



Boundary Recognition Model and AI4biochar Training

Date: Tuesday 13th May 2025

Location: Bao Son International Hotel, Hanoi

Agenda

The “Data to Decisions: Digital Transformation in Vietnam’s Agriculture” workshop aims to facilitate a high-level discourse among policymakers, researchers, and industry leaders on the integration of cutting-edge digital methodologies into Vietnam’s agricultural frameworks. The objective of the specific Rice Boundary Recognition model training is to enhance institutional capacities in the use of remote sensing, spatial data analytics, and digital tools for agricultural planning and monitoring, building directly on the themes to be discussed during the main workshop.

Time	Session	Facilitator
08.30-09.00	Participant Registration and Networking	
09.00-09.15	Welcome address	Mr. Francesco Tubiello, Senior Statistician and Team Leader, FAO
09.15-09.30	AI application to practical case studies	Mr. Mai Van Trinh, Director General, IAE, VASS
09.30-09.45	Capacity development needs on geospatial intelligence and remote sensing	Mr. Nguyen Huu Nhuan, Deputy Dean, Faculty of Economics and Management, NUA
09.45-10.30	Demonstration of the AI prototype: An End-to-End Workflow for Crop Field Delineation Using Sentinel-2 Data	Ms. Claudia Paris, ITC, University of Twente
10.30-10.45	Coffee break	
10.45-12.30	Demonstration of the AI prototype: introduction to Deep Learning, Google Earth Engine and Google Colab	Mr. Furkan Çelik, ITC, University of Twente
12.30-13.30	Lunchbreak	
13.30-14.00	Training on AI4biochar tool	Mr. Alessandro Flammini, FAO Ms. Giulia Conchedda, FAO Mr. Lorenzo Testa, FAO (remotely)
14.30-15.15	Open discussion: <ul style="list-style-type: none"> Using the tool for ongoing initiatives Feedback from participants 	All
15.15-15.30	Concluding remarks and lessons learned	Mr. Phuong Do, DDT/MAE



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Workshop Agenda

Agriculture is a cornerstone of Vietnam's economy, employing tens of millions, contributing significantly to the national GDP, and ensuring food security and rural livelihoods. As digital technologies reshape global agrifood systems, Vietnam stands at a critical juncture to leverage data-driven decision-making to enhance its agricultural sector.

The Food and Agriculture Organization (FAO), in collaboration with the Department of Digital Transformation (DDT) of the Ministry of Agriculture and Environment (MAE) and the AFSIS Initiative, is advancing geospatial analytics, artificial intelligence (AI), and machine learning to improve agricultural planning and monitoring. These efforts align with FAO's global commitment to digital transformation for sustainable agriculture and are supported by the Ministry of Agriculture, Forestry and Fisheries (MAFF) of Japan.

The workshop aims to facilitate a high-level discourse among policymakers, researchers, and industry on the integration of digital methodologies into Vietnam's agricultural frameworks.

Objectives:

- To examine and disseminate findings from ongoing digital agriculture initiatives in Vietnam.
- To explore advanced applications of geospatial analytics, machine learning, and AI in agricultural monitoring and planning.
- To enable interdisciplinary collaboration among government entities, international organizations, and private-sector innovators.
- To generate policy directives aimed at institutionalizing data-driven approaches for agricultural decision-making.

Time

Session

Facilitator

08.30-09.00

Participant Registration and Networking

Inaugural Session

09.00-09.10

Welcome address

Mr. Remi Nono Wondim, FAO
Representative in Vietnam

09.10-09.30

Opening remarks

Mr. Mai Van Trinh, Director General,
Institute for Agricultural Environment
(IAE), Vietnam Academy of Agricultural
Sciences (VASS)

Ms. Sari Murai, Section Chief, Statistics
Planning Division, Japanese Ministry of
Agriculture, Forestry and Fisheries (MAFF)

09.30-10.00

Group Photo followed by coffee break

Time

Session

Facilitator

Session 1: Geospatial Intelligence and Remote Sensing

10.00-10.30	Developing a geodatabase in support of agricultural planning	Mr. Francesco Tubiello, Senior Statistician and Leader of Agro-Environmental Statistics, FAO
10.30-10.50	Feedback from the use and application of the rice boundary recognition model and the AI4Biochar tool	Mr. Alessandro Flammini, Senior Adviser on Climate and Energy, FAO Ms. Giulia Conchedda, Land and Water Officer, FAO
10.50-11.10	Formulating policy directives for data-driven agriculture	Mr. Do Xuan Lan, FAO Policy Expert
11.10-11.30	DDT's ongoing projects, including under the AFSIS Initiative Need for field level data, how the AI field boundaries tool can help Reflections on possible application of the tool	Mr. Phuong Do, Senior Researcher and Deputy Head, Digital Transformation and International Cooperation Division, DDT, Ministry of Agriculture and Environment
11.30-12.00	Q&A session	Moderated by FAO
12.00-13.10	Lunchbreak	

Session 2: Statistics and Machine Learning for practical applications

13.30-13.50	Towards Scalable Crop Mapping: Leveraging AI and Open-Access Sentinel-2 Data	Ms. Claudia Paris, ITC, University of Twente
13.50-14.10	Advanced Digital Tools for Agriculture: ALU and AMED tools	Mr. Alok Talekar, Google DeepMind Foundational Research
14.10-14.30	MRV for the 1 million ha rice initiative	Mr. Mai Van Trinh, IAE
14.30-14.50	Digital ecosystem priorities and how the FAO tool can be applied	Ms. Nguyen Thi Thuy, Director of the Statistics Division, DDT, MAE
14.50-15.20	Q&A (panel) - Moderated by Mr. Phuong, DDT, MAE • Interdisciplinary collaboration to identify challenges, opportunities, and research gaps • Potential cooperation, including funding sources	
15.20-15.30	Closing address and way forward	Mr. Francesco Tubiello, FAO