

Summary of the 10th eConversation, 2nd Series: Week 1

Collaborating organisations

This eConversation has been organised by the [Commonwealth Secretariat](#) and the [Digital Agri Hub](#) in partnership with [AGRA](#), [Farmerline](#) and [DIASCA/GIZ](#).



The Commonwealth
Connectivity Agenda



Digital
Agri Hub



DIASCA
Digital Integration of Agricultural
Supply Chains Alliance



AGRA
Sustainably Growing
Africa's Food Systems

FARMERLINE

eConversation framework

Data has become the fuel for economic growth for many economies today and the data economy is likely going to determine the next world order, much like the role that the oil industry has played in creating economic power players in the past. Data is also the rail on which digitalisation runs and the bedrock for emerging digital technologies such as artificial intelligence (AI), machine learning, blockchains and internet of things that are enabling availability and access to information.

Agriculture is increasingly data-driven and considering the huge potential of agricultural data for countries, multiple stakeholder groups – farmers, governments, non-governmental organisations (NGOs), agribusinesses, donors, foundations, investors, researchers, digital platform operators, international organisations and technology firms – are each investing in data collection, curation, processing, storage and sharing in a typical national agricultural data ecosystem.

However, these data systems are often fragmented and built in silos without interoperability. Data remains duplicated across government agencies, research institutes, and private actors, making it difficult to build a full picture of food production, markets, and natural resources at national level. In times of crisis—whether drought, pest outbreaks, or global price shocks—this lack of integration slows down responses and weakens evidence-based policymaking. Without a structured and coordinated approach to data management, the agricultural sector risks operating in the dark. The result is operational inefficiencies, increased costs, revenue losses, and reduced trade and investment both within and between countries.

The consequences extend to sustainability and innovation. Poorly managed data means missed opportunities for climate adaptation, inefficient use of land and water, and limited progress toward national and global sustainability goals. Researchers, startups, and agribusinesses struggle to innovate without open, interoperable datasets. In short, the absence of a country-level framework that

brings together all the key agricultural data—collected by governments, research institutions, private companies, and even farmers themselves—into a coordinated, standardised, and accessible system is more than a technical shortfall—it is a strategic vulnerability that undermines resilience, competitiveness, and equity across the entire food system.

Through the Commonwealth Connectivity Agenda for Trade and Investment (CCA) programme, the Commonwealth Secretariat launched the **National Agricultural Data Infrastructure (NAGDI)** initiative in September 2023. The vision of NAGDI is to strengthen and harmonise existing individual data systems at country level through an interoperable national data infrastructure, enabling interconnected infrastructure at regional and global levels, thereby creating a superhighway for secure data exchange within and between countries, and across regions for macro-level decision-making. NAGDI is not a Digital Public Infrastructure (DPI), but an approach to delivering DPIs for agricultural data management at country level. NAGDI is likened to any national public infrastructure such as transport, telecommunication, energy, etc. NAGDI has been conceptualised to cover four components, namely (i) systems and technologies, (ii) principles and policies, (iii) marketing and business, and (iv) governance and administration.

If carried out well, a functional NAGDI can become a cornerstone of agricultural transformation. It would lay the foundation for independent data verification, giving investors the confidence to support Micro-, Small and Medium-sized Enterprises (MSMEs) and startups, while also improving access to finance and fostering innovation. By bringing together multiple data sources, it would enable more accurate, reliable, and evidence-based policymaking—ensuring governments are equipped to respond quickly and effectively to challenges in the food system.

NAGDI would also empower countries to navigate well-intended but disruptive external regulations, such as the European Union Deforestation Regulation (EUDR), by

facilitating access to credible and verifiable data. At the same time, it would strengthen national sovereignty in the digital domain, ensuring governments retain control over their agricultural data. Most importantly, it would prepare countries to fully harness the power of Artificial Intelligence and other emerging digital technologies, all of which depend on large volumes of accurate, trusted data.

Looking beyond national borders, interoperable NAgDIs across regions would create a secure “data superhighway” for exchange within and between countries. This would unlock new opportunities for macro-level decision-making, while serving as a catalyst for deeper intra-regional trade and investment. In this way, NAgDI is more than infrastructure—it is the backbone of a smarter, more connected, and more resilient agricultural future.

About the events

The Commonwealth Secretariat developed a **Policy Guide for NAgDI** in support of intra-Commonwealth trade and investment. However, the policy extends beyond the Commonwealth. Prior to and alongside the launch of the Guide, the Commonwealth Secretariat and Digital Agri Hub, in partnership with AGRA, Farmerline, and DIASCA/GIZ, hosted this eConversation which consisted of a series of events including e-discussions and webinars unfolding over a period of four weeks. The initiative provided a two-way dialogue to assist the Secretariat in establishing the business case for private

sector investment in NAgDI for interested countries, as well as raised awareness of the opportunities that were and would be available. The flow of events mobilised the audience around the initiative and engaged the parties during the launch of the Guide and its rollout activities.

The activities combined online and in-person events to bring together stakeholders from the Commonwealth and beyond – public sector, international organisations, development partners, private sector investors, and others interested in developing markets on the subject.

Week 1 Summary of the eConversation (Webinar & e-Discussion)

A

Summary of the Webinar – Week 1

On 26 September, a Launching Webinar paved the way for the actual eConversation, which was followed by weekly e-discussions and webinars. The Launching Webinar titled *“From Silos to Systems: NAgDI as a Delivery Approach to DPI in Agriculture”* introduced the concept of foundational digital public infrastructure (DPI), its implications for the agricultural sector, and the consultative approach used by the Commonwealth Secretariat in developing the NAgDI framework. Speakers included **Benjamin Kwasi Addom**, the Commonwealth Secretariat, **Krishan J Bheenick**, KMNCB Associates, **Nidhi**

Parekh, the World Bank, and **Robert Karanja**, Co-Develop.

On 03 October, the Webinar titled *“From Silos to Systems: Decentralised and interoperable data exchange”* explored the nature of technologies and systems that are needed to support the deployment of NAgDI in countries. Principles such as secure, decentralised, standardised and interoperable technologies and systems that create national spaces to facilitate seamless data exchange between individual data systems adhering to DPI principles to foster innovation and support

data-driven collaboration were discussed. Speakers included **Vineet Bhandari**, Centre for Digital Public Infrastructure (CDPI), **Peter Wortsman**, European Food and Farming

Partnerships (EFP), **Gabriel Saunyama**, ChromePay, and **Tomaso Ceccarelli**, Wageningen University and Research.

Some Statistics on the Webinars

Date	Title	Registered individuals	Attendees %	Female	Recording
26/09/25	From Silos to Systems: NAgDI as a Delivery Approach to DPI in Agriculture	186	55%	34%	YouTube
03/10/25	From Silos to Systems: Decentralised and interoperable data exchange	81	79%	26%	YouTube

Date	Title	Attendees' age group					
		18-24	25-34	35-44	45-54	55-64	65+
26/09/25	From Silos to Systems: NAgDI as a Delivery Approach to DPI in Agriculture	2%	23%	33%	30%	11%	1%
03/10/25	From Silos to Systems: Decentralised and interoperable data exchange	2%	24%	28%	26%	14%	6%

B

Summary of the e-Discussion – Week 1

Q1 What have been your sources of guidance on DPI for agriculture and what have you learnt from them that has helped you in practice?

During week 1 of the eConversation, a vibrant online discussion among agricultural data experts, policymakers, and technologists has spotlighted the urgent need to move from fragmented, siloed data systems to coordinated DPI in agriculture. The conversation, hosted by the D4Ag community, was sparked by the launch of the Commonwealth Secretariat's NAgDI initiative, which aims to harmonize disparate agricultural data systems at the national level and enable secure, interoperable data exchange across borders.

The Problem: Fragmented Data, Missed Opportunities

Participants agreed that agriculture is increasingly data-driven, but current systems are fragmented, with data duplicated across government agencies, research institutes, and

private actors. This fragmentation leads to inefficiencies, higher costs, and missed opportunities for innovation and sustainability. In times of crisis—such as drought or pest outbreaks—this lack of integration slows down responses and weakens evidence-based policymaking.

The Vision: National Agricultural Data Infrastructure

The NAgDI initiative was presented as a solution to these challenges. Its vision is to create an interoperable national data infrastructure, likened to public utilities like transport or energy, that would serve as the backbone for secure data exchange and evidence-based decision-making. If implemented well, NAgDI could foster innovation, improve access to finance, and strengthen national sovereignty over

agricultural data, while also preparing countries to harness emerging digital technologies like AI.

Defining DPI: Public, Scalable, and Interoperable

A central thread in the discussion was the definition and characteristics of DPI. Drawing on resources like the UNDP's DPI Playbook, contributors highlighted three core components: digital identity, digital payments, and consent-based data sharing. True DPI, they argued, must be scalable, interoperable, and accessible—ideally with open APIs that allow both public and private actors to build on top of foundational government-owned modules.

Governance and Ownership: Public Good, Not Just Government-Owned

While DPI is often government-led, participants emphasized that “public” does not necessarily mean exclusive government ownership. The “public” in DPI refers to orchestrating a fair, inclusive, and interoperable ecosystem governed by public interest principles. The Rwandan e-voucher platform was cited as a successful example, integrating farmer digital identity, payments, and data sharing, with governance anchored in public policy but open to private sector innovation.

Data Governance and Privacy: The Next Frontier

Strong data governance and privacy laws were flagged as essential, especially as DPI scales up. Contributors called for robust consent mechanisms and clear rules to protect farmers' data, drawing inspiration from frameworks like the EU's GDPR. The debate continues whether governance should focus

on the infrastructure itself or the data within it, with some arguing for a shift toward infrastructure governance to leverage existing data governance progress.

Country Cases: From Nigeria to the Netherlands

The discussion featured case studies from around the world:

- Nigeria: Early-stage efforts focus on digital farmer registries and grassroots engagement, but challenges remain in data availability and implementation speed.
- Netherlands: The AgroDataCube integrates multiple open datasets to provide a consistent, quality-assured data layer for developers, demonstrating the value of DPI “building blocks” and APIs.
- Lao PDR & Sri Lanka: Open-source registries like OpenSPP have enabled better targeting of subsidies and services, with the government as orchestrator and farmers retaining control over their data.

The Road Ahead: Collaboration and Building Blocks

The consensus: DPI in agriculture should be built as interoperable, open-source “building blocks,” with strong governance, public-private collaboration, and a focus on farmer benefit. The ultimate goal is a resilient, innovative, and inclusive agricultural ecosystem—one where data flows securely and efficiently, powering smarter decisions and better outcomes for all.

The debate continues, with the community calling for more shared experiences, documentation of best practices, and deeper exploration of governance models as countries move from silos to systems in agricultural data.

C

Week 1 e-Discussion Podcast (AI-generated)

Audio Alternative: Listen to introduction the overall topic of NAgDI as a delivery approach to DPI in Agriculture “NotebookLM AI-

generated Deep Dive” podcast (<https://youtu.be/6FR31PWx-MI?si=lkYwH0gRuUMHc-Do>)

D

Resources – Week 1

URLs of key resources mentioned in the discussion

Digital Public Infrastructure (DPI) Documents

1. The DPI Approach: A Playbook (UNDP, India's G20 Presidency)
<https://www.undp.org/sites/g/files/zskgke326/files/2023-08/undp-the-dpi-approach-a-playbook.pdf>
2. DPI White Paper - World Bank
<http://tiny.cc/wv8t001>
3. Digital Transformation of Agri Food System - World Bank Report
<http://tiny.cc/dw8t001>
4. Digital Public Good Alliance - Annual Reports
<https://www.digitalpublicgoods.net/annual-reports>
5. ADB Policy Brief
<http://tiny.cc/8w8t001>
6. Digital Public Infrastructure and Development: A World Bank Group Approach (Mar 2025)
<https://documents1.worldbank.org/curated/en/099031025172027713/pdf/P505739-84c5073b-9d40-4b83-a211-98b2263e87dd.pdf>
7. A Digital Public Infrastructure Approach for the Agriculture Sector (Sep 2025)
https://vitalwave.com/wp-content/uploads/2025/09/DPI-Approach-for-Agriculture-Sector_Final_.pdf

10. Gram Disha Trust - IoT Agritech for Smallholders
<https://gramdisha.org/iot-agritech-smallholders/>

India's Agricultural Digital Systems

11. Government of India - Press Information (Factsheet)
<https://www.pib.gov.in/FactsheetDetails.aspx?Id=149111>
12. Government of India - Press Release
<https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2033389>
13. Sustainable Practices for Natural Farming in Himachal Pradesh (SPNFHP)
<https://spnfhp.in/>
14. Himachal Pradesh Mobile Applications
<https://mobileappshp.nic.in/EN-IN/>
15. AgriStack - India's Agricultural Infrastructure
<https://agristack.gov.in/>
16. CETARA-NF Methodology Paper ([LinkedIn](#))
17. Sustainable Agriculture Made Easy - CETARA-NF ([LinkedIn](#))
18. CETARA-NF Inspires National Natural Farming ([LinkedIn](#))

Agricultural Data Infrastructure Examples

8. AgroDataCube (Wageningen University)
<https://agrodatacube.wur.nl/>
9. Gram Disha Trust - SLM IoT Integration for Natural Farming
<https://gramdisha.org/slm-iot-integration-for-natural-farming/>

Shared Documents

19. Google Drive - Shared Document <https://drive.google.com/file/d/1TQj1qB9q-hTBsxX0JC2iSr6sVUNlnreZ/view?usp=sharing>

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