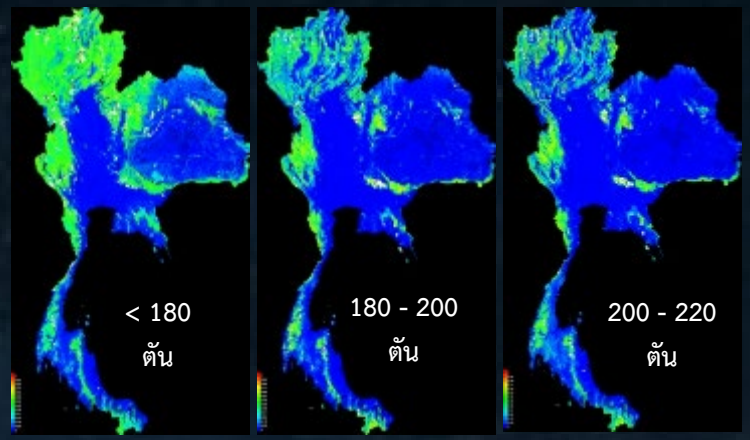


Flood extent, Flood level/ Volume, Burn Scar

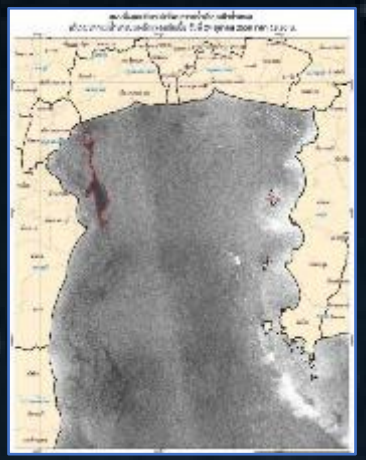
Examples of important performance results that create value for the country and organization

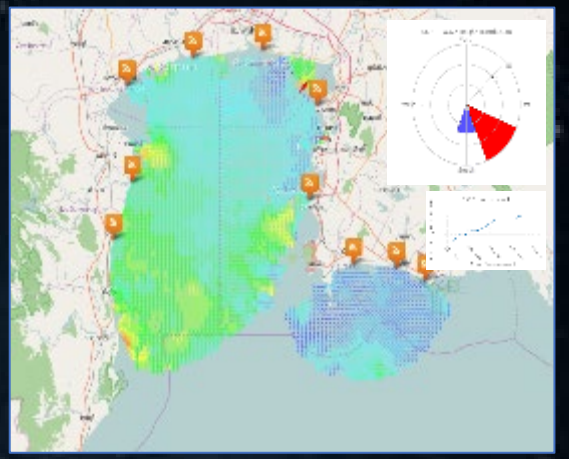
Following and Predicting the flood situation

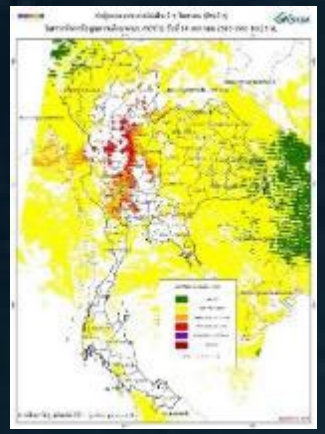
Estimating the carbon within the forest



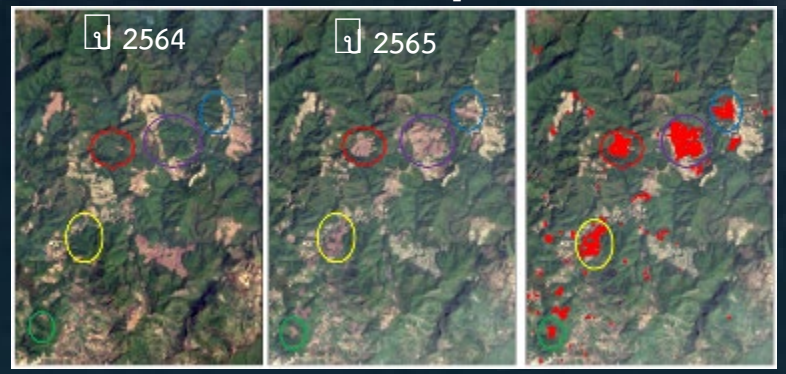
Oil spill in the Thai gulf



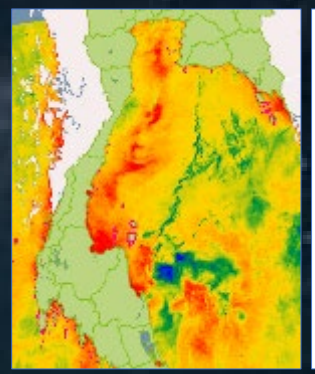


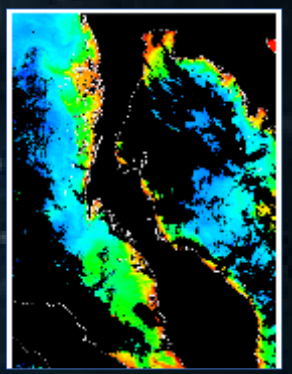


Detecting the changes in forest landscape



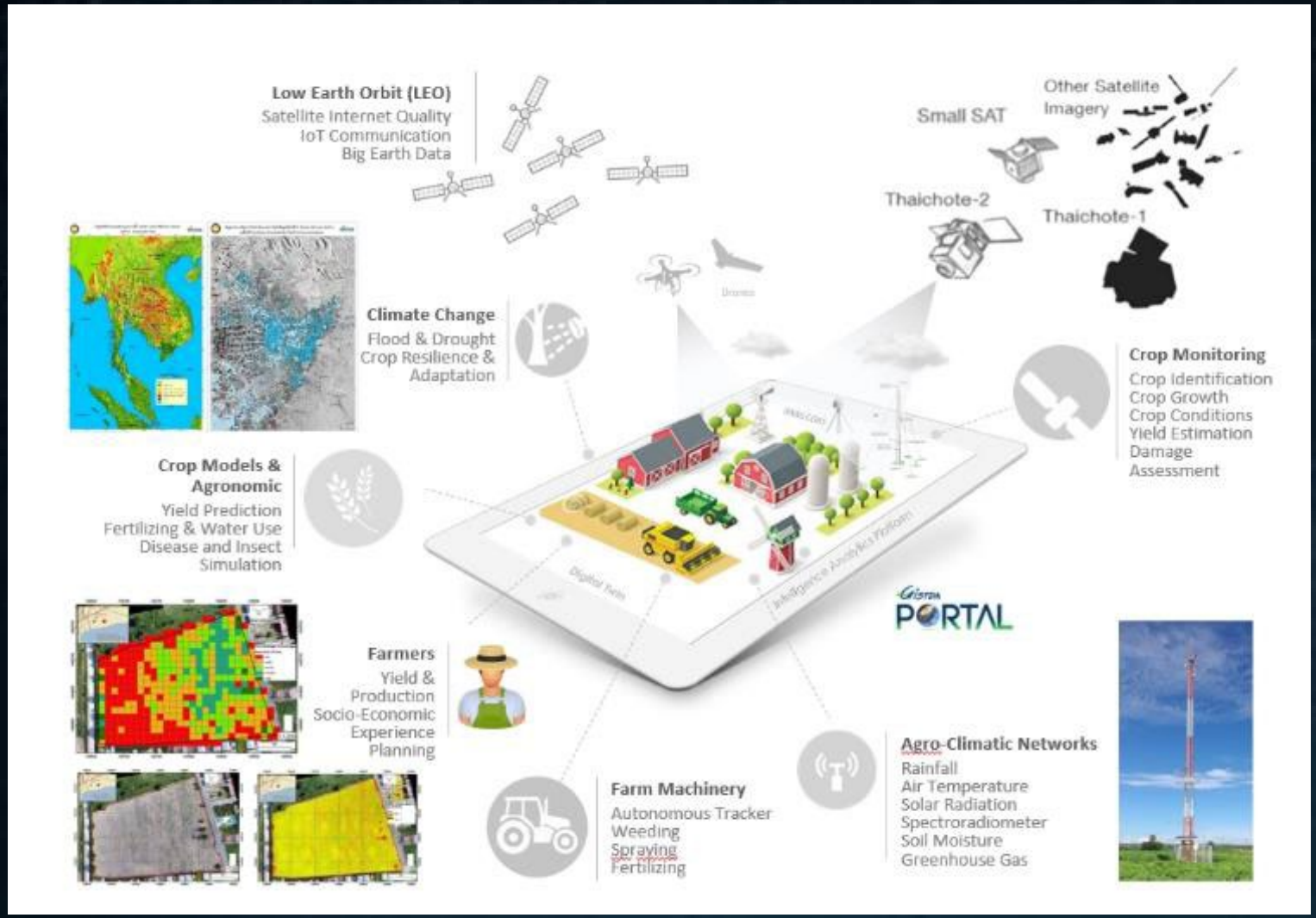
sea water's quality



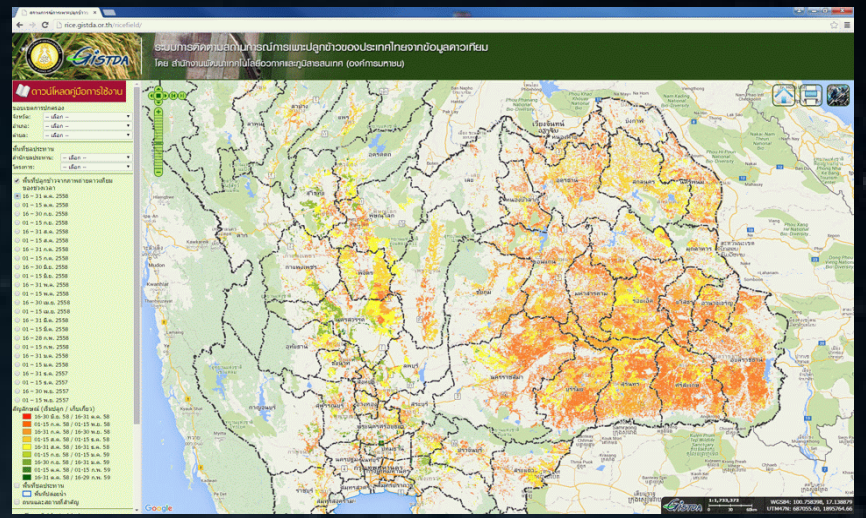


Examples of important performance results that create value for the country and organization

individual scale agriculture platform



Economic crop production situation




Rice


Sugarcane


Cassava

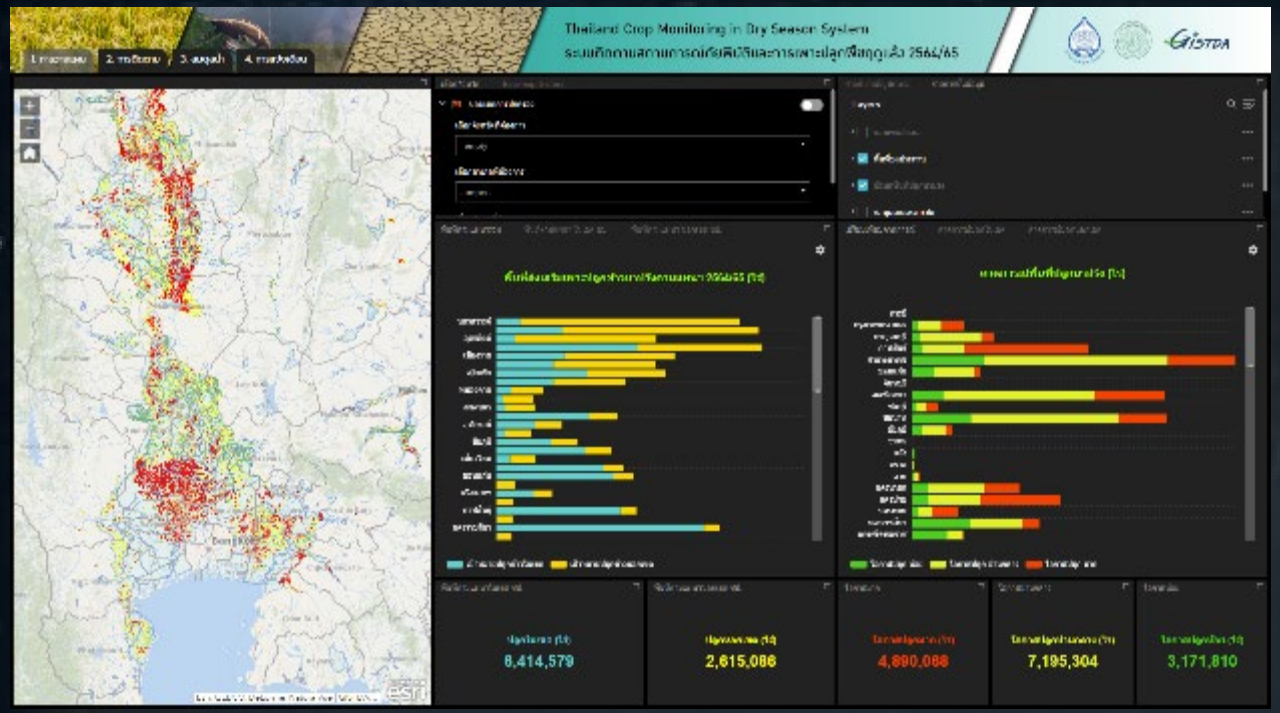

Maize


Para Rubber

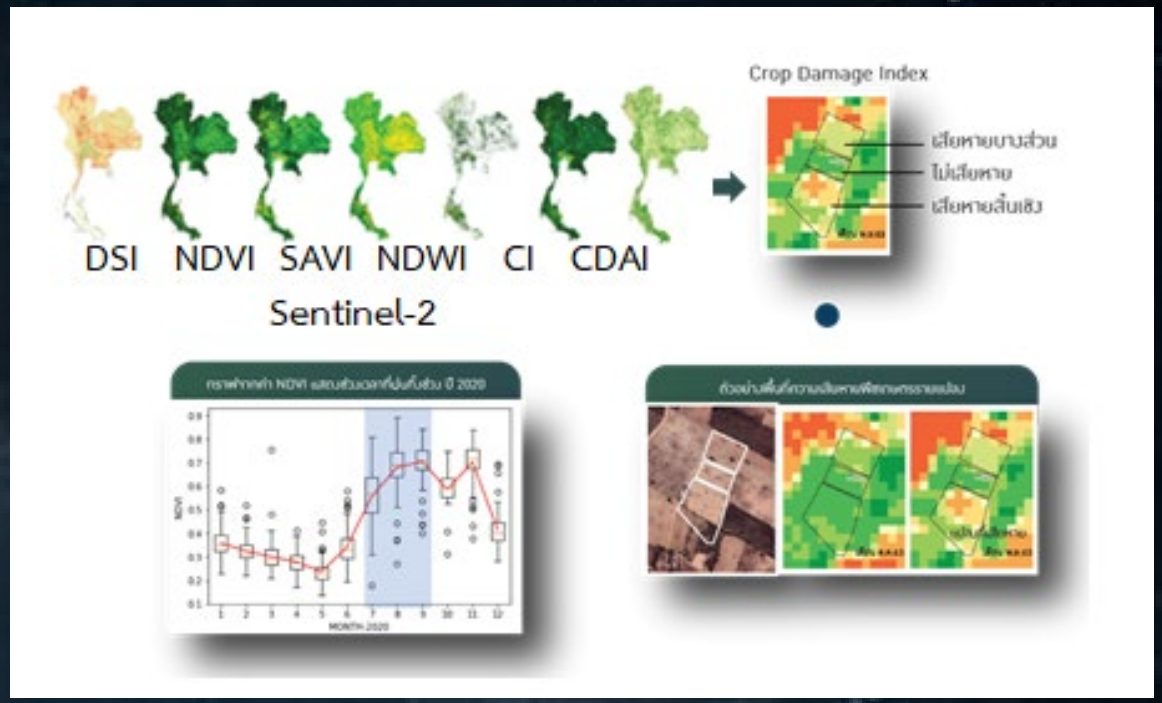

Oil Palm

Application/Solution ที่เป็นวาระสำคัญของประเทศ

Disaster situation monitoring system and cultivation of dry season crops

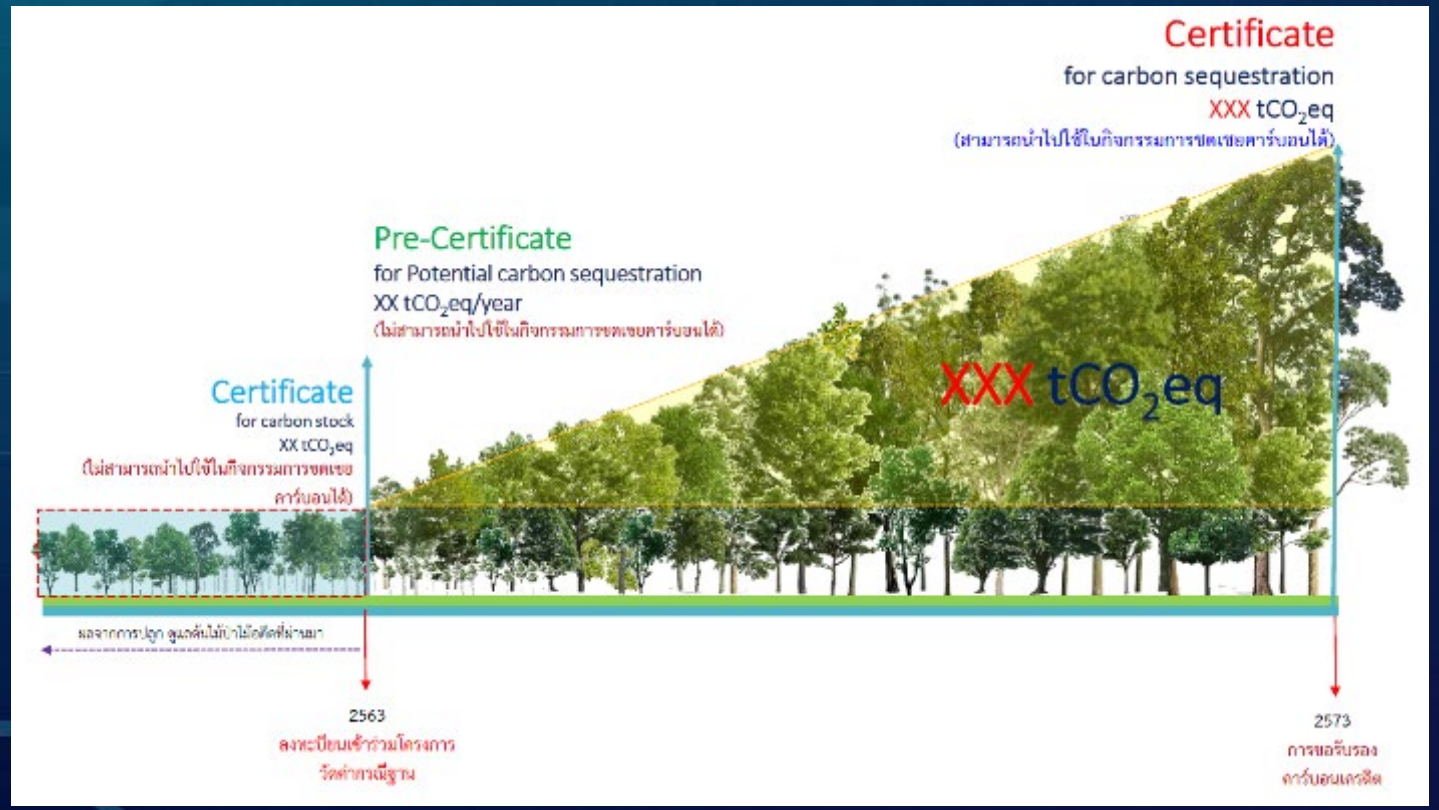


Assess risk area for drought and damage of agricultural crops

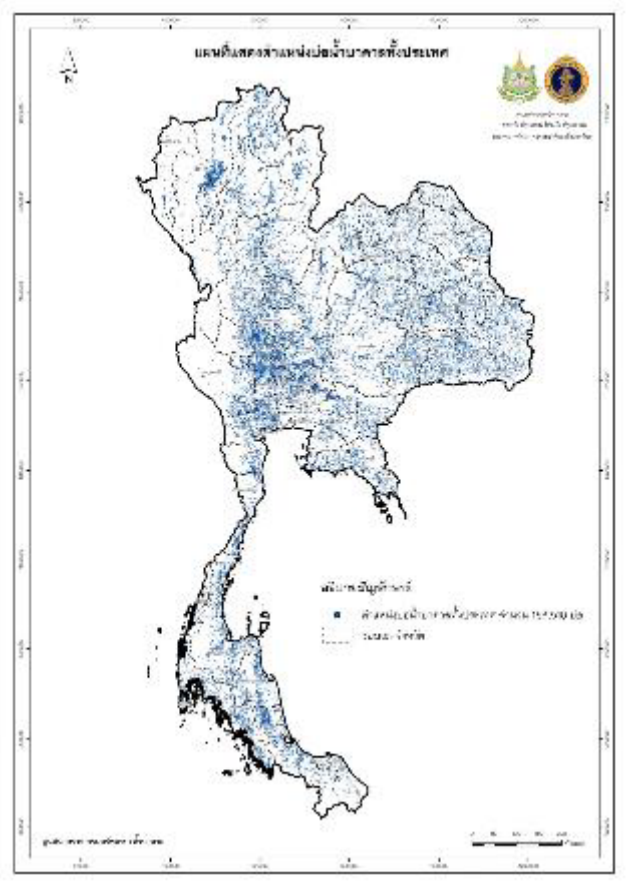


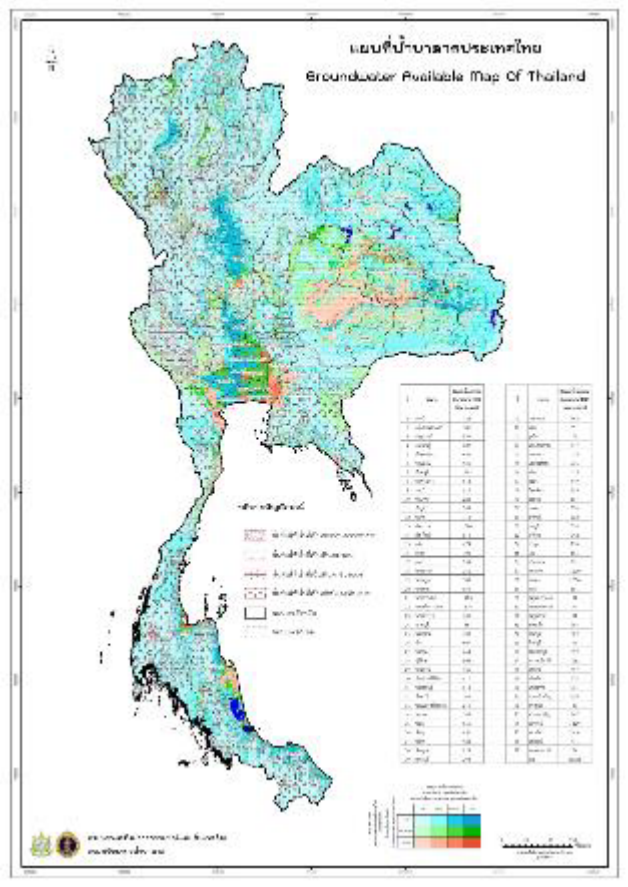
Government decision support tools in case of Flood and Draught.

CARBON CREDIT Calculation from Geo-Informatics Technolgoy

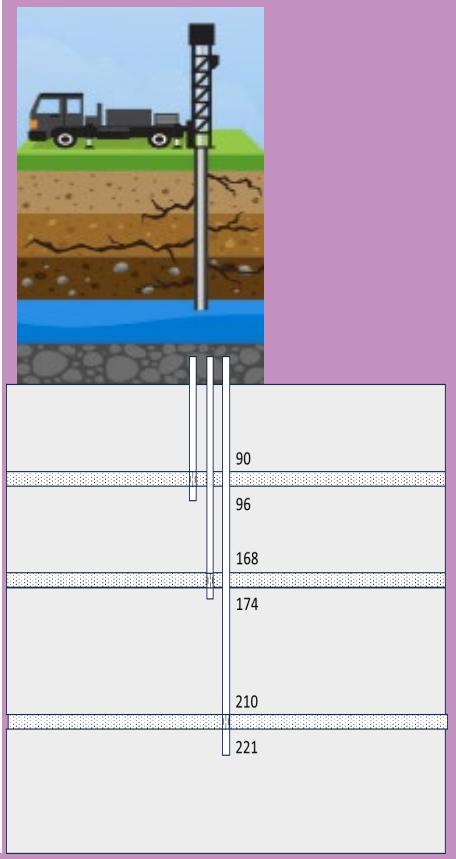


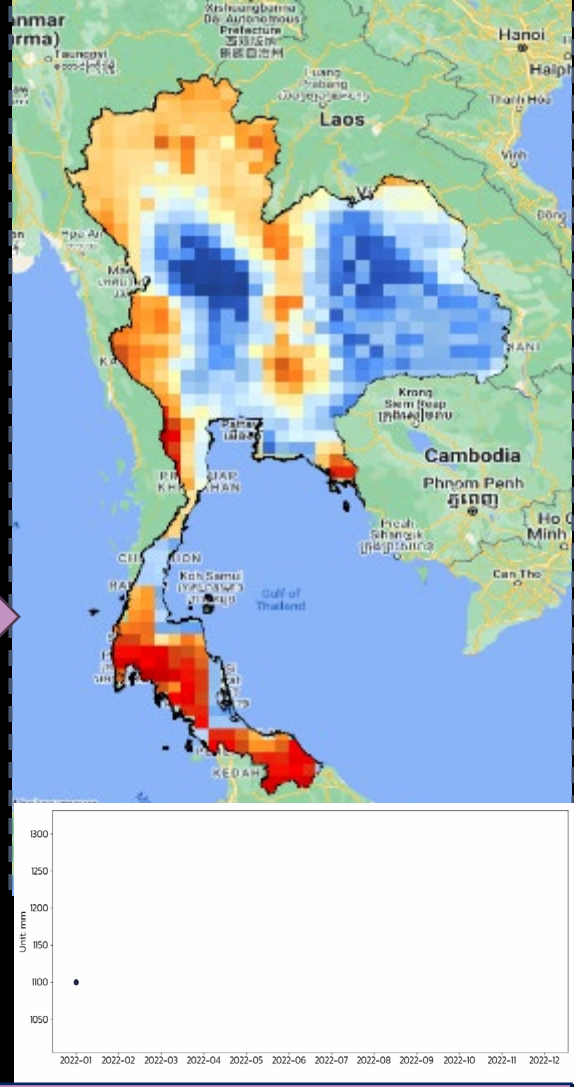
Map of THAILAND Groundwater Available

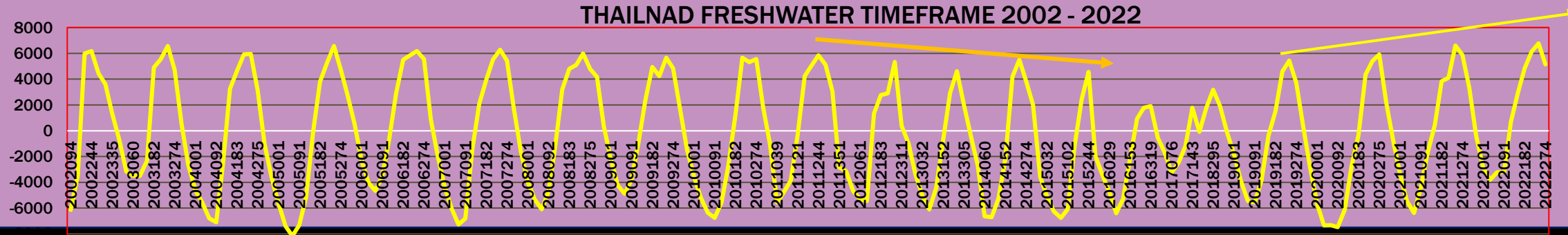




https://www.dgr.go.th/



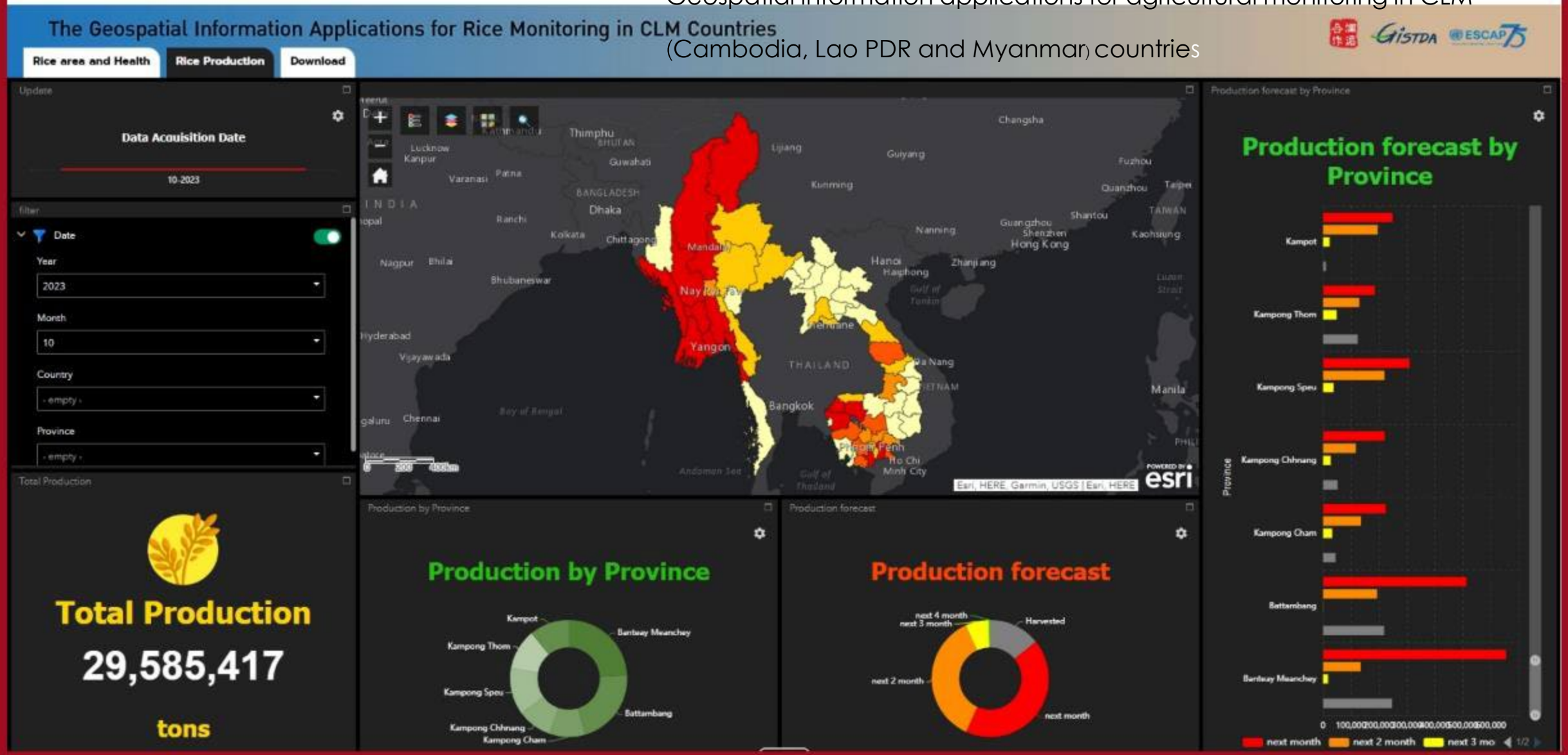




Rice CLM Portal

Lancang-Mekong Cooperation Special Fund Project

Geospatial information applications for agricultural monitoring in CLM (Cambodia, Lao PDR and Myanmar) countries



Capacity Building program

	Myanmar	Lao PDR	Cambodia
1st Training	23-26 August 2022 at GISTDA Training Center Bangkok (Completed)	10-13 January 2023 in Vientiane (Completed)	24-27 January 2023 in Phnom Penh (Completed)
2nd Training	20-23 December 2022 at Space Krenovation Park, Chonburi,Thailand (Completed)	4-7 April 2023 in Pakse, Lao PDR (Completed)	20-23 June 2023 in Siem Reap (Completed)
3rd Training	27 July 2023 (Online)	31 July 2023 (Online)	24-26 August 2023 in Phnom Penh (Completed)
Workshop	7-8 December 2023 in Bangkok, Thailand	27 November – 1 December 2023 Regional Forum on Geospatial Information Applications for Resilient Agriculture in South-East Asia Yunnan University, Kunming, China	

Collaboration