

KKU, GISTDA, and MHESI network drive SGI-Farm to revolutionise smart farming in Thailand

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Thailand's Khon Kaen University (KKU), in collaboration with the Geo-Informatics and Space Technology Development Agency (GISTDA) and the Ministry of Higher Education, Science, Research and Innovation (MHESI) Northeastern Network Operations Unit, conducted a workshop titled "Enhancing Agricultural Production with Modern Technology and Smart Farming through the SGI-Farm Geo-Informatics Innovation Platform." The event, aimed at systematically upgrading the capabilities of Thai farmers for smart agriculture, was held at the Ban Faek-Non Samran Community Rice Centre Enterprise in Nakhon Ratchasima and the Isan Khiao Organic Rice Community Enterprise in Khon Kaen.

Over the two-day event, the focus was on integrating knowledge transfer with hands-on practice. Farmers learned to use geo-informatics technology via the SGI-Farm platform to manage data throughout the entire production chain—from farmer registration, cultivation plots, and field activities to production standards, yields, and final products. This allows for precise cultivation planning, cost reduction, and a tangible increase in production efficiency.

A key feature of the project is the application of climate change data from satellites for analysis and forecasting. This enables farmers to make timely decisions regarding water management, planting, and harvesting, leading to more effective control over the quality and quantity of their produce.

Dr. Siraprapa Bamrungrkit, a lecturer at the Faculty of Economics, Khon Kaen University, stated that in addition to developing the upstream and midstream value chain, the university plays a crucial role in advancing the downstream segment. KKU provides comprehensive support for product and packaging development, from designing brand identity and selecting appropriate materials to creating labels and product information. This support extends to integrating a traceability system via QR codes on packaging to enhance credibility, add value, and strengthen market competitiveness.

This initiative not only helps modernise community products to meet consumer demands but also opens up new market opportunities for farmers, enabling them to generate sustainable income. It strengthens the local economy while promoting the Creative Economy, which uses knowledge and innovation as key tools to add value to local resources.

The workshop fostered a collaborative and participatory atmosphere, creating a space for genuine knowledge exchange among academics, government agencies, and local farmers. It highlighted Khon Kaen University's role as a "University for Society," applying academic knowledge to create tangible, real-world outcomes in partnership with communities.

From a sustainability perspective, this project not only increases agricultural productivity but also enhances food security, reduces inequality, and promotes social innovation. It aligns with several Sustainable Development Goals (SDGs), including Zero Hunger (SDG 2), Industry, Innovation and Infrastructure (SDG 9), and Reduced Inequalities (SDG 10), aiming for balanced and sustainable societal growth.