

FAO provides technical tools for satellite data based forest monitoring across Southeast Asia

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The Food and Agriculture Organization of the United Nations (FAO) has shared the latest tools and techniques to support data collection from satellite imagery for monitoring forests with experts across Southeast Asia, including for the subregion's mangroves.

Participants will contribute to the "Remote Sensing Survey" of FAO's 2025 "Global Forest Resources Assessment" (FRA), which provides essential information for understanding the extent of forest resources, their condition, management and uses across the globe.

Experts from Bhutan, Cambodia, the Lao People's Democratic Republic, Malaysia, Nepal, Papua New Guinea, Thailand and Viet Nam attended the training week from 24 to 28 June 2024 in Bangkok, which was organized with the assistance of the European Union and Norway's International Climate and Forest Initiative.

Trainers provided an overview of methodology, implementation and definitions as well as lessons on the physics of remote sensing, theory of photointerpretation and utilizing FAO's dedicated platform, [Collect Earth Online](#) (CEO), for data collection.

"The extensive field knowledge of the region's experts is essential for better capturing complex land-use change patterns in Southeast Asia, such as shifting cultivation," said Adolfo Kindgard, FAO Forestry Officer.

Conserving and protecting mangrove forests

Experts also compared satellite images from the FRA 2025 Remote Sensing Survey with the actual conditions on the ground in the Royal Thai Army Nature Study Center, Bang Pu, Samut Prakan Province, for further practical instruction in image interpretation, with a special focus on Bang Pu's mangroves.

As of 2020, [nearly 44 percent](#) (6.48 million hectares) of the total global area of mangroves (14.8 million hectares) is found in South and Southeast Asia, which also hosts the highest mangrove species diversity. However, this subregion also has the highest rate of net mangrove loss due to [primary drivers](#) such as the conversion to aquaculture and agriculture, losing 0.11 percent of mangrove cover per year from 2010 to 2020. Mangroves provide hundreds of millions of people living along coastal areas with services such as protection from natural disasters, timber and non/wood forest products, and pollution control. They also protect and conserve biodiversity by providing homes, breeding grounds and food for diverse types of animals, and are key to combatting climate change through carbon storage.