Phytobiomes Alliance Event

Framing Smallholder Digital Agriculture

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June 3 2021
Presentation Outline

- Background

- D4Ag Framework

- Ag. Data Infrastructure & Policy Implications
I: Background
The Commonwealth Secretariat

An intergovernmental organisation that supports its 54 member countries to achieve the Commonwealth’s aims of development, democracy and peace
The Commonwealth Connectivity Agenda (CCA)

Physical Connectivity: Reducing physical barriers to trade

Digital Connectivity: Taking advantage of the opportunities presented by digital trade

Regulatory Connectivity: Addressing the capacity deficit and improve the regulatory environment

Supply Side Connectivity: Encouraging participation in global value chains

Business to Business Connectivity: Exploring the role of private sector in promoting the blue and green economy

Boosting trade and investment across the Commonwealth in the process grow intra-Commonwealth trade to US$2 trillion by 2030, and expand investment.
Supply Side Connectivity Cluster of CCA

Objective: Encouraging the participation of all members in global value chains (through digitalisation)

- Interested Member Countries to be engaged
- Selected MSMEs, Coaches, Investors, etc.
- Regional, National and Commodity specific Association

**Activities**

- Focus on facilitating the development of Digital Agricultural and Fisheries Data Infrastructure
- Focus on facilitating Business Development Services for MSMEs to build back after the pandemic
- Focus on connecting the associations through experience sharing for trade and investment facilitation

**Stakeholder Groups**

- Member State Governments
- Micro, Small, & Medium Enterprises (MSMEs)
- Farmers, Fishers & Associations

**Partners**

- Selected MSMEs, Coaches, Investors, etc.
Digitalisation for Agriculture (D4Ag)

The use of digital technologies, innovations, and data to transform business models and practices across the agricultural value chain and address bottlenecks in, among other things, productivity, postharvest handling, market access, finance, and supply chain management to achieve greater income for smallholder farmers, improve food and nutrition security, build climate resilience, and expand inclusion of youth and women (Tsan et al. 2019)
II: D4Ag Framework
First Statement

Generic (digitalisation) - we should be able to customise and apply the framework to different sectors.
Second Statement

National context - the framework takes a macro approach to digital agriculture and goes beyond individual actors
Framing Digital Agriculture

1. Digital innovations
   - Digital Solutions
     - Advisory services
     - Macro agr-intelligence
     - Supply chain management
     - Market linkages
     - Financial access
   - Digital Technologies
     - AI/ML
     - Drones
     - Blockchain
     - Satellites
     - Sensors
     - Internet of Things

2. Data Infrastructure
   - Quality Content
     - Weather Data
     - Soil Data
     - Agronomic Data
   - Market Data
     - Financial Data
     - Supply chain management
     - Financial access
   - Digital User Identity
     - Individual Identities
     - Institutional Identities

3. Business Development
   - Financing & Investment
   - Non-governmental Organisations
   - CO-OP
   - Farmers
   - Agribusinesses
   - Investors
   - Donors

4. Enabling Environments
   - Infrastructure & Access
   - Policies & Strategies
   - Literacy & Skills
   - Business Ecosystem
   - Knowledge & Networking

Smallholder farmer-level Impacts
- Climate Resilience
- Higher Yields
- Higher Incomes
- Financial Inclusion
- Inclusion of Women
- Youth Employment

Macro-level Impacts
- Agricultural Transformation
- Inclusive Growth
- Sustainable Food and Nutrition Security
“Digital agriculture” is not the same as “Digital Agricultural Solutions”
III. Ag. Data Infrastructure & Policy Implications
The Missing Middleware

*Invest in the missing middleware infrastructure.* Successful D4Ag solutions require access to a wide range of data (from remote sensing data to farmer-specific data) in order to deliver high-quality services to farmers.
Digital Solutions & Users in Africa (2018)

Western Africa
- **Solutions**: HQ: 145, Focus: 162
- **Users**: 3.1M, 4.3M

27 solutions headquartered in the G5 Sahel, account for 573k users. Another 33 solutions have users in the region.

Central Africa
- **Solutions**: HQ: 18, Focus: 20
- **Users**: 0.60M, 0.85M

Eastern Africa
- **Solutions**: HQ: 124, Focus: 146
- **Users**: 21.0M, 21.8M

Southern Africa
- **Solutions**: HQ: 43, Focus: 46
- **Users**: 3.9M, 5.8M

Credit: CTA's D4Ag Report for Africa
Duplication Digital Solutions (Kenya, 2018)

Advisory & information services
Market linkages
Financial access
Supply chain management
Macro agri-intelligence

Credit: CTA’s D4Ag Report for Africa
Data Infrastructure (DI) - current situation!

Multiple Spokes With No Hub
Data Infrastructure (DI) - alternative option!

National Hubs & Spokes
IV. Conclusion
The Commonwealth Secretariat welcomes interested partners to work and build the D4Ag framework

The Framework can be used to assess, track and compare the resilience of the agricultural sector through digitalisation at national level

Enable us to know countries that are leading in leveraging digitalisation in agricultural sector
Imagine what we can do, if we build, connect & sustain agricultural data infrastructure across countries/continents.