ITU Regional Forum for Europe on Meaningful Connectivity

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Session 2

Connecting rural areas in Europe: regional and national approaches for digital agriculture

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Digital Agriculture

Opportunities and Challenges

Opportunities

Technological innovation is crucial for economic growth

Digital technologies *can*:

- Improve efficiencies
- Reduce transaction costs
- Better manage risks
- Strengthen trust between actors
- Facilitate inclusion and access to finance

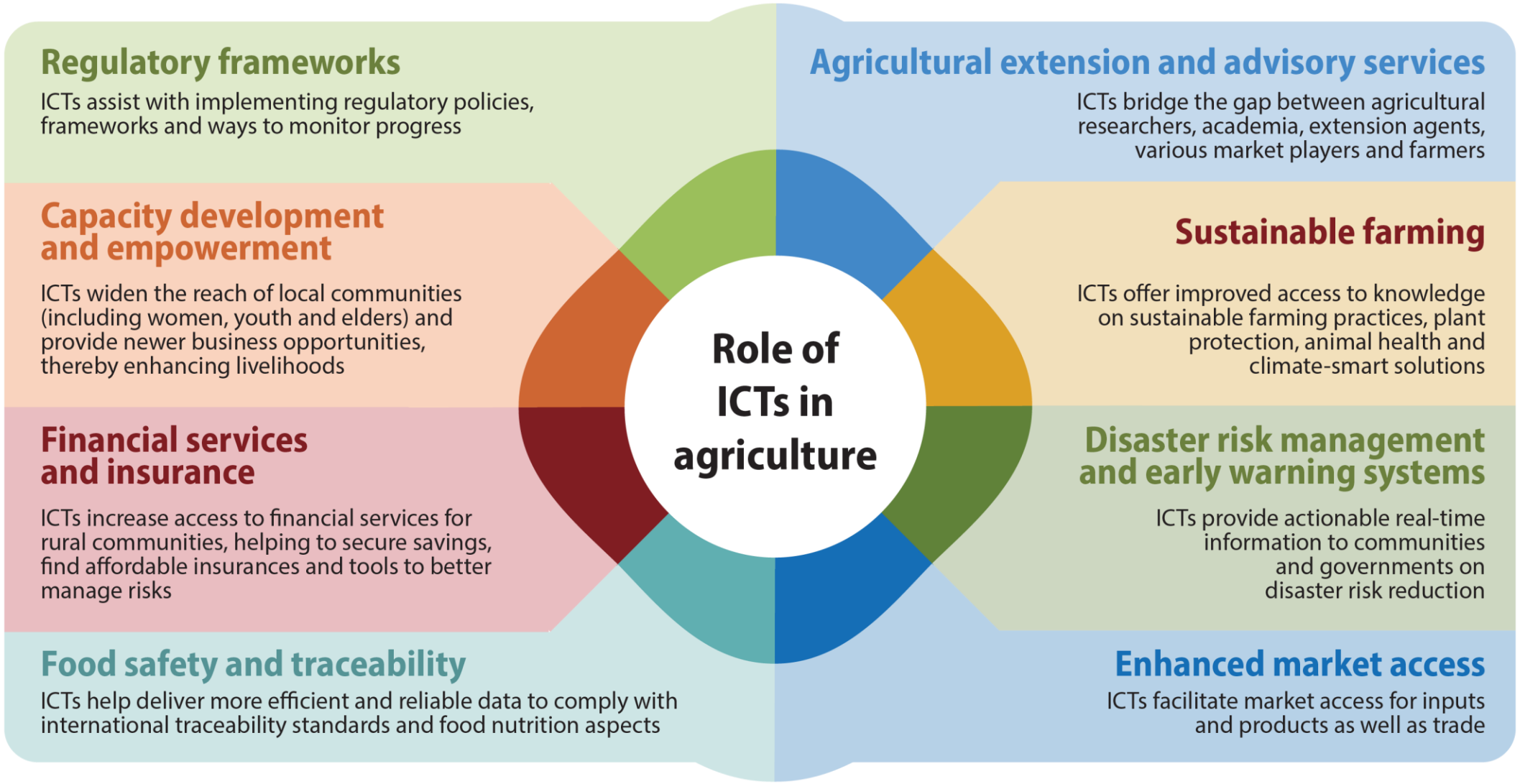
Challenges

Digital divide is most evident in agriculture sector

Digital divide *exists*:

- Across countries, reflecting differences in access to information and technologies
- Within countries between rural and urban areas
- Between people (age, sex, social class …)
- And across sectors

Diversity of opportunities



Human challenges

- **Young** generation is **leaving** rural areas
- Farming population is **ageing**
- Majority of farmers are **smallholders**
- Shortage of farm **labour** in some countries
- **Suicide** rate among farmers
- **Conservative** attitude of farmers vis-à-vis new technologies
- Lack of basic digital **skills**
- Expert skills needed for IT maintenance

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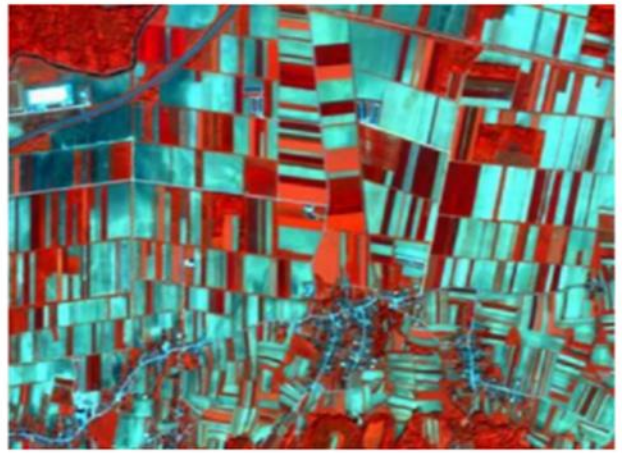
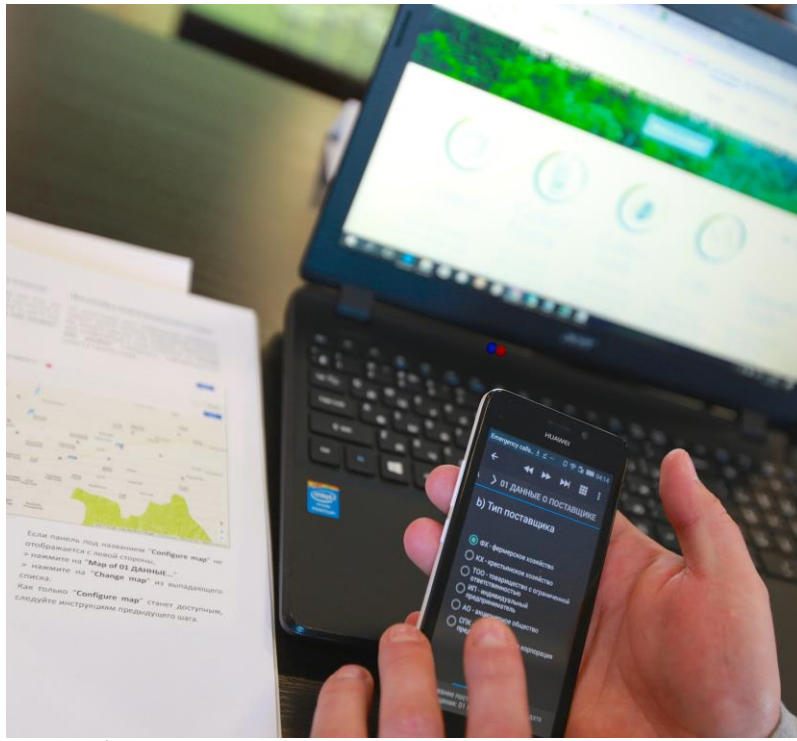
Smallholder farmers' challenges

- **Farm size** and diversity
- **Technologies** often not adequate for smallholder farmers realities
- Exclusion of smallholders from **policy incentives** and **rural services**
- **Low capacities to generate, use and manage data and information** – at level of farmers, service providers, regulators
- **Ownership and privacy issues** – on-farm data
- **Access to and control of data in agri-food systems**: limited integration in market chains and limited decision power



Rural digital divide is a reality

- **Instable and irregular** internet **connectivity**
- **Poor quality** of connectivity in rural areas compared to cities, for **same price**
- **Increased demand** of connectivity due to COVID-19: e-commerce, teleworking, … **high demand but low response**
- **Low use of digital technology in agriculture and rural areas** … due to poor connectivity and lack of Return over Investment for smallholders



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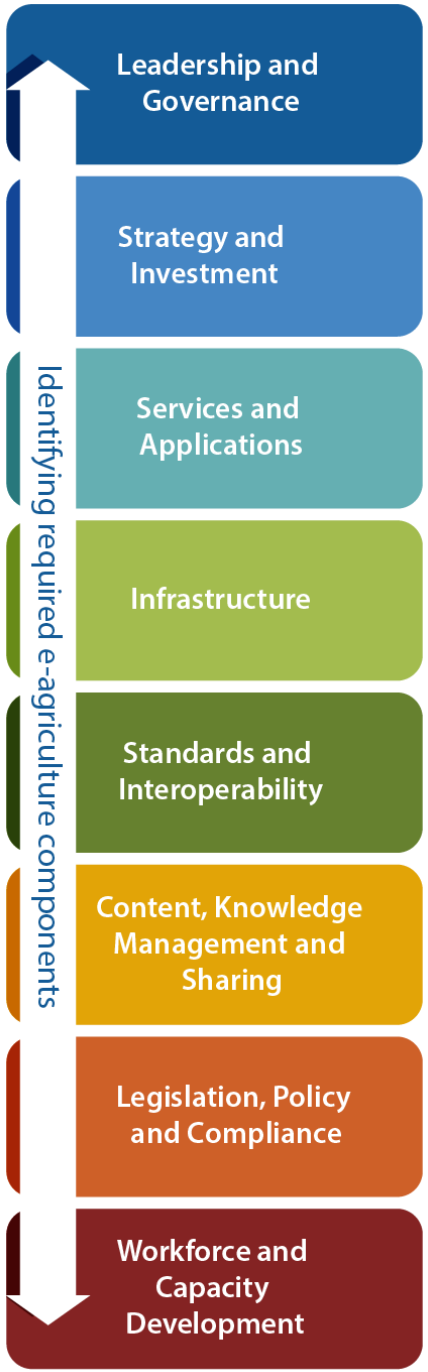
Response

Assessments at national and regional levels	**Policy framework**
Projects	**Knowledge exchange**

FAO-ITU Response with assessments

Albania
Armenia
Azerbaijan
Belarus
Bosnia & Herzegovina
Georgia
Kazakhstan
Kyrgyzstan
Moldova
Montenegro
North Macedonia
Russian Federation
Serbia
Tajikistan
Turkey
Turkmenistan
Ukraine
Uzbekistan



Building blocks of policy framework

Regulatory Framework
required to integrate their digital economies

Policies
encourage innovation, incentives to uptake of digital services/solutions.

Data Governance
regulate data and consumer protection, data ownership,
security and e-transactions

Infrastructure
improve digital infrastructure
invest in roads, storage facilities, warehouses, and regional trade facilities

Capacities
improve technical education, capacity development at all levels
to participate in the digital ecosystem

Closing the Triple Divide

Digital

Rural - Urban

Gender

-

Investments

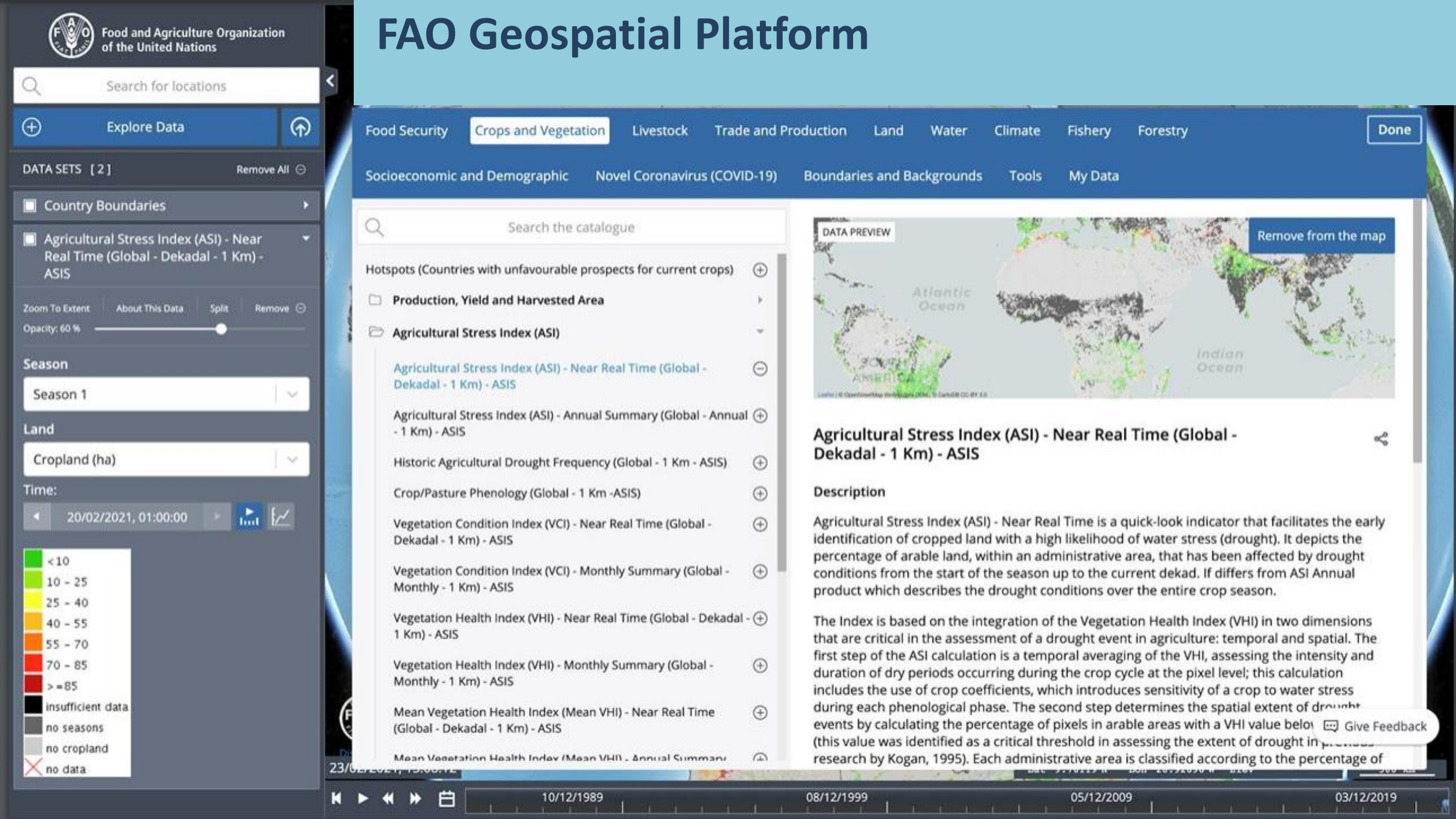
To increase technology adoption rates in rural areas requires investments in **supply-side** and **demand-side factors**

- ***Supply-side***
  Rural network coverage and availability of digital applications are needed
- ***Demand-side***
  digital skills and literacy, especially for smallholders

Addressing such factors necessitates a range of public policy interventions, and most importantly a regulatory environment that attracts private sector investment

- *Participation of Governments* in investments, through public-private partnerships, can ensure that gaps in infrastructure and access are bridged also in rural areas
- *Public-private partnerships* will be important to provide incentives for private investments

FAO Geospatial Platform



International Platform for Digital Food and Agriculture

Why a 'Platform'?

An **inclusive multi-stakeholder forum** to:

- discuss the potential benefits and risks of digitalization of agriculture
- provide policy advice and guidance

What role?

Maximize benefits

- Sustainable production
- low costs & efficiency
- analytics to support decisions
- inclusive markets

Address challenges

- digital divide, public goods
- data ownership/privacy
- human rights, environment, animal welfare
- long-term impacts, rural development

What gap?

ITU

WSIS FORUM

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Food & Agriculture

AI for Good Global Summit

IGF Internet Governance Forum

What deliverables?

- bridge the gap and increase awareness
- facilitate discussions and common understanding
- best practices
- policy recommendations
- voluntary guidelines

In conclusion

A conducive environment for the digitalization of agriculture requires:

- Expanding and improving infrastructure – both for ICT and otherwise
- Improving people's ability to use internet effectively so that they benefit from digitalization and
- Designing a regulatory framework that is both conducive to innovation and takes into account the specificities and risks digitalization entails

Thank you

For more information

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www.fao.org/europe/resources/e-agriculture

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