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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

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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 decortivating 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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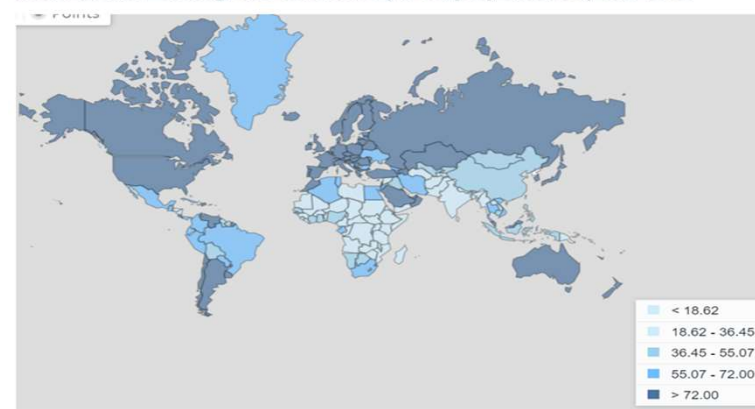
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PROMOTION OF DIGITAL AGRICULTURE FACES CHALLENGES IN THE REGION

- **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 precisions 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

