

POLICY BRIEF

SUSTAINABLE AND SMART TECHNOLOGIES FOR IMPROVED AGRICULTURE PRODUCTION SUPPLY CHAINS IN MEKONG COUNTRIES



BACKGROUND

This policy brief is the result of the Sustainable and Smart Agricultural Supply Chain Development in Mekong Countries project, financed by the Mekong – ROK Cooperation Fund (MKCF). The project was implemented from December 2021 to May 2023, with a focus on improving agricultural digitalization in the Mekong countries, where the agriculture sector and agricultural supply chain play a dominant role in economic development towards sustainability.

The brief highlights several enabling factors in response to existing problems in agricultural digitalization and provides implications for strengthening the smallholder Agri-Tech investing ecosystem in support of the sustainable development of the agriculture, energy, logistics, and transport sectors. Specifically, it concentrates on accelerating the digital transformation process in the agriculture sector in the Mekong region.



IN ASEAN DIGITAL INITIATIVES RELATED TO FOOD
AND AGRICULTURE SECTOR:

Digital Master Plan (2025)

**Strategy on the Fourth Industrial
Revolution for ASEAN (2021)**

**Comprehensive Recovery Framework
and its Implementation Plan (2021)**

**Guidelines on Promoting the Utilization
of Digital Technologies (2021)**

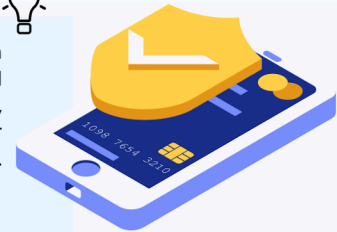
PROPOSED INNOVATIVE MODELS AND TECHNICAL SOLUTIONS



Develop hardware devices, including drones and robots, can automate on-farm tasks such as spraying, weeding, and harvesting. Internet of Things devices, like sensors, help farmers monitor their farms and make better decisions. Additionally, affordable machines like harvesters and combines create opportunities for digitally enabled rental services.

Hardware Development

Applications offer advice and information to farmers. These solutions are accessible through social media platforms and Android mobile applications. Farmers can receive personalized advice, sharing issues such as low yields, lack of knowledge on seed selection, pest identification, climatic conditions, and planting timing. This helps bridge the yield gap between smallholder farms in the Mekong countries and larger farms in the region.



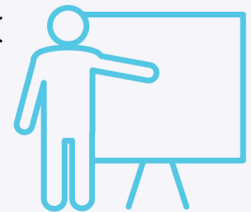
Digital Farmer Advisory Services



The Digital Trading Platforms help to respond to demands for use of digital tools in trading, managing inventory and trucking routes, and communicating with farmers through databases and apps.

Digital Trading Platforms

Technical assistance programs to boost the capacity of various stakeholders in the impact investing ecosystem. This includes farmers, Micro, Small and Medium-Sized Enterprise, investors, and ecosystem enablers like government ministries, research institutions, universities, and NGOs.



Capacity Development

To mainstream the proposed innovative models, it's recommended that the governments of the Mekong countries prioritize the following:



Further strengthen the legislation on digital economy for agriculture sector with priorities for digital technologies for agricultural transformation



Further enable business and investment environment to attract more private capital from both domestic and foreign impact investors into Agri-Tech businesses/startups



Further promote public-private partnership (PPP) modality to engage with the private sector stakeholders, e.g., businesses, innovators, business incubators, accelerators, etc. to accelerate agricultural digitalization process



Mobilize fundings and technical assistance from international donors (multilateral and bilateral) and international development organizations and individuals to implement both infrastructure investment and capacity development programs / projects to enhance capacity for the organizations and people in the Agri-Tech ecosystem as well as harnessing smart and sustainable technologies in the agriculture sector

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