



**FMAFS**

FEDERAL MINISTRY OF AGRICULTURE  
AND FOOD SECURITY, FEDERAL REPUBLIC  
OF NIGERIA



Investing in rural people

## **National Stakeholder Workshop on Best Practices for the National Digital Farmers Registry (NDFR)**

**November 19 and 20, 2025  
FRASER SUITES, CENTRAL AREA, ABUJA**

### **STRATEGIC & POLICY RECOMMENDATIONS FOR THE IMPLEMENTATION OF THE NATIONAL DIGITAL FARMER REGISTRY (NDFR) IN NIGERIA**

Adopted on 20 November 2025

## Background

1. National Digital Farmer Registry (NDFR) is a centralized system that securely captures and verifies data on farmers, their households, land, production practices, and participation in agricultural programs. It provides each farmer with a verifiable digital identity and enables transparent, targeted, and accountable agricultural services. As a core element of Agriculture Digital Public Infrastructure (AgDPI), the NDFR connects with digital ID, payments, and data-exchange platforms to support extension services, input subsidy reform, access to finance and insurance, advisory and extension services, and coordinated planning across government and private actors. Built on open standards, secure APIs, and consent-based data sharing, it ensures that women, youth, and marginalized farmers are visible and included.

2. The Federal Ministry of Agriculture and Food Security (FMAFS) guided by His Excellency, the President of the Federal Republic of Nigeria's "...circular on the use of National Identification Number (NIN) by all MDAs in the provision of government services to beneficiaries, has partnered with NIMC to leverage the National Identity Management System to power the Ministry's farmer registry by the linkage of the NIN...". To this end, "FMAFS in collaboration with the National Identity Management Commission (NIMC), is introducing the National Identity Number (NIN) enabled farmer registry in line with the government's commitment in improving transparency, efficiency and ensuring inclusivity under the President's Renewed Hope Agenda, of which food security is a primary objective"<sup>1</sup>. According to the vision of the Federal Government, the Digital National Farmers' Registry "is a transformative initiative that seeks to capture accurate, real-time, and geo-referenced data on farmers across the country — disaggregated by location, commodity, scale of production, gender, and age. The Farmer Registry is a strategic tool for promoting inclusion, transparency, and measurable impact. The NDFR is also the foundation for evidence-based planning, targeted intervention, inclusive policymaking, and accountability in the agricultural ecosystem."<sup>2</sup>

3. In support of this government agenda, and in line with the National Agricultural Technology and Innovation Policy (NATIP) and the IFAD Digital Innovation Action Plan (DIAP), the NDFR Policy Dialogue Initiative launched on May 28th, 2025 to: a) Strengthen the capacity of key stakeholders in supporting and coordinating an effective, efficient, and sustainable Unified National Digital Farmers Registry (NDFR); b) Identify strategic recommendations to support the development and implementation of the NDFR; and c) Establish a multi-stakeholder platform to mobilize, coordinate, and integrate the contributions of key actors, including government, the private sector, civil society organizations, farmer organizations, and development partners. The Policy Dialogue Initiative brought together stakeholders from the Federal Ministry of Agriculture and Food Security (FMAFS), IFAD, Heifer International, farmer organizations, development partners, private sector actors, and various government ministries, departments, and agencies<sup>3</sup>. The strategic recommendations presented in this document are informed by the Policy Dialogue Initiative, consultations with stakeholders, the Rapid Assessment of Digital Farmer Databases, and Global Best Practices on the design and implementation of National Farmer Registries.

<sup>1</sup> <https://nimc.gov.ng/press-releases/fmafs-nimc-nin-enabled-farmer-registry--g2p-card-project>

<sup>2</sup> Annex 2 – Opening Remark of the Federal Ministry of Agriculture and Food Security, at the Policy Dialogue on Digital National Farmers' Registry, Held at Wells Carlton Hotel, Asokoro, Abuja on Wednesday, 28th May 2025. Final Report of Official Launch of Policy Dialogue Initiative for the National Digital Farmers Registry (NDFR) in Nigeria. Pg 19.

<sup>3</sup> Final Report of Official Launch of Policy Dialogue Initiative for the National Digital Farmers Registry (NDFR) in Nigeria. Executive Summary, Pg 5.

4. Global experiences offer valuable lessons and insights. India's PM-KISAN and AgriStack show how linking registries to national ID and digital payments enables large-scale benefit transfers, while highlighting the need for strong privacy and grievance systems. Tanzania's M-Kilimo demonstrates the value of geospatial mapping and mobile onboarding, and Kenya's KIAMIS showcases the integration of services such as e-voucher system improve subsidy targeting and transparency. These cases underline the importance of farmer registries coupled by political will can unlock access to digital enabled services for small holder farmers while promoting systems interoperability, local ownership, data standards, and transformation of food systems.

### **Strategic Pillars of the National Digital Farmer Registry (NDFR)**

The successful implementation of the National Digital Farmer Registry (NDFR) depends on a set of core components that define how farmer data is captured, verified, organized, and made interoperable across agricultural systems. These key components provide the structural backbone for accuracy, inclusion, secure data exchange, and service delivery.

#### **1. Digital Public Infrastructure and Farmer Registry**

*(Unique ID • Data Standards • Core Farmer Data Architecture • Local Context)*

The Registry Design imperative defines core data architecture and identification standards using unique identifiers such as NIN, household IDs, project IDs, and alternatives for hard-to-reach farmers. Standardized fields cover demographics, land, production, and socioeconomic status to ensure accuracy and interoperability. The registry also embeds gender, youth, disability-sensitive data and modules tailored to local contexts and commodity value chains.

Within this strategic recommendations, the following were agreed and adopted by stakeholders as priority actions:

1. Leverage the National Identity Number (NIN) to coordinate & manage all identity databases across all agri-business or projects from a Federated Architecture perspective.
2. Users and services should have a unique identifier to monitor and check duplication of farmers and services with the same geographic locations.
3. Data-capturing templates suitable for agriculture DPI should be developed to cater for disparities in data collection and enable standardization.

#### **2. Secure, interoperable digital architecture and data exchange**

*(Technical Infrastructure • Open Standards • Secure-by-Design • APIs & Data Exchange • eGovStack • Standardization of Farmer Databases)*

This component acknowledges the existence of farmer databases that are managed by various stakeholders in the ecosystem. Accordingly, the NDFR should serve as a central, unified source of farmer data/information, rather than operating as an isolated database. An API-first design enables seamless interoperability, integration and coordination with identity systems DPI, payment gateways, and the NSR. Promoting open-source oriented architecture can prevent vendor lock-in and support national ownership. A harmonized data exchange layer allows government and authorized private actors to securely access consented farmer data for services like subsidy verification and insurance. Privacy is protected through encryption, consent management, and full compliance with National Data Protection Act/Strategy.

Within this strategic recommendations, the following were agreed and adopted by stakeholders as priority actions:

1. Development of a national technical architecture for all Ministries, Departments and Agencies (MDAs)—that addresses security (through "Secure-by-Design"), scalability, and seamless integration. A single national architecture gives the country a standard way of building and connecting systems. This reduces duplication of spending, improves federal and state coordination, and ensures every MDA and public sector entity can exchange data seamlessly.
2. Develop strategy to drive data demand and use for farmer data—to help provide a blueprint/framework of how different primary service providers/stakeholders within the ecosystem can request and use farmer data, design services, and subsequently provide periodical updates to support integrity of the registry.

### **3. Inclusive, multi-stakeholder partnerships collaboratively developing, managing, and implementing the NDFR.**

*(Stakeholder Participation • Public–Private Collaboration)*

Beyond technology, the Ecosystem Approach & Inclusion component recognizes that digital transformation in agriculture should be people centered. It brings together government agencies, private sector innovators, development partners, and farmer organizations to co-create and govern the registry. Structured APIs enable vetted fintechs, Agri-techs, extension service, market information, input suppliers, and buyers to interact with verified farmer data under clear access rules. Farmer groups including women and youth, support in shaping the system to ensure usability and trust. Capacity-building for government staff, extension workers, and service providers, along with continuous policy dialogue, strengthens adoption and fosters an inclusive, collaborative digital agriculture ecosystem.

Within this strategic recommendations, the following were agreed and adopted by stakeholders as priority actions:

1. Co-create a standardized data collection template that will capture relevant data requirements of all stakeholders and make it available in a digital format with online and offline data collection capabilities
2. Develop service platform-based business models that make key services easily accessible for increasing production and income generation services zero-rated cost to farmers (e.g. extension platforms) while enabling the service providers to benefit from the large volume of farmers accessing their services on the platform

### **4. Use Cases & Applications for enabling better, targeted and effective access to digital-enabled services**

*(Extension Services • Input Delivery • Financial Services • Value Chain Development • Planning & M&E)*

The value of the NDFR becomes fully evident in the Service Layer, which translates registry data into real-life benefits for farmers and institutions. High-impact solutions such as digital extension service and digital input delivery through e-vouchers to transparent targeting and the elimination of ghost beneficiaries. Standardized data packages to empower financial institutions to offer credit, savings, and index-based insurance tailored to farmers' profiles. Processors, aggregators, and exporters can identify production clusters and promote value chain engagement and efficiency. Through integration with cross-sectoral agencies, the registry also supports localized and targeted climate-smart advisories, early warnings, and optimized resource allocation.

Within this strategic recommendations, the following were agreed and adopted by stakeholders as priority actions:

1. Upgrade existing programmes—such as extension service and input distribution—into fully digital, transparent platforms. This will streamline operations, reduce leakages, and strengthen accountability across all agricultural support interventions.
2. Position the NDFR as a reliable source of verified farmer identity and profiling data to de-risk lending for banks and financial institutions to enhance financial inclusion. Enable secure API integrations for fintechs to authenticate farmers, assess risk, and deliver tailored financial services at scale.
3. Adopt the NDFR's role beyond administrative record-keeping by transforming it into a strategic data asset that informs national planning, market forecasting, climate and food security analysis, and emergency response efforts.

## **5. Strengthen Data Governance, Ethical use and Policy for the farmer registry** *(Policy & Compliance)*

A robust Data Governance Framework ensures that the registry is governed in a transparent, ethical, and secure manner. This implies a design in compliance fully with National Data Protection strategies and global best practices, including GDPR-aligned principles. It includes detailed protocols for data validation, verification, updates, and lifecycle management. Access rules specify who can use the data, for what purpose, and under what conditions. There are also built-in mechanisms for managing risks such as identity fraud, misuse of information, cybersecurity threats, and citizen grievances. Ethical guardrails should ensure that emerging technologies such as AI and predictive analytics are used responsibly, preventing bias, exclusion, or harm.

Within this strategic recommendations, the following were agreed and adopted by stakeholders as priority actions:

1. Establish a Unified Data Consent and Reuse Framework that embeds an explicit, informed consent mechanism that enables a “collect once, use multiple times” principle. This framework should clearly outline how farmer data is collected, reused across programmes, and protected—ensuring transparency, trust, and compliance with national data protection laws.
2. Adopt comprehensive ethical guidelines that guarantee equitable access for women, youth, and vulnerable groups, including persons with disabilities. This includes preventing discriminatory algorithms, ensuring inclusive system design (e.g., visual notifications for hearing-impaired users), and enforcing safeguards that protect against exclusion at all stages of registry implementation.
3. Institutionalize a robust Role-Based Access Control (RBAC) that ensures only authorized personnel at federal, state, LGA, and ward levels can access specific categories of data. This protects sensitive information, prevents misuse, and ensures that data collected at community levels is securely managed and accessed only by those with legitimate operational responsibilities.

### **Key Strategic Enablers for Implementing the NDFR in Nigeria**

The successful rollout of the NDFR in Nigeria depends on a set of strategic enablers that ensure the system is technically sound, institutionally anchored, inclusive, and sustainable. These include:

#### **1. Phased Implementation and Minimum Viable Product (MVP) Rollout**

A phased and sequenced implementation approach enables iterative development while managing development complexities. While starting with a Minimum Viable Product

(MVP)—such as core farmer registration, extension service or an input e-voucher module—helps validate system design, demonstrate early value, and build institutional confidence. Subsequent phases can add other services such as digital payments for financial services, land and geospatial data, climate-smart advisories, market linkages, and integration with broader AgDPI components. This structured rollout supports continuous learning, refinement, and scalability.

## **2. Stakeholder Inclusion and Coordination Mechanisms**

Effective implementation requires identifying and engaging actors across federal, state, and local levels, including government agencies, development partners, farmer organizations, cooperatives, Agri-tech firms, fintechs, extension service technologies and input suppliers. Establishing a Multi-Stakeholder Governance Board with clear mandates, decision-making processes, and coordination platforms such as technical working groups and policy forums to ensure alignment, strengthen data ownership, and promote collaboration throughout the lifecycle of the NDFR.

## **3. Legal and Policy Alignment**

The NDFR should be anchored in a strong legal framework. Key enablers include compliance with the Nigeria Data Protection Act (NDPA) 2023, integration mandates for NIN, NSR, and CBN-led systems, and clear data-access and consent protocols. Alignment with national strategies—such as NATIP, NPRGS, and the Digital Economy Policy—is essential. Standardized MoUs and data-sharing agreements should govern institutional partnerships and safeguard farmer data rights.

## **4. Standardization and Interoperability Protocols**

To harmonize existing farmer databases and ensure seamless data exchange, the NDFR must adopt standardized data schemas and APIs across federal and state systems. Open-source, modular architecture, integration with eGovStack components (identity, payments, GIS), and adherence to global Digital Public Infrastructure standards will enable interoperability across services such as subsidies, finance, land administration, climate information, and insurance.

## **5. Assessment of Digital Infrastructure and Systems Readiness**

Robust assessment of digital infrastructure is essential for deployment and scale. This includes secure hosting environments, geospatial tools, identity verification mechanisms, offline-capable mobile data collection tools, and strong system interoperability. Secure-by-design principles including encryption, access control, audit trails—must be embedded. A centralized monitoring and analytics dashboard will support real-time decision-making. Ensuring technical and institutional readiness at national and sub-national levels reduces operational risks.

## **6. Capacity Development and Change Management**

Training for extension agents, state officials, farmer leaders, and private sector innovators is critical. Capacity needs include system use, API adoption, data standards, and compliance. Policymakers require orientation on the strategic value of the NDFR. Continuous support via helpdesks, peer-learning networks, and adaptive learning mechanisms will sustain long-term adoption.

## **7. Sustainable Financing and Ownership**

Long-term sustainability requires transitioning from project-based to public infrastructure financing. This includes dedicated budget lines within mandated/coordinating agencies, supported by donor basket funds for rollout and ecosystem strengthening. Cost-recovery

models—such as premium API access—can further support sustainability. Anchoring the NDFR within mandated government agency (like the Federal Ministry of Agriculture and Food Security – FMAFS), with technical support from other government agencies like the, Federal Ministry of Livestock (FML), Federal Ministry of Marine and Blue Economy (FMMBE), National Identity Management Commission (NIMC), Central Bank of Nigeria (CBN), etc, to ensure institutional ownership and cross-sector continuity.

FGN/IFAD Policy Dialogue Initiative on National Digital Farmer Registry (NDFR)  
Implemented by:

