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Digital Agriculture in Asia and the Pacific

Strategies for Donor Impact

DIGITAL TECHNOLOGIES FOR SUSTAINABLE AND RESILIENT FOOD SYSTEMS IN ASIA

Shingo Kimura
Senior Natural Resources and Agriculture Specialist
East Asia Department
ADB

12.07.2021

11.00 - 12.30 CEST | 17.00 - 18.30 SGT

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DIGITAL AGRICULTURE IS SHAPING ASIA'S FOOD SYSTEM



Leveraging the innovative digital technology is key for food system transformation in Asia

- **Productivity improvement** throughout food supply chains
- Integration of smallholders to **value chains and various services**
- **Traceability** of environmental and climate footprints
- Reduce **food loss and wastes**



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DIGITAL AGRICULTURE and E-COMMERCE IN PRC and ROK

- **Production:** (i) increasing access to extension, financial and marketing services, (ii) reducing transaction costs of contract farming for quality standard and food safety compliance monitoring, (iii) facilitating more demand driven production
- **Distribution:** (i) e-commerce is reducing high transaction costs through traditional markets, and maintained food supply during the pandemic, (ii) ensuring more stable supply and reducing food wastes, and (iii) product standardization
- **Consumption:** (i) contactless delivery and (ii) increasing access to product information
- **Rural welfare:** Access to (i) education, (ii) culture, and (iii) health care (e.g., ROK's giga island project) project



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GEOTAG AND DRONE FOR FOREST PROJECT MANAGEMENT IN PHILIPPINES

Picture of Abaca Fiber of DAHIL Farmers
Association, Bukidnon Province with **GEOTAG**



Bundles of Abaca fiber, a finish product of decorticating machine of PO-DAHIL FA,
Dagundalahon, Talakag, Bukidnon

DRONE Picture of Fruit Plantation of Ili
Seedling Growers and Farmers Association
in Apayao Province



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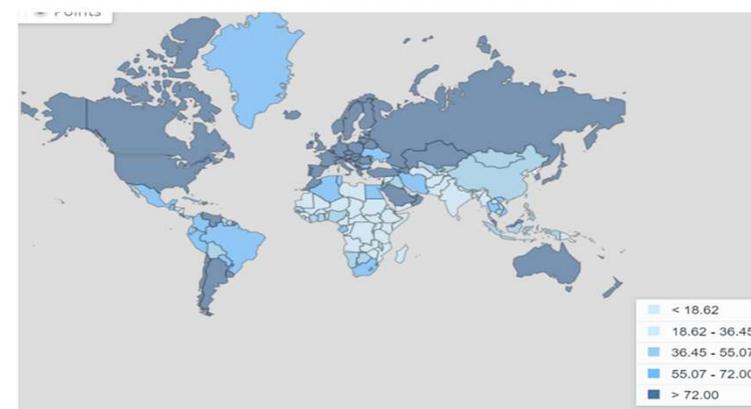
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PROMOTION OF DIGITAL AGRICULTURE FACES CHALLENGES IN THE REGION

- **Inclusiveness** of digital agriculture is a big concern;
 - **Digital infrastructure:** Limited availability of affordable network coverage and logistic infrastructure, and underdevelopment of data governance.
 - **Digital Skill:** missing support for smallholder farmers and agribusinesses to adopt digital applications also depress their demand for e-commerce and precision agriculture.
- **Digital divide** persists

Individuals using the Internet (% of population) IN 2019



Source: World Bank



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ADB's Activities

- **Investment projects**

- ✓ **Gansu Internet-Plus Agriculture Development Project (PRC):** Developing comprehensive information service and management platform together with modernization of agricultural production, processing, storage, and marketing
- ✓ **Agricultural Value Chain Competitiveness and Safety Enhancement Project (CAM):** Enhancing digitalization of government's services through an integrated agricultural data platform, multichannel extension services, and piloting of a traceability system as a part of support to develop competitive and efficient value chains, in close coordination with IFAD's ongoing initiatives.

- **Knowledge sharing**

- ✓ Knowledge products on ICT application in agriculture in PRC
- ✓ MOU and Joint Study with Alibaba Group on Digitalization of Foods Supply Chain in PRC
- ✓ Leveraging from Experiences of Agriculture and Rural Development: Lessons from Korea



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CONCLUSION AND WAY FORWARD

- Digital technologies can address challenges in food systems in Asia but require public actions
 - ✓ Develop both **hard and soft digital infrastructure** to increase the availability of affordable connectivity and digital applications
 - ✓ Enhance the **digital skill** of the farmers and build a favorable environment to foster a vibrant innovation and startup ecosystem to encourage the context-aware solutions for smallholder farmers.
 - ✓ Make use of traceability technologies to create **new financing channels** for the actions to preserve natural capital and eco-system services.
- Development organizations like MDBs should strengthen financial flow to support digitalization of food systems



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Digitalization of the agricultural supply chain is also an integral part of the new initiative of ADB

Natural Capital Fund: Co-financing projects secured against future incremental income & eco-compensation rewards

Natural Capital Lab: Building valuation tools, knowledge & best practices; training for better utilization; policy & regulation

Innovative Natural Capital Financing Facility (INCF)

Agribusiness Service Platform: Digitalizing supply chains to assist project sponsors to improve and upgrade value creation in their marketing, procurement and logistics efforts