



FEDERAL REPUBLIC OF SOMALIA
Ministry of Agriculture and Irrigation
Department of Agricultural Technology and Innovation

The State of Digital Agriculture in Somalia

Progress, Challenges, Opportunities and Path to Scale



Executive Summary

This report sets out the state of digital agriculture in Somalia. It reviews the policies and strategies that guide digital agriculture, the digital systems the Ministry of Agriculture and Irrigation has built for farmers, the progress of the national ID, the role of the private sector, the challenges that remain, the opportunities ahead and the path to scale.

Digital tools offer a practical way to raise productivity, warn farmers of climate shocks and connect them to markets and finance. Between 2025 and 2026 the Ministry of Agriculture and Irrigation (MoAI) moved from isolated pilots towards a national framework. It launched the Somalia National Digital Agriculture Strategy and Action Plan 2025–2029 on 20 August 2025, prepared by the Ministry with support from FAO; prepared the Somalia Digital Agriculture Roadmap 2025–2028 through the Food Systems Resilience Project (FSRP) with support from the World Bank; and completed the first national assessment of farmers' digital needs.

The Ministry also delivered working systems. It registered 132,297 farmers on the Somali Farmer Registration Platform (SOFAREP), 61.1% of them women, built an e-voucher application to verify them, runs the e-Fidiye advisory app and the 507 farmer call centre, which has reached 130,000 farmers with SMS flood warnings, and developed a seed certification and traceability system (MoAI, 2026).

The foundations outside the sector are stronger too. Mobile money is used by 73% of adults (MoCT and ITU, 2025), a national ID is being rolled out, and a national instant payment system is live (Dawan Africa, 2026). Farmers already trade through mobile wallets such as EVC Plus, Zaad, eDahab, Sahal and Jeeb.

Four challenges hold back wider use: digital skills, internet access, electricity and devices. Rural connectivity, data costs and fragmented platforms add to them. In the 2026 needs assessment, 85% of respondents owned a phone but only 5.1% used an agricultural app (MoAI, 2026).

The path to scale is to build on what farmers already use, which is voice, SMS, radio and mobile money in the Somali language. The registry, the national ID and payments should be joined into one backbone, and investment in power, connectivity and extension capacity should come before advanced applications.

FIVE KEY MESSAGES

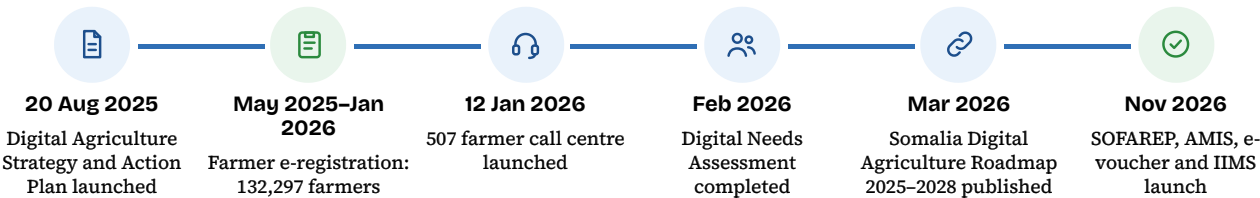
- 1 A national framework now exists:** a strategy, a roadmap and survey evidence.
- 2 Core systems are working:** registry, e-voucher, advisory app, call centre and seed traceability.
- 3 Farmers are on phones and mobile money,** but not yet on agricultural apps.
- 4 Digital skills, internet, electricity and devices** are the main challenges.
- 5 Scale depends on integration** and on putting infrastructure first.

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MILESTONES

From Strategy to Working Systems, 2025–2026



1 Introduction

Agriculture is the backbone of Somalia’s economy. Together with livestock, it contributes about 60% of GDP (SNBS, 2026), employs 45.8% of employed people (World Bank, 2026) and is the main source of food and income for rural households. Farming follows the two rainy seasons, Gu and Deyr, across five main farming zones. With an estimated 8.9 million hectares of arable land and two permanent rivers, the country has a strong base for growth.

Somali agriculture is making progress. Four crops lead production and together are worth about USD 99 million a year. Somalia is the **4th largest sesame producer** in the East African Community, with about 34,800 tonnes a year, mainly from Bay. Sesame is the country’s most valuable crop and its leading crop export, grown largely by smallholders and traded by a growing number of exporters. Somalia is also a major producer of sorghum (about 111,000 tonnes a year), maize (about 76,800 tonnes, half from Lower Shabelle) and cowpea beans (about 27,000 tonnes from the coastal “cowpea belt”) (SNTF Lab, 2024).

Young people are increasingly interested in agriculture as a business. Many years ago, crops that need specific temperatures, such as tomatoes and cucumbers, were imported into Somalia from Kenya and Ethiopia. Today, young people have started greenhouses as a business and supply markets in the big cities of Somalia.

Digital technology can speed up this progress. Advisory services and weather alerts, certified seed, e-vouchers for inputs, market prices and mobile payment can reach farmers and pastoralists in every region. The National Transformation Plan 2025–2029 and the Digital Transformation Strategy 2025–2030 make digital transformation a national priority, and the Ministry of Agriculture and Irrigation (MoAI) has set its direction through the National Digital Agriculture Strategy and Action Plan 2025–2029 and the Somalia Digital Agriculture Roadmap 2025–2028. To lead this work, MoAI established the Department of Agricultural Technology and Innovation (DATI) in September 2024. This report records what has been achieved since then, the challenges that remain, the opportunities ahead and the path to scale.



The Shabelle River in Jowhar District, Middle Shabelle, with irrigated farmland along its banks.



Bananas on their way to market. Banana is one of the Ministry’s seven target crops.

Main Farming Zones of Somalia

1 Northwest Parts of Awdal and West Galbeed Rain-fed maize and sorghum	2 Coastal Belt Central and Southern Somalia Cowpea and other pulses	3 Bay and Bakool Rain-fed sorghum with livestock production	4 Shabelle and Juba Riverine valleys Rain-fed and irrigated maize, sesame and cash crops	5 Bari and Nugaal Date palm production and livestock
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Source: MoAI, 2026.

2 Why Digital Agriculture Matters

Somali farming is dominated by smallholders and mobile pastoralists who work with few inputs and have limited access to irrigation, machinery, structured markets and formal finance. The main crops in Somalia are sorghum, maize, sesame and cowpea (TASAI, 2025). The country has an estimated 8.9 million hectares of arable land.

Four seasons characterise Somalia's climate: (1) Gu, the main rainy season, April–June; (2) Hagaa or Xagaa, the dry season, July–September/October; (3) Deyr, the short rainy season, October–November/December; and (4) Jilaal, the dry season, December–March. The Gu and Deyr rainy seasons are particularly important for agricultural production, pasture regeneration and water availability.

Climate shocks drive much of the risk. The 2023 Deyr floods damaged about 83,000 hectares of cropland, mostly in Juba, Hiraan and Gedo (FEWS NET and FSNAU, 2023), and 44.3% of the population faces moderate or severe food insecurity (SNBS, 2024). Extension is still delivered mostly in person and is short of resources, so it struggles to reach dispersed and mobile communities.

Digital channels can close part of this gap. The Strategy defines six uses of digital agriculture: advisory and information services, market linkages, supply chain management, financial access, agricultural intelligence for government, and training. Each one answers a known weakness in the sector, from late warnings to weak price information.

MOAI'S SEVEN TARGET CROPS

Sesame

Maize

Sorghum

Rice

Lemon

Banana

Beans

The Ministry of Agriculture and Irrigation has set seven target crops. Digital services matter for each of these value chains: weather and pest alerts protect the harvest, certified seed and e-vouchers improve inputs, registry data guides support, and market prices and mobile payment help farmers sell for more.

60%

of GDP comes from agriculture

45.8%

of employed people work in agriculture

8.9M ha

of arable land

50.7%

of the population lives in rural areas



Maize harvest. Photo: FSRI, from the Digital Agriculture Roadmap.

Six Uses of Digital Agriculture



Advisory and information. Crop, livestock, weather and pest advice delivered by SMS, voice, radio and apps.



Market linkages. Prices, buyers and trusted digital marketplaces that reduce the share lost to middlemen.



Supply chain management. Tracking inputs, seed and produce from supplier to farm to market.



Financial access. Mobile money, e-vouchers, credit and Takaful insurance built on digital records.



Agricultural intelligence. Registry, production and climate data that let government plan and target support.



Training. Digital learning for farmers, extension workers and young agripreneurs.

Source: National Digital Agriculture Strategy and Action Plan 2025–2029.

From Known Weaknesses to Digital Answers

LATE WARNINGS

Floods and droughts hit before farmers hear. **SMS and voice alerts** reach a basic phone within hours.

THIN EXTENSION

Too few extension workers for dispersed and mobile communities. **Call centres and advisory apps** extend their reach.

NO FARMER RECORDS

Support cannot be targeted without knowing who farms where. **A digital farmer registry** makes it possible.

3 The National Digital Setting

Digital agriculture depends on foundations that the agriculture sector does not control: networks, identity, payments, laws and skills. Somalia's National Transformation Plan (NTP) 2025–2029 names digital transformation as one of the key pillars for progress in every sector, and the Digital Transformation Strategy (DTS) 2025–2030 puts that pillar into practice through ten pillars and more than 40 initiatives (MoCT and ITU, 2025).

People and Connectivity

Somalia has a population of about 20 million. It is young, with about three quarters of people under 30, and 50.7% live in rural areas (MoCT and ITU, 2025; DataReportal, 2025). About 85% of people aged 15 and over own a mobile phone, and there were 11.5 million mobile connections at the end of 2025 (MoAI, 2025; DataReportal, 2025). Mobile money is used by 73% of adults, with rural use (72%) close to urban use (82%) (MoCT and ITU, 2025).

Digital in the National Transformation Plan

- **Infrastructure.** Broadband and digital infrastructure are priorities alongside energy, roads and water.
- **Jobs.** ICT is framed as a source of jobs for young people and women.
- **Governance.** A national e-ID and e-government platforms are treated as essential for reform and better services.
- **Finance.** Diaspora remittances, equal to 15–16% of GDP, are seen as a possible source of funding for digital programmes (MoCT and ITU, 2025).

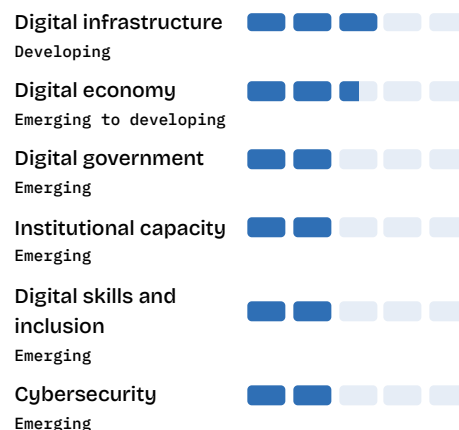
What Is in Place

Private telecom operators have led Somalia's digital growth. Since 2017 the Government has added public foundations around that base: the National Communications Law (2017), the Data Protection Act (2023), a Cybercrime Bill approved by Cabinet in August 2025, a national ID and a national instant payment system (MoCT and ITU, 2025; Dawan Africa, 2026).

What Is Still Weak

Only 27.6% of people use the internet, and fewer than 10% of rural households are connected. A fixed broadband package costs 59% of average income. Somalia ranks 191 of 193 in the UN E-Government Development Index and scores 37.4 out of 100 in the Global Cybersecurity Index. Fewer than 10% of adults are digitally literate (MoCT and ITU, 2025).

FIGURE 1
Digital Maturity by Area, 2025



Five levels: nascent, emerging, developing, maturing, advanced. Source: DTS.

FIGURE 2
Monthly Cost of Connectivity, Share of Average Income



Scale 0–60% of GNI per capita. Source: ITU, in the DTS.

FIGURE 3
The Ten Pillars of the DTS 2025–2030



Pillars 6 and 9 contain the agriculture initiatives. Source: DTS.

3.1 Digital Agriculture in the National Setting

For agriculture, the national picture has one clear message: almost every farming household can be reached by voice, SMS and a mobile wallet, but only a small share can be reached by an app.

What This Means for Digital Agriculture

-  **Design for the basic phone.** SMS, USSD and voice reach almost every farming household, so services should work on them first and add apps later.
-  **Build on the national ID.** Linking the farmer registry to the NIRA number gives each farmer one verified identity across services.
-  **Include women and young people.** Training and outreach must reach women farmers and the young majority directly.
-  **Pay through mobile wallets.** Mobile money is already used in rural areas, so subsidies, e-vouchers and input payments can travel through it.
-  **Close the rural connectivity gap.** Better coverage and power in farming districts is needed before data-heavy services can scale.
-  **Use shared national systems.** Agriculture should connect to national payment, identity and data systems rather than build its own.

Where Agriculture Fits

The DTS gives the Ministry of Agriculture the role of promoting e-agriculture and the use of digital solutions in the sector. It places agriculture platforms in its second phase (2027–2028), after the national e-ID, government service portals and cybersecurity frameworks of 2025–2026. This order suits the sector: agriculture can build on national identity, payment and connectivity systems instead of creating its own.

Agriculture in the DTS Pillars

- **Sustainability and resilience.** Climate-smart agriculture platforms, smart water and irrigation monitoring, and ICT-enabled early warning.
- **Social development and connected services.** Agriculture digital advisory services and digital social safety net transfers.
- **Governance and coordination.** Harmonised rules between the federal government and Federal Member States.

DTS Targets for 2030 That Matter for Agriculture

INDICATOR	BASELINE	2030 TARGET
People with internet access	27.6%	80%
Rural households connected	under 10%	55%
Adults who are digitally literate	under 10%	60%
Farmers using digital agricultural services	under 5%	35%
Farmers on digital advisory platforms	under 5,000	100,000
Districts with ICT-enabled early warning alerts	under 10%	70%
Mobile money providers that are interoperable	0%	100%

Source: DTS monitoring framework.

When Agriculture Comes In: DTS Phases

PHASE 1 • 2025–2026

Quick wins and foundations: national e-ID, government service portals, universal access pilots and cybersecurity frameworks.

PHASE 2 • 2027–2028

Scaling sector platforms in health, education and **agriculture**, the national data backbone, and programmes for women, youth and displaced people.

PHASE 3 • 2029–2030

Innovation through sandboxes, research hubs and advanced services such as AI, the Internet of Things and 5G.

4 Policy and Institutional Framework

The Department of Agricultural Technology and Innovation

The Ministry of Agriculture and Irrigation (MoAI) of the Federal Republic of Somalia established the Department of Agricultural Technology and Innovation (DATI) in September 2024 to lead the use of machinery, digital tools and innovation in Somali farming.

The Ministry nominated **Eng. Dirie Abdi Mohamed** as Director of the Department. He is an agricultural machinery and technology specialist and a graduate of Azerbaijan State Agricultural University.

The Department's mandate is to lead the national agenda for agricultural mechanization, digital agriculture and innovation. It guides policy, coordinates development partners and Federal Member States, and leads the Ministry's digital agriculture work, including the Strategy, the Roadmap and the farmer registration, e-voucher, seed and call centre systems described in this report.

Coordination with the Federal Member States

The Federal Member States have established the same department in their ministries of agriculture. DATI coordinates with these state departments so that national strategies, registration campaigns and digital services are planned together and carried out in the same way across the country.

Three Sections of the Department



Agricultural Mechanization

Promotes appropriate machinery for land preparation, planting, irrigation, harvesting and processing, and the skills and services farmers need to use it.



Agricultural Digitalization

Leads digital systems for the sector: farmer registration, e-vouchers, seed certification and traceability, digital advisory and the 507 call centre.



Smart Agriculture and Innovation

Advances climate-smart technologies and new solutions, working with researchers, the private sector and young innovators.



Eng. Dirie Abdi Mohamed, Director of DATI, speaking at the FAO Africa Conference on Sustainable Agricultural Mechanization, Johari Rotana, Dar es Salaam, Tanzania, 3–6 February 2026. Photo: MoAI.

FIGURE 4

How the Department Leads and Coordinates



Source: MoAI.

4.1 National Policy Documents

Until 2025 Somalia had no dedicated policy for digital agriculture. Three documents prepared by MoAI now set the direction, and the national Digital Transformation Strategy places agriculture inside the wider government agenda.

STRATEGY • 2025–2029

National Digital Agriculture Strategy and Action Plan

Prepared by MoAI with support from FAO and launched on 20 August 2025, with financing from the African Development Bank (MoAI, 2026). Its vision is for Somalia “to be a leading country in Africa in the adoption of digital agriculture technologies having achieved self-sufficiency in food production.” It sets 14 strategic objectives, from governance and data to e-extension, early warning, e-markets, input verification and traceability. Estimated cost: USD 5.72 million over five years, with a mid-term review in July 2027 (MoAI, 2025).

ROADMAP • 2025–2028

Somalia Digital Agriculture Roadmap 2025–2028

Prepared by MoAI through the Food Systems Resilience Project (FSRP) with support from the World Bank. It has three pillars (use cases, a shared digital stack and the enabling environment) and four priority use cases: a farmer and pastoralist registry with e-vouchers, weather and early warning, livestock disease surveillance, and trusted digital markets. A Steering Committee, a Technical Committee and a Digital Agriculture Delivery Unit inside MoAI will govern delivery.

EVIDENCE • FEBRUARY 2026

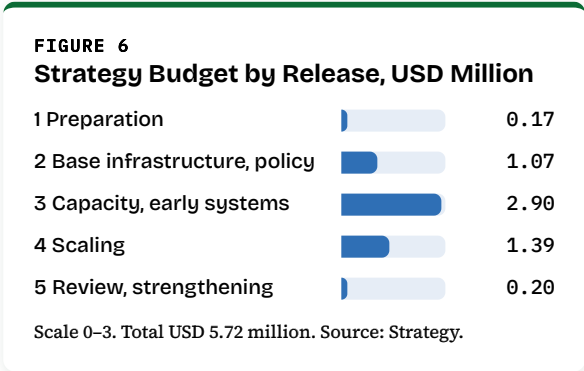
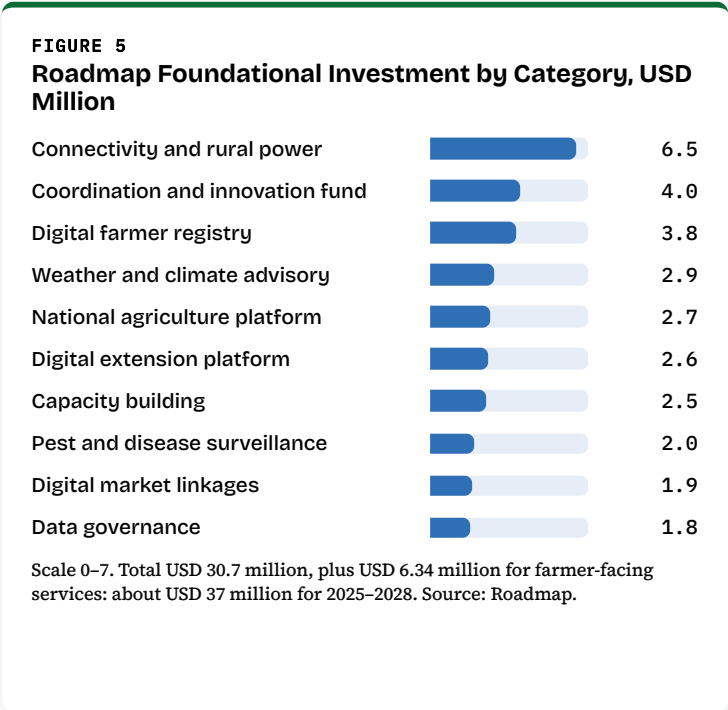
Digital Needs Assessment

The first national survey of digital agriculture needs. It covered 413 farmers, pastoralists and value-chain actors in Banadir, Galmudug, Hirshabelle, Jubbaland, Somaliland and South West, with interviews and validation workshops. Its findings were used to reset the Roadmap towards infrastructure first, trust and inclusion.

NATIONAL SETTING • 2025–2030

Digital Transformation Strategy

Led by the Ministry of Communications and Technology and the NCA with ITU. It gives the Ministry of Agriculture the role of promoting e-agriculture, plans to scale sector platforms in 2027–2028, and sets 2030 targets of 35% of farmers using digital agricultural services and 100,000 farmers on digital advisory platforms (MoCT and ITU, 2025).



Consultation workshop on digitalizing Somalia's agricultural and livestock ecosystem. Photo: FSRP.

4.2 The Digital Agriculture Strategy: Launch and Content

The Somalia Digital Agriculture Strategy and Action Plan 2025–2029 was prepared by the Ministry with support from FAO. It was launched and disseminated at a national workshop at the Afrik Hotel on 20 August 2025. The Ministry of Agriculture and Irrigation hosted the event with FAO, the African Development Bank, the Food Systems Resilience Project and the World Bank Group, and participants received printed copies of the Strategy.



National Workshop on Launching and Dissemination of the Somalia Digital Agriculture Strategy, 20 August 2025. Photo: MoAI.



Participants with printed copies of the Strategy at the launch. Photo: MoAI.

VISION

“To be a leading country in Africa in the adoption of digital agriculture technologies having achieved self-sufficiency in food production.”

MISSION

“To leverage digital technologies and data to increase agricultural productivity, improve access to markets, enhance climate resilience, food security and household incomes.”

Fourteen Strategic Objectives

1. Establish a governance structure for digital agriculture
2. Build shared smart farming infrastructure and mechanised inputs
3. Improve the availability, quality and accessibility of data
4. Enhance extension so advice is reliable, effective and timely
5. Share good and climate-sensitive agricultural practices digitally
6. Link farmers to climate and risk early warning systems
7. Narrow the gap between demand and supply through e-markets and logistics platforms
8. Verify and monitor the quality of farm inputs
9. Connect research and innovation platforms
10. Strengthen technology-based lifelong learning for farmers and extension officers
11. Promote a connected innovation and entrepreneurship system
12. Strengthen farmers' collective action and reduce informality
13. Increase traceability and certification for food safety and exports
14. Improve policy and regulation in favour of digital agriculture

Guiding Principles

- **Farmer centricity:** farmers' needs drive the choice of technology.
- **Equality and inclusion:** services for every gender, language, income and background.
- **Ubiquitous technologies:** access from any device, place and network.
- **Futureproof:** open systems that adapt as needs change.
- **Shared resources:** common databases and standard data exchange.
- **Responsible use of data and intellectual property,** with privacy protected.
- **Renewability:** avoid e-waste and environmental harm.

How It Will Be Delivered

The Strategy builds on existing initiatives, including the GO Smart Agriculture Program for precision farming. It is delivered in five releases, under a governing committee that brings together agriculture and ICT leadership.

A mid-term review is set for July 2027, and an end-term review will take place six months before the Strategy period closes. Both follow the National Integrated Monitoring and Evaluation Framework.

4.3 Somalia Digital Agriculture Roadmap 2025–2028

The Somalia Digital Agriculture Roadmap 2025–2028 was prepared through the Food Systems Resilience Project (FSRP) with support from the World Bank. It sets out how the sector will move from pilots to national systems. Its vision is “to build inclusive, affordable, interoperable, and trust-oriented digital agriculture systems that improve productivity, strengthen resilience, and expand income opportunities for farmers and pastoralists.” It concentrates on four priority use cases, chosen from the needs assessment.

USE CASE 1 • USD 1.52 MILLION

Farmer and Pastoralist Registry with E-Vouchers

Digital public infrastructure for verified identity, entitlement management and targeted support such as input subsidies and emergency transfers.

USE CASE 2 • USD 0.92 MILLION

Weather and Early Warning Expansion

Climate and market intelligence delivered in Somali through SMS, USSD, voice response and radio, for areas with low bandwidth and low literacy.

USE CASE 3 • USD 1.05 MILLION

Livestock Surveillance and Disease Reporting

Surveillance that follows pastoralist mobility and meets international standards, to protect exports and animal health.

USE CASE 4 • USD 1.28 MILLION

Trust-by-Design Digital Markets

Price transparency and buyer access through verified traders, grievance channels and mobile payment.

Four design principles run through all of them: infrastructure before applications, Somali language first, inclusion of pastoralists, and trust by design. The Roadmap also budgets USD 0.68 million for digital advisory and extension, USD 0.35 million for digital literacy and USD 0.34 million for governance and interoperability, giving USD 6.34 million for farmer-facing services (MoAI, 2026).

Three Pillars of the Roadmap



Solution Areas and Use Cases

High-impact digital services that address structural bottlenecks across agricultural and livestock value chains.



Digital Stack

The unified national platform: shared registries, an integration layer and analytics systems that support every use case.

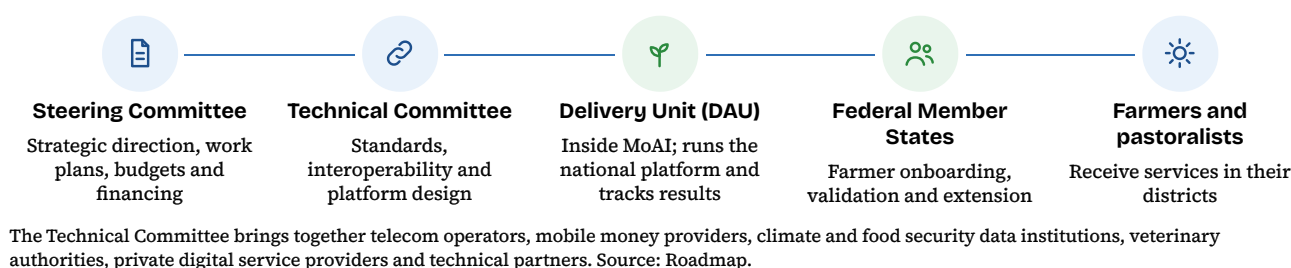


Enabling Environment

Governance, infrastructure, data policy, institutional capacity and financing needed for scale.

Source: Roadmap.

FIGURE 7
How the Roadmap Will Be Governed

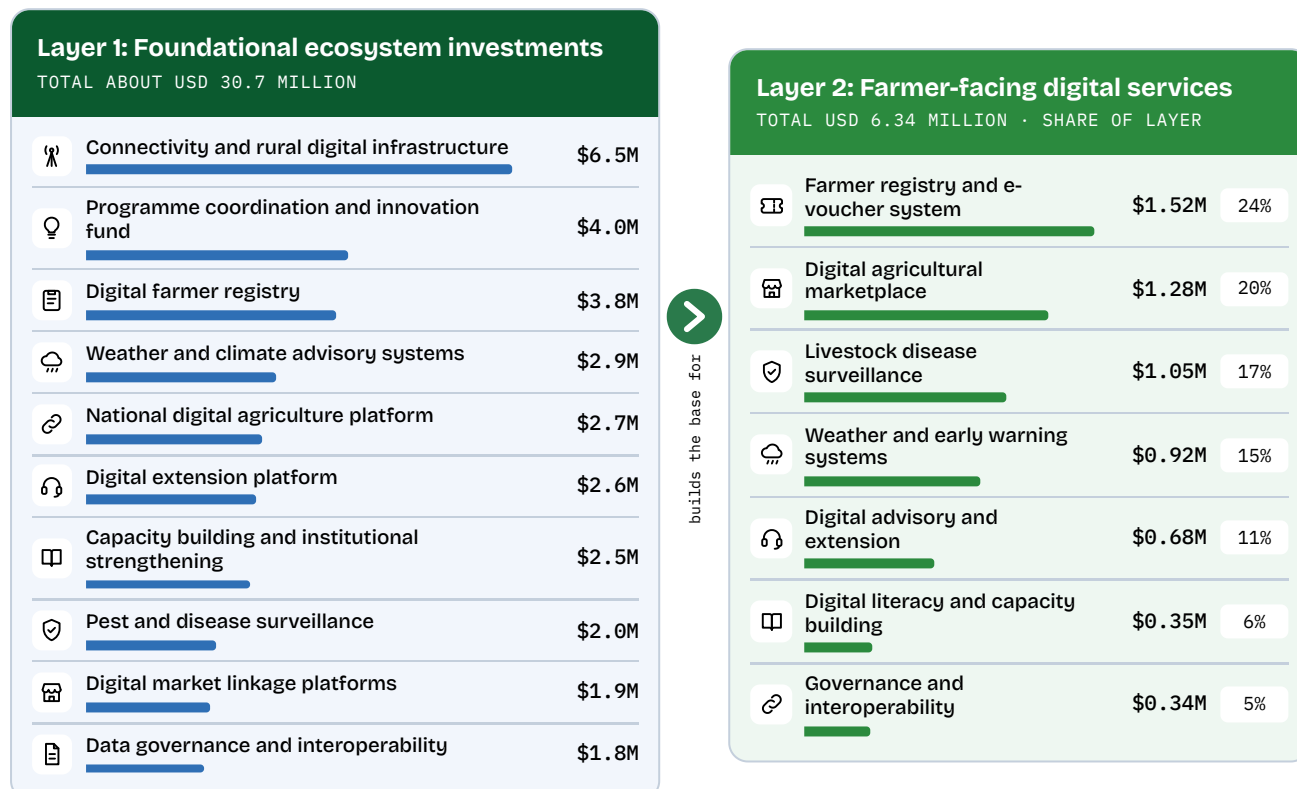


4.4 Roadmap Investment Architecture, 2025–2028

The Somalia Digital Agriculture Roadmap 2025–2028 organises its investment in two layers. The first builds the shared foundations: connectivity and power, the national platform, the farmer registry, data governance and institutional capacity. The second turns those foundations into services that farmers and pastoralists use directly.

FIGURE 8

Somalia Digital Agriculture Investment Architecture, 2025–2028



TOTAL ROADMAP INVESTMENT 2025–2028: ABOUT USD 37 MILLION

Two-layer strategy

Ecosystem foundations first, then scalable services for farmers

Implementation period

2025–2028

Goal

A scalable, integrated national digital agriculture ecosystem

Amounts in USD. Bars compare items within each layer. Shares are of the Layer 2 total; they may not add to 100% because of rounding. Source: Somalia Digital Agriculture Roadmap 2025–2028, Figure 5 and Tables 3–4 (MoAI, 2026).

What the Architecture Shows

- **Foundations come first.** About 83% of the investment goes to Layer 1, in line with the Roadmap's principle of infrastructure before applications (MoAI, 2026).
- **Connectivity is the largest line.** Rural connectivity and power, at USD 6.5 million, is about a fifth of Layer 1 (MoAI, 2026).
- **The registry is the largest service.** The farmer registry and e-voucher system takes 24% of Layer 2 (MoAI, 2026).



Cover of the Somalia Digital Agriculture Roadmap, March 2026, prepared through FSRP with World Bank support.

5 Progress: Somali Farmer E-Registration

The Somali farmer e-registration campaign was the Ministry's first national registration of farmers on a digital platform. It ran from May 2025 to January 2026 under the project Leveraging Digital Systems for Emergency Preparedness and Response to Food Crisis in Somalia (EmergenSys), funded by the African Development Bank (AfDB) and implemented by FAO in partnership with the Ministry of Agriculture and Irrigation.

132,297

farmers registered, May 2025 to January 2026

61.1%

of registered farmers are women

38.9%

of registered farmers are men

16

districts in four Federal Member States



Registration in the Field

Enumerators met farmers at registration points in their villages and recorded each farmer on a smartphone. Every record carries a photo stamped with GPS coordinates, date and time, so the Ministry knows where and when each farmer was registered.

Farmer e-registration in Middle Shabelle, July 2025. Each photo carries the GPS position, date and time of registration. Photos: MoAI.

FIGURE 9

Registered Farmers by Sex



Share of 132,297 registered farmers. Source: MoAI programme data.

Women Are the Majority

Women make up 61.1% of registered farmers and men 38.9% (MoAI, 2026). Through e-registration, each woman farmer now holds a verified record in her own name, and can be reached directly with support and information.

Districts Covered, by State

Jubaland

3 districts

- Kismayo
- Dolow
- Luuq

South West

5 districts

- Baidoa
- Burhakaba
- Hudur
- Afgoye
- Wanlaweyne

Hirshabelle

4 districts

- Balcad
- Jowhar
- Bulo Burte
- Beledweyne

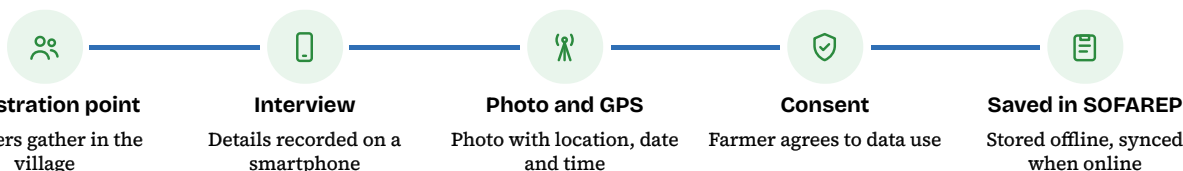
Galmudug

4 districts

- Abudwak
- Dhusamareb
- Guriceel
- Xeraale

FIGURE 10

How a Farmer Is Registered



Steps follow the registration indicators and platform functions. Source: MoAI.

6 Progress: Somali Farmer Registration Platform (SOFAREP)

SOFAREP is the Ministry’s **centralized farmer registry platform**, developed under the EmergenSys project, funded by the African Development Bank and implemented by FAO in partnership with MoAI. It brings all farmer records from every state and district into one national database. It holds the 132,297 records from the 2025–2026 e-registration campaign (MoAI, 2026). For the first time the Ministry has a verified list of who farms, where, and what they produce. That list is the starting point for targeting inputs, planning extension and responding to droughts and floods.

Built for Somali Conditions

- **Biometric identification.** The platform uses facial biometrics, so a farmer can be recognised without documents or a password.
- **Offline functionality.** Enumerators can collect and store data where there is little or no internet, and synchronise it when a connection returns.
- **Location and consent.** Each record carries a GPS-enabled photo, the GPS coordinates of the registration point and the farmer's consent for data use.
- **Standard indicators.** Every farmer is recorded with the same set of fields, listed in section 6.1.

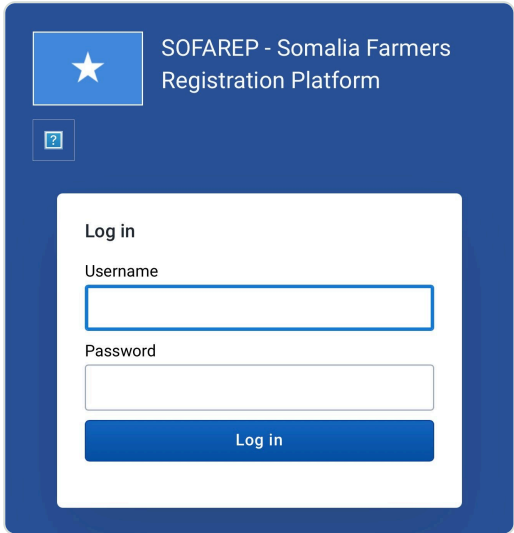
One Registry, Several Uses

SOFAREP is the base for other Ministry systems. The e-voucher application (section 7) verifies farmers against SOFAREP records before support is released. District and village data allow early-warning messages to reach the right areas, and cooperative and Farmer Field School data help extension services reach groups of farmers.

RECORDS IN SOFAREP

132,297

farmers, 61.1% of them women (MoAI, 2026).



SOFAREP login page. Image: MoAI.

WHAT STAKEHOLDERS WANT

Stakeholders rated a farmer registry with e-voucher capability as the highest priority use case, and asked for SOFAREP to be rolled out nationwide and linked with social protection databases.

OUTREACH STILL NEEDED

The FSRP target for farmer registration is 350,000 farmers. Reaching it needs more awareness, so that farmers know about SOFAREP and the benefits of registering.

SOFAREP at a Glance

ITEM	DETAIL
Developed under	EmergenSys project, funded by AfDB, implemented by FAO with MoAI
Records	132,297 farmers from the May 2025–January 2026 e-registration; 61.1% women, 38.9% men (MoAI, 2026)
Coverage	Sixteen districts in Jubaland, South West, Hirshabelle and Galmudug
Key features	Facial biometrics, offline data collection, GPS-stamped photos, recorded consent; linked to the e-voucher application
Next steps	Nationwide registration, use of the national ID number, links to mobile money and social protection

6.1 What SOFAREP Records for Each Farmer

Registration follows a standard set of indicators, so that every record is complete and comparable across districts. The indicators fall into six groups. Others may be added as the platform develops.

 The Farmer - Name - Date of birth - Sex (male, female) - Phone number - ID number (optional) - Passport photo, GPS-enabled - Form of disability	 The Farmer's Alternate - Name of alternate - Date of birth - Sex - Phone number	 Location - District - Village or settlement - GPS coordinates of the point of registration
 Groups - Cooperative membership (yes, no) - Name of the cooperative - Farmer Field School membership (yes, no) - Name of the Farmer Field School	 Enterprise - Sector: agriculture, livestock, fisheries - Enterprises, marked major or minor - Number of animals: cattle, shoats, donkeys, camels - Land area in acres - Land ownership: owned, rented, borrowed	 Consent Consent for the farmer's information to be used and shared (yes, no)

How Each Group of Data Is Used

DATA GROUP	WHAT IT MAKES POSSIBLE	WHO USES IT
The farmer	A unique, verifiable record for each farmer; removal of duplicates; verification before support is delivered	MoAI, e-voucher application
Alternate	A named person who can act for the farmer when the farmer cannot be present	Distribution teams
Location	Targeting by district and village; mapping; early-warning messages for the right area	Planning, early warning, call centre
Groups	Reaching farmers through cooperatives and Farmer Field Schools	Extension services, cooperatives
Enterprise	Estimates of input needs, herd sizes and land under production; value-chain planning	MoAI departments, partners
Consent	Lawful use and sharing of personal data, in line with the Data Protection Act (2023)	All users of the data

BUILT FOR FIELD CONDITIONS

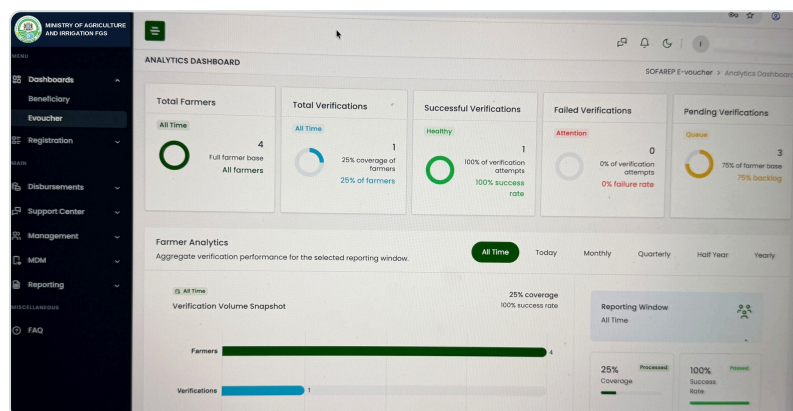
Biometric identification uses facial recognition. **Offline functionality** lets enumerators collect and store data in areas with limited internet and synchronise it later.

LINK TO THE NATIONAL ID

The farmer's ID number is optional today, because many rural people do not yet hold a national ID. As NIRA registration expands in farming districts, the NIRA number can become the common identifier (see section 15).

7 Progress: The E-Voucher Application

An e-voucher application was developed under the EmergenSys project, funded by AfDB and implemented by FAO with MoAI, to verify farmers before support reaches them. It runs as a module of SOFAREP and draws on the same farmer records.



E-voucher analytics dashboard in SOFAREP. The numbers on screen are test data from the development environment. Image: MoAI.

What the Dashboard Shows

- **Total farmers** in the beneficiary base.
- **Total verifications** and the share of farmers covered.
- **Successful, failed and pending verifications**, with a success rate and a backlog.
- **Reporting windows:** all time, today, monthly, quarterly, half-yearly and yearly.

The application also has modules for registration, disbursements, a support centre, user management and reporting.

Why It Matters



Support reaches the right farmer. Seed, inputs or other assistance are released only after the farmer is verified.



Less duplication and leakage. One farmer cannot be served twice under different names.

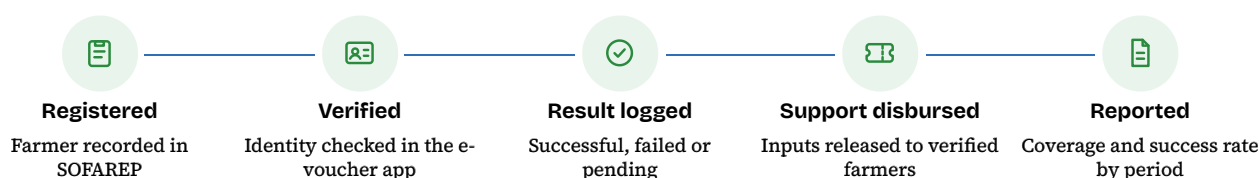


A record for audit. Every verification is logged and can be reported by period.



Ready for digital payment. Verified entitlements can later be paid through mobile money.

FIGURE 11
From Registration to Verified Support



What Each Verification Status Means

STATUS	MEANING	TYPICAL NEXT STEP
Successful	The person matches the farmer record in SOFAREP	Support can be released and is logged
Failed	The person's identity could not be confirmed	The case is reviewed before any support is given
Pending	The farmer is registered but has not yet been verified	Counted as backlog until verification is done

Where the E-Voucher Fits

The e-voucher sits between the registry and the delivery of support. SOFAREP supplies the farmer record, the e-voucher confirms the person and the entitlement, and the input or payment follows. The Roadmap makes the registry with e-voucher capability its first priority use case. It budgets USD 1.52 million for it, including a module to manage entitlements for subsidies and vouchers, and integration with mobile money (MoAI, 2026).

NEXT STEPS

- Train enumerators to use the e-voucher application.
- Link the e-voucher with agro-dealers.
- Use the e-voucher in the field to verify farmers during input distribution.

8 Progress: Seed Certification and Traceability System

A seed certification and traceability system was developed for the Somali Agricultural Regulatory and Inspection Services (SARIS) under the EmergenSys project, funded by AfDB and implemented by FAO with MoAI. It is a separate system from the e-voucher. The e-voucher verifies the farmer. The seed system verifies the seed.

18

seed companies registered with SARIS by January 2025, up from 3 in 2020

9

public seed inspectors for the whole country in early 2025

1,304 t

of certified seed produced in 2024

62

cases of counterfeit seed reported by companies in 2024

Why Somalia Needs It

Most seed in Somalia still moves outside the formal system. In 2024 the informal system supplied 94% of maize seed, 96% of sorghum seed and 78% of cowpea seed. Between 43% and 50% of seed companies sold uncertified seed. Companies reported 62 cases of counterfeit seed in 2024, while government recorded 3 (TASAI, 2025).

The Legal Base

Two laws signed on 24 December 2024 give the system its footing. The SARIS Law (No. 32 of 2024) mandates SARIS to inspect, test and certify seed, register seed actors and run plant quarantine. The Seed and Plant Varieties Law (No. 35 of 2024) covers testing, certification, variety release and trade.

What the System Does

A certification and traceability system brings the records of seed producers, inspections, laboratory tests and certificates into one place, so that a certified seed lot can be followed from the producer to the farmer. It builds on an earlier step. Since January 2024, seed testing reports have carried a QR code that links to an official record of the test status, certified quantity, expiry date and certificate owner (TASAI, 2025).

FIGURE 12
Share of Seed Supplied by the Informal System, 2024



Scale 0–100% of seed needs. Source: TASAI.

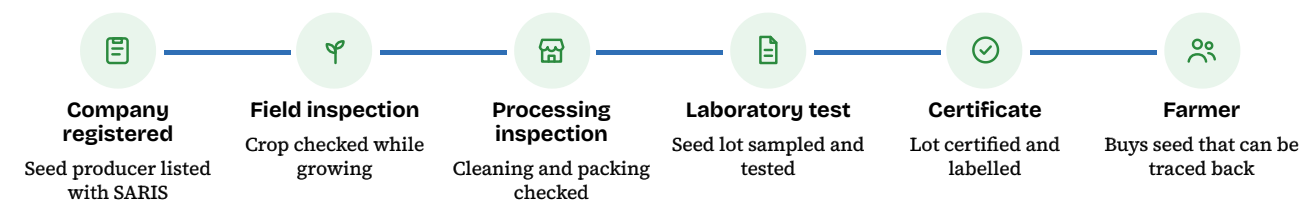
FIGURE 13
Certified Seed Production, Tonnes



Scale 0–2,400 tonnes. Source: SARIS data in TASAI.

FIGURE 14

The Certification Chain That the System Records



Certified seed passes three inspection stages (field, processing and testing) under the 2021 Seed Sector Guidelines.

Who Benefits

- **Farmers** can check that the seed they buy is genuine and certified.
- **Seed companies** get proof of quality that separates them from sellers of fake seed.
- **SARIS** can cover more producers with few inspectors and keep a full record.
- **Government and partners** can buy and distribute only certified seed.

What Comes Next

- **Rules and procedures.** Technical regulations under the new laws are still to be written. Standard procedures for inspection, sampling and certification are being prepared, with a link to SARIS's digital systems.
- **Use by seed companies.** Seed companies will use the system to register their seed, record inspections and tests, and certify the seed they sell.

9 Progress: The 507 Farmer Call Centre



The Ministry launched the 507 call centre on 12 January 2026. Farmers can call the short number 507 for advice, and the centre sends SMS messages to farmers across the country (MoAI, 2026).

Since its launch the call centre has reached 130,000 farmers with SMS early warnings about floods. It also gives farmers daily advice on agricultural practices, from planting and crop care to pests and harvest. Each agricultural department of the Ministry has an expert in the call centre office to advise farmers.



Opening of the 507 call centre at the Ministry, 12 January 2026.
Photo: MoAI.

507

short number farmers call for support

Jan 2026

call centre launched by the Ministry

130,000

farmers reached with SMS flood early warnings

Daily

advice on agricultural practices

What the Call Centre Does



Flood early warning by SMS. Mass SMS alerts tell farmers in at-risk areas when floods are expected, so they can protect crops, seed and livestock.



Awareness. The centre informs farmers about Ministry programmes, registration and services.



Daily advisory. Agents answer farmers' questions by phone in Somali on good agricultural practices, crops, pests and inputs.



A link to the Ministry. Farmers can raise problems and requests directly, and the Ministry learns what farmers need.

Why Voice and SMS Work

The call centre reaches farmers through the channels they already use. About 85% of people aged 15 and over own a mobile phone, and SMS alerts are already the second main source of climate information after radio (MoAI, 2025; MoAI, 2026). A call or an SMS works on a basic phone, needs no mobile data, and a call needs no reading.

Working with SOFAREP

The call centre has reached 130,000 farmers by SMS, close to the 132,297 farmers in the registry. The two systems can support each other. Registry phone numbers and districts allow alerts to be sent to the right farmers in the right areas, and farmers who call 507 can be invited to register.

9.1 How the Call Centre Operates

The call centre runs on two platforms: a call management system that routes and records calls, and a bulk messaging platform for SMS alerts, with USSD and voice options.



Call management dashboard, week of 5–12 October 2026: total, answered, missed and abandoned calls, and waiting time. Image: MoAI.

FIGURE 15
Calls in One Week, 5–12 October 2026

Total calls	66
Answered calls	43
Missed calls	23
Abandoned calls	0

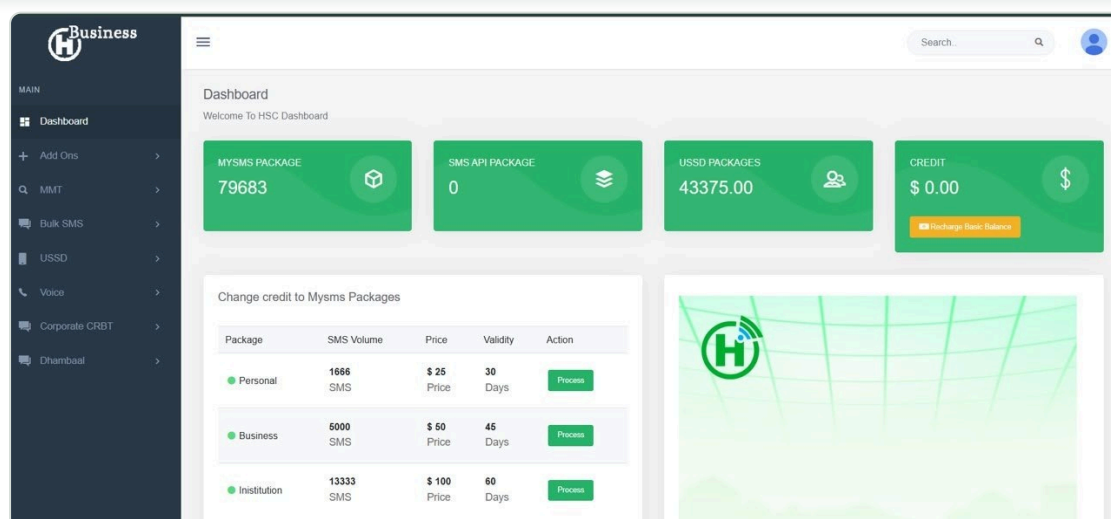
Scale 0–70 calls. Average waiting time 6 seconds. Source: call centre dashboard (MoAI, 2026).

What One Week Shows

In the week of 5 to 12 October 2026 the centre received 66 calls. Agents answered 43, or 65%, and 23 were missed. No caller abandoned a call, and the average waiting time was 6 seconds (MoAI, 2026).

The missed calls show where the service can improve: calling farmers back and adding agents on busy days.

FIGURE 16
How a Farmer's Call Is Handled



Bulk messaging platform used for SMS alerts, with USSD and voice options. Image: MoAI.

10 Progress: Advisory, Early Warning and Markets

e-Fidiye Advisory App

MoAI developed the e-Fidiye app, and its Department of Extension and Research manages it. The app gives farmers advisory content and helps link them to markets. The needs assessment describes it as the government-led extension service for weather, crop and livestock advice, available nationwide with most use in the riverine areas. The platform now has 6,101 active farmers and 22 active input suppliers. Its modules cover training and resources, communication with farmers, service requests, early warnings, a product catalogue and marketplace, and reports.

e-Fidiye and the 507 Call Centre

The app and the 507 call centre (section 9) complement each other. The app serves farmers and extension staff with smartphones, while the call centre reaches farmers on any phone by voice and SMS.

Climate Information Reaches Farmers by Radio, Voice and SMS

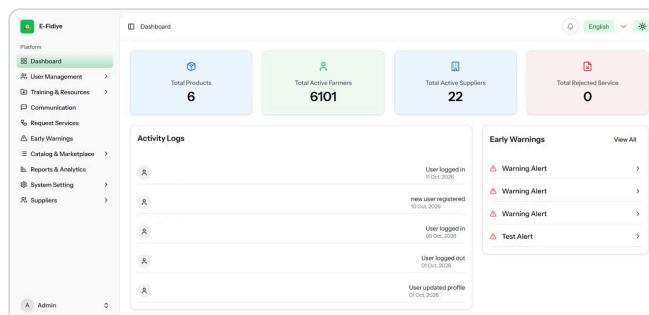
Farmers receive climate and weather information through several channels. Radio is the most widely heard: the Ministry of Agriculture and Irrigation and development partners broadcast early-warning and advisory messages on local radio stations.

During risks such as floods, telecom companies play a voice message to callers when they make a phone call, so early warnings reach people on any phone. The Ministry's 507 call centre also sends SMS early warnings directly to registered farmers, and social media spreads the same messages quickly in towns.

E-FIDIYE ACTIVE FARMERS

6,101

farmers and 22 input suppliers active on the platform, October 2026 (MoAI, 2026).



e-Fidiye dashboard, October 2026. Image: MoAI.



A Somali farmer listening to the radio, the most widely heard channel for climate and early-warning messages. Photo: ©WFP Africa.



NATIONAL POLICY • JANUARY 2026

National Agricultural Extension Strategy and Action Plan 2026–2030

The Ministry of Agriculture and Irrigation developed the National Agricultural Extension Strategy and Action Plan 2026–2030 with support from FAO under the CADRE project, funded by the European Union and implemented by FAO in partnership with the Ministry. It aims to rebuild and strengthen extension and advisory services that are **pluralistic, demand-driven and market-led**.

PILLAR 3

Research, Innovation and Extension Linkages for Agricultural Transformation

The strategy will deploy various digital platforms to complement other dissemination methods in providing agricultural extension services. Access to digital technology by smallholder farmers and other rural businesses will provide links to suppliers and information, allowing users to tap into workforce talent, build strategic partnerships, access support services such as training and finance and, critically, reach markets and customers.

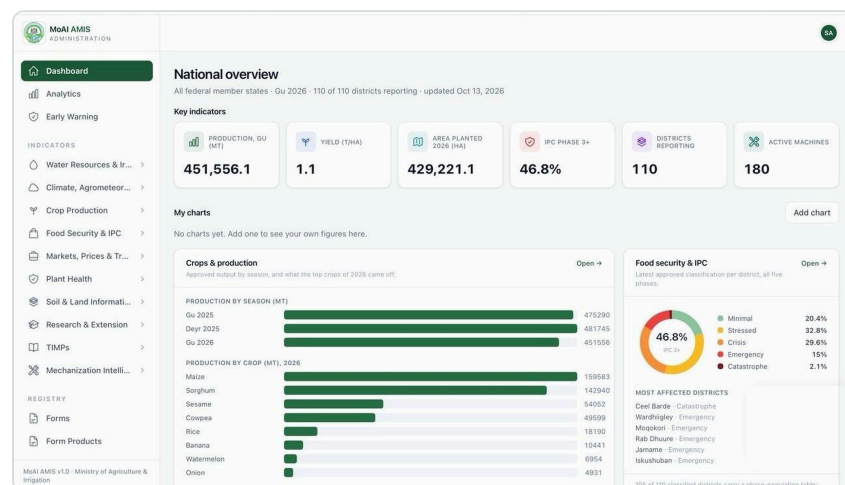
Source: MoAI, National Agricultural Extension Strategy and Action Plan 2026–2030.

INTERVENTION 6.1

Leverage digital agricultural technologies, approaches, methods and messages in the provision of agricultural extension services

11 Progress: Agriculture Management Information System

The Agriculture Management Information System (AMIS) is the Ministry's national platform for agricultural data. It will bring data collected across the Federal Member States into one place, so that production, food security, markets and climate can be followed district by district and season by season.



AMIS national overview dashboard, design preview. Image: MoAI.

NOTE ON THE DASHBOARD

The dashboard shown here is a design preview of how the system will look. The figures on screen are sample data used for testing; they are not official statistics.

Indicators on the Dashboard

- Crop production by season and by crop; yield and area planted
- Food security (IPC phase) by district
- Districts reporting each season, and active agricultural machines

Data Modules in AMIS



FIGURE 17
How Data Will Flow Through AMIS



Source: MoAI.

WHY IT MATTERS

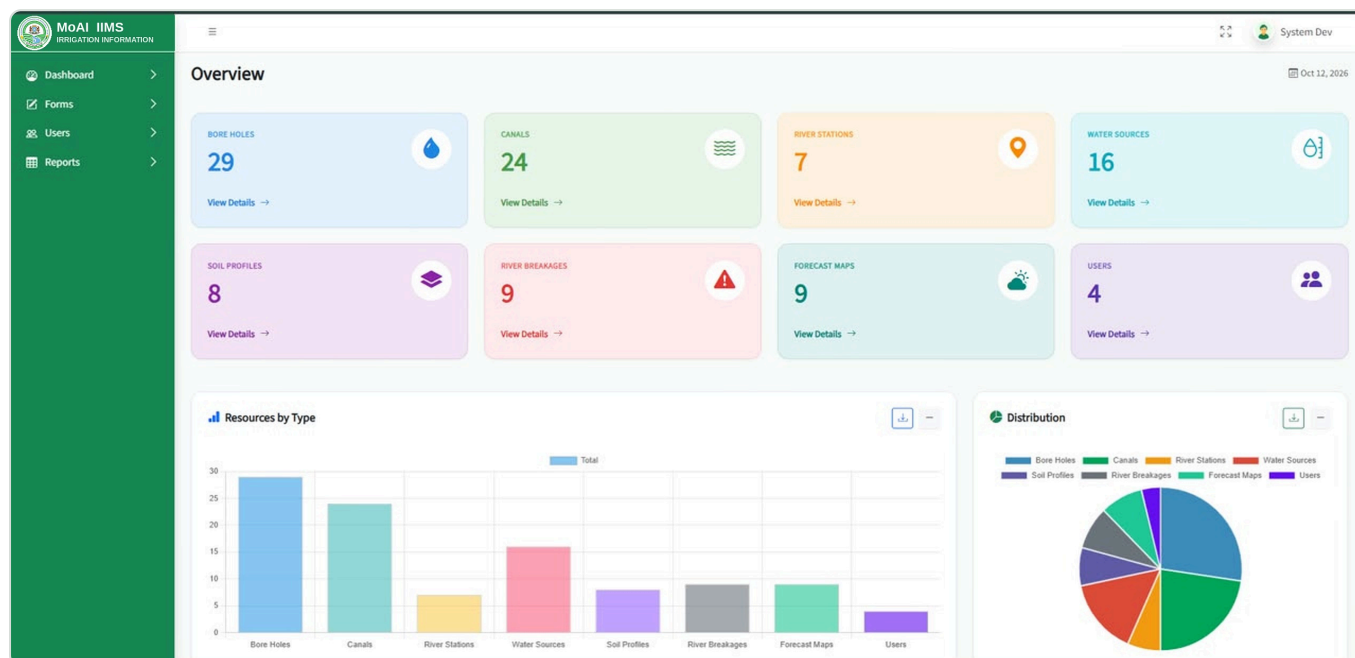
AMIS will let the Ministry see national production, food security and machinery in one view, with every district reporting. Planning, early warning and targeting of support will be faster and based on evidence.

NEXT STEPS

Complete testing, load verified field data, link AMIS with SOFAREP and the irrigation system, and decentralize AMIS to the Federal Member States so that general agricultural data for the whole country is collected and managed in every state, with trained district data officers.

12 Progress: Irrigation Information Management System

The Irrigation Information Management System (IIMS) is being built through the Food Systems Resilience Project (FSRP). It is in the final stage of development, with the domain being set up, and will be launched soon. It will be the Ministry's digital record of water and land resources for irrigated agriculture, used by the Ministry's Department of Irrigation, Land and Agrometeorology.

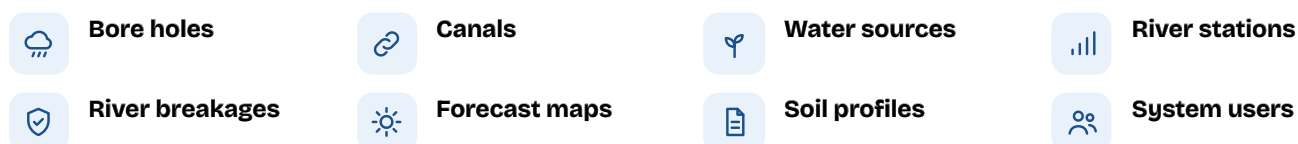


IIMS overview dashboard, design preview. The figures on screen are sample data, not official statistics. Image: MoAI.

NOTE ON THE DASHBOARD

The dashboard shown here is a design preview of how the system will look. The figures on screen are sample data used for testing; they are not official statistics.

What IIMS Will Record



Who Will Use IIMS

The system will be used by the **Department of Irrigation, Land and Agrometeorology**, one department covering three areas of work:

- **Irrigation:** bore holes, canals, water sources and river breakages that need repair.
- **Land:** soil profiles that guide land use and crop choice.
- **Agrometeorology:** river stations and forecast maps for flood and drought warning.

WHY IT MATTERS

River breakages along the Shabelle and Juba cause floods that destroy crops. Knowing where canals, breakages and river stations are will let the Ministry plan repairs and warn farmers before water levels rise.

What the System Will Do

- Digital forms to register each water and land asset with its location.
- One dashboard with totals and their distribution by type.
- Reports that can be downloaded for planning and maintenance.

NEXT STEPS

Complete the domain set-up and launch the system, map irrigation canals and river breakages in the riverine districts, and share IIMS data with AMIS and the 507 call centre for early warning.

13

Progress: Centre for Innovation and Agripreneurship Development (CIAD)



The Ministry of Agriculture and Irrigation established the Centre for Innovation and Agripreneurship Development (CIAD) in September 2024 for agribusiness incubation, innovation and the training of young people and women farmers.

What CIAD Does



Incubation of agribusiness. Helps young agripreneurs turn ideas into businesses, with mentoring and links to markets.



Agricultural innovation. Finds, tests and promotes new solutions, including digital tools for farmers.



Training youth and women farmers. Builds practical, business and digital skills.



Partnerships. Connects innovators with the Ministry, partners, investors and companies.

Three Digital Systems Developed by CIAD



1. Innovation Management Portal

Manages innovation programmes from call to award: submissions, teams, mentors, jury members and partners.



2. Agriculture Knowledge Management Platform

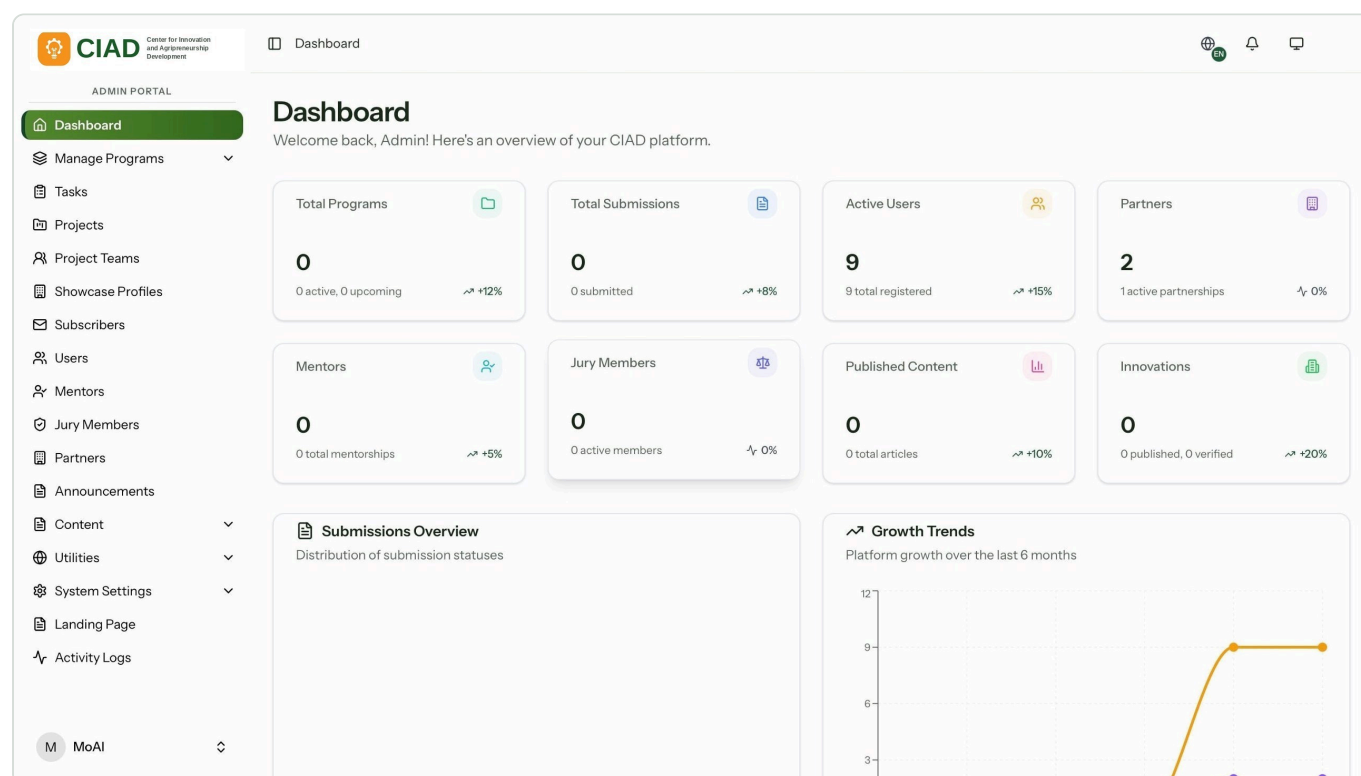
A shared library of agricultural knowledge, research, guides and good practice.



3. Learning Management System (LMS)

Online courses for youth, women farmers and extension staff, with progress tracking and certificates.

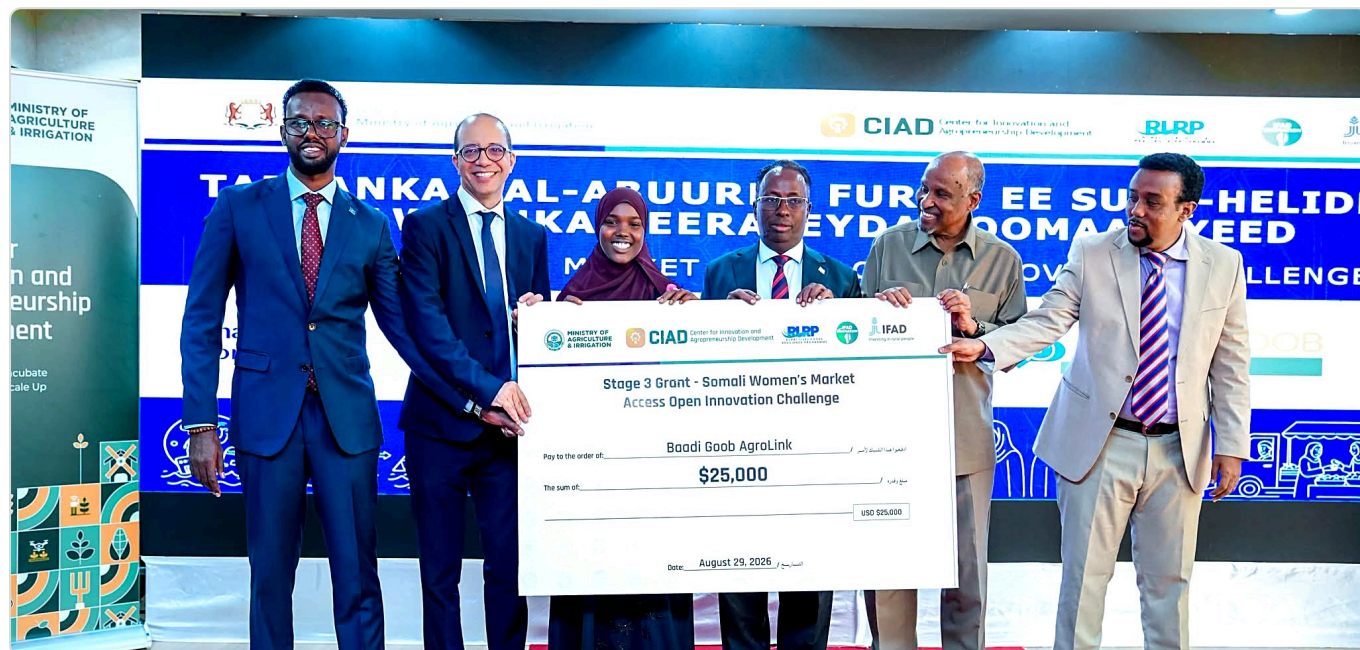
The three systems are supported by the World Food Programme (WFP) Somalia. Source: MoAI.



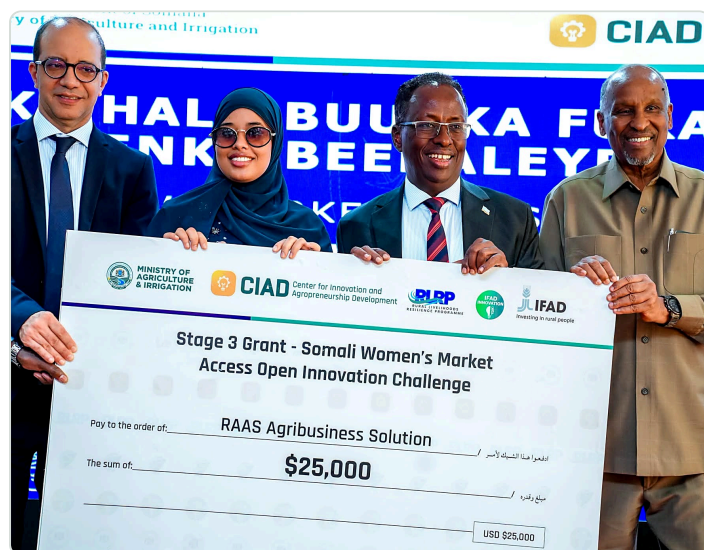
CIAD Innovation Management Portal, admin dashboard. This is a sample view: the platform has not yet been launched and will be launched soon, so the figures on screen are not programme results. Image: MoAI.

13.1 Progress: Open Innovation Challenge

CIAD organised an Open Innovation Challenge to find and reward Somali solutions for agriculture. The Somali Women's Market Access Open Innovation Challenge opened in July 2025. Young innovators competed and the winners were awarded grants, and companies offering digital agriculture solutions for Somalia also took part. The programme is supported by the International Fund for Agricultural Development (IFAD).



Stage 3 grant of USD 25,000 awarded to Baadi Goob AgroLink, 29 August 2026. Photo: MoAI.



Stage 3 grant of USD 25,000 awarded to RAAS Agribusiness Solution. Photo: MoAI.



Somali Women's Market Access

The challenge focused on solutions that help women farmers and traders reach markets.



Stage 3 Grants: USD 25,000 Each

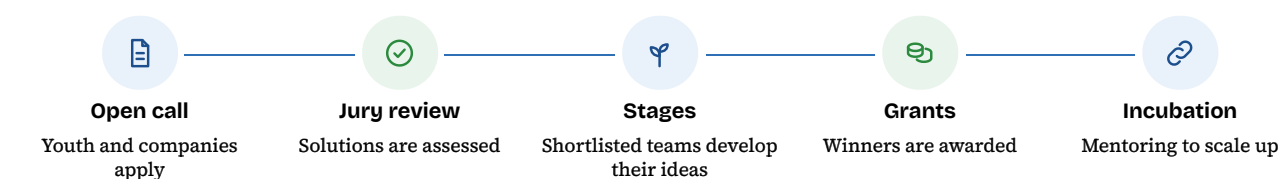
Awarded to Baadi Goob AgroLink and RAAS Agribusiness Solution to grow their solutions.



Youth and Companies

Young innovators and digital agriculture companies competed for grants, with IFAD support.

FIGURE 18
How the Challenge Works



Source: MoAI.

14 Fintech for Farmers

Mobile Money Is Already the Farmer's Bank

Somali farmers use mobile money for everyday trade. They sell produce, buy seed and fuel, pay labour and transport, and receive remittances through wallets such as EVC Plus, Zaad, eDahab, Sahal and Jeeb. Nationally, 73% of adults use mobile money, compared with about 15% who hold a formal bank account, and around 155 million transactions are recorded each month (MoCT and ITU, 2025).

The payment system around these wallets is improving. The Central Bank launched the Somalia Instant Payment System and the SOMQR code standard in January 2025, and plans to connect mobile money operators and the pan-African PAPSS network (Dawan Africa, 2026).

Credit and Insurance Lag Behind Payments

Payments are strong, but credit and insurance for farming are not. Few farmers hold a formal bank account, and lenders have little record of farm income on which to base a loan.

Financial products must be Sharia-compliant to be accepted. Farmers prefer interest-free credit, and accept insurance when it is structured as Takaful, or mutual cooperation. Interest-free and Takaful models for farming are still underdeveloped.



Mobile Money on Any Phone

Mobile money works on the basic phones most farmers own. A transfer is confirmed by SMS, as in this EVC Plus message, with no need for internet or a smartphone. This is why e-vouchers and input payments can reach farmers in rural areas through the wallets they already use.

An EVC Plus transfer confirmation on a basic phone.

Why Mobile Money Matters for Farmers

- Works on any phone.** Payments are confirmed by SMS, with no need for internet or a smartphone.
- Support arrives directly.** Subsidies, e-vouchers and emergency transfers reach the verified farmer without intermediaries.
- Remittances reach rural families.** Money from relatives at home and abroad arrives in the same wallet.
- Safer than cash.** Farmers and traders do not have to carry cash to and from markets.
- Easier trade.** Buyers and agro-dealers can pay and be paid at a distance.
- A record for finance.** Payment history can later serve as evidence for credit and Takaful insurance.

Next Steps for Digital Payments in Agriculture

NOW

Pay e-vouchers, input subsidies and emergency transfers through mobile wallets to verified farmers.

NEXT

Use SOMQR and the instant payment system so agro-dealers and buyers accept digital payment from any wallet.

LATER

Pilot Sharia-compliant credit and Takaful insurance, using registry and payment records as evidence of activity.

15 The National ID and Farmers

The National ID Reaches Farming Districts

The National Identification and Registration Authority (NIRA) had registered more than 1.5 million people by October 2026, and aims to register 15 million by the end of 2029. NIRA has established fixed enrolment centres in major cities and regions, uses mobile teams for rural and remote areas, and plans 150 fixed centres and 50 mobile teams nationwide. By March 2026 it reported 70 registration centres, 18 mobile teams and more than 100 integrated services, including every bank. Women made up 47% of those enrolled (NIRA, 2026).

NIRA has opened registration centres in several agricultural districts, which bring the national ID closer to farming communities.

NIRA Registration Centres in Agricultural Districts

NIRA has registration centres in many agricultural districts where the farmer registry took place, including Balcad, Jowhar, Beledweyne, Baidoa, Afgoye and Dhusamareb. Farmers in these districts have access to the national ID.

All six districts were also covered by the 2025–2026 farmer e-registration. Farmers there can hold both a national ID and a SOFAREP record, which makes them the natural place to start linking the two systems.

The national ID is also becoming essential for rural finance. Banks require a national ID to open a bank account, and SIM card registration with the national ID will become mandatory. A farmer with an ID can therefore open an account, protect a mobile wallet and receive payments safely.

The Ministry will work with NIRA so that farmers who register in SOFAREP are encouraged to obtain a national ID, and so that NIRA teams and farmer registration teams can reach the same farming communities.

Why a National ID Matters to Farmers

- One farmer, one record.** A unique ID lets the registry remove duplicates and false entries, so the numbers can be trusted.
- Access to finance.** The ID meets know-your-customer rules for bank accounts, credit and Takaful insurance.
- Formal standing.** Farmers can join cooperatives, sign contracts with buyers and document land with a recognised identity.
- Inclusion of women.** A woman with her own ID can hold her own SIM, wallet and registry record, independent of the household head.

1.5M+

people registered by October 2026

15M

registration target for the end of 2029

70

registration centres, with 18 mobile teams

100+

services integrated, including all banks

FIGURE 19
National ID Registrations



Scale 0–1.6 million. Sources: NIRA and press reports.



Sample Somali national ID cards. Image: NIRA.

Support reaches the right person. Subsidies, seed and e-vouchers can be verified against the ID at the point of delivery.

A secure SIM and wallet. A registered SIM protects the mobile money account that farmers trade with.

Faster help in a crisis. Drought and flood assistance can be targeted quickly, including for displaced farmers.

Access to markets. Verified identity builds trust between farmers, traders and buyers in digital markets.

15.1 Linking the National ID to Farmer Services

The national ID is built to be checked digitally. That is what makes it useful for agriculture.

Banks and other institutions verify customers electronically through Hubiye, NIRA's identity verification platform, and the national ID is now used for know-your-customer checks when opening accounts. Each card carries a QR code and a machine-readable zone for fast checks, and citizens can follow their registration by phone using a tracking number and their ID number.

The same verification can serve farmers. When SOFAREP, the e-voucher application and mobile money all use the national ID number, a farmer's identity is confirmed once and recognised everywhere.



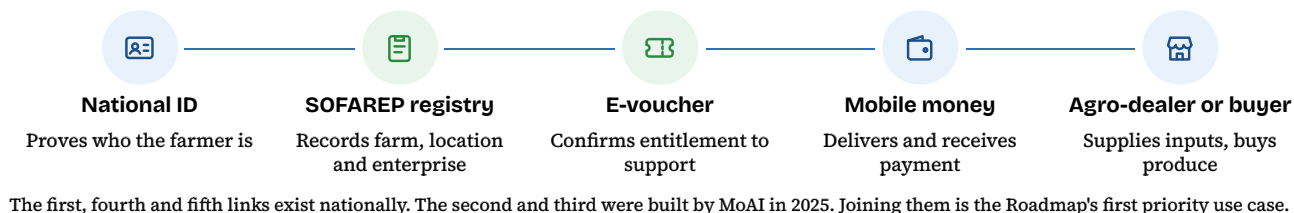
A farmer shows his national ID card and mobile phone in an irrigated field. Photo: MoAI.



NIRA application for checking registration with a tracking and ID number. Image: NIRA.

FIGURE 20

How Identity, the Registry and Payments Fit Together for a Farmer



Steps to Link the National ID and SOFAREP

STEP	WHAT IT INVOLVES	RESULT FOR THE FARMER
Record the NIRA number	Capture the ID number in SOFAREP wherever a farmer has one; the field is optional today	One identity across all services
Start where both exist	Begin in Balcad, Jowhar, Beledweyne, Baidoa, Afgoye and Dhusamareb, where NIRA centres and farmer e-registration overlap	Quick results in six districts
Joint registration drives	NIRA mobile teams and MoAI enumerators visit farming districts together	ID and farmer record in one visit
Verify through Hubiye	Check farmer records against NIRA's electronic verification service	No need to give the same details again
Use the ID for payment	Link verified farmers to wallets and bank accounts that require a NIRA ID	Subsidies and payments arrive digitally

FOR THE MINISTRY

A shared identifier removes duplicate records, makes registry figures reliable and allows targeted support to be audited.

FOR FARMERS

One identity opens the registry, the e-voucher, a mobile wallet and a bank account, without repeating the same details to each service.

16 Challenges

Four challenges affect every digital service in Somali agriculture: digital skills, internet, electricity and devices such as mobile phones. Addressing them together is the key to scaling digital agriculture nationwide.



CHALLENGE 1 Digital Skills

<10%
of adults digitally
literate (DTS, with
ITU)

Using digital services requires basic skills: reading on a screen, navigating an app, keeping a password and a mobile wallet safe. Many farmers, especially older farmers and those with little schooling, have not had the chance to learn them.

- Farmers use voice calls, SMS and mobile money confidently, but apps and web platforms are new to most.
- Extension workers and enumerators also need training before they can guide farmers.
- Services in the Somali language and in voice or picture form make learning easier.



CHALLENGE 2 Internet

27.6%
of people use the
internet (ITU / DTS)

Mobile networks reach most towns and main roads, but internet in rural farming areas is often weak, slow or unavailable, and data can be costly for rural households.

- Apps that need a constant connection cannot serve farmers in remote areas.
- Services that work offline, or by SMS, USSD and voice, can reach farmers without internet.
- Expanding rural broadband is a national priority in the Digital Transformation Strategy.



CHALLENGE 3 Electricity

24.4%
rural access to
electricity

A phone or tablet is only useful when it is charged. According to the World Bank, about 54% of Somalis had access to electricity in 2024, but only about 24% in rural areas, where most farmers live (World Bank, 2024).

- Many rural areas have no public grid; farmers rely on generators, solar panels or charging points in town.
- The Ministry of Energy and Water Resources is expanding off-grid solar through the Somali Electricity Access Project (SEAP), supported by the World Bank.
- Solar energy offers a practical, low-cost solution for rural communities and digital service points.

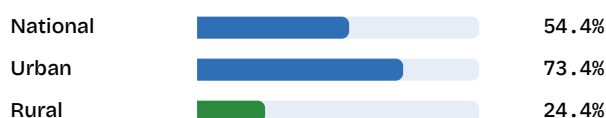


CHALLENGE 4 Devices

Most households have a mobile phone, but many are basic feature phones that cannot run apps, and tablets and computers are rare in rural areas. Smartphones remain expensive for many rural families, and one phone is often shared by the household.

- Services designed only for smartphones leave many farmers out.
- SMS, USSD, voice and mobile money work on any phone.
- Shared devices at cooperatives and affordable handset schemes can widen access.

FIGURE 21
Access to Electricity, 2024



Scale 0–100%. Source: World Bank WDI.

FIGURE 22
Cost of Connectivity, Share of Income



Scale 0–60% of GNI per capita. Source: ITU, in the DTS.

Responses Already Under Way



Digital skills: the Department of Agricultural Technology and Innovation (DATI) leads digital skills training for extension staff, enumerators and farmers, with CIAD's LMS.



Electricity: off-grid solar through the Ministry of Energy and Water Resources' SEAP project.



Internet: the 507 call centre and SMS alerts reach farmers without mobile data.



Devices: mobile money, SMS and voice services work on basic phones.

17 Opportunities

The same evidence that shows the constraints also shows where progress can be fast. Farmers are not reluctant: where platforms are used, most users report benefits, and 77% of respondents want existing services joined into one system (MoAI, 2026). The opportunity is to meet that demand through channels farmers already trust.

Farmers were also clear about sequence. Asked to rank investments, 45% put rural connectivity and electricity first, followed by weather systems and market information. The Roadmap follows the same order, placing infrastructure and governance before large-scale service rollout.

Voice, SMS and radio at scale. The call centre and e-Fidiye can become one advisory service delivered by voice, SMS, USSD and radio in Somali. These channels work on any phone and need no data.

Identity and registry as public infrastructure. NIRA's rollout in farming districts and the 132,297 SOFAREP records give Somalia the two halves of a verified farmer database.

Youth and local innovators. About 75% of Somalis are under 30 (MoCT and ITU, 2025), and awareness of farm platforms is highest among those aged 18–25 (45%) (MoAI, 2026).

Traceability and export markets. The seed certification system shows that traceability can work. The same approach can extend to produce and livestock to meet export standards.

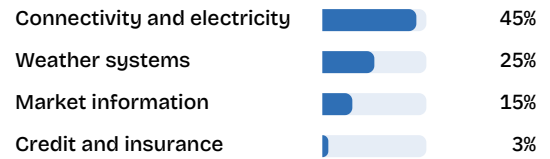
Mobile money as the payment rail. With 73% of adults using wallets (MoCT and ITU, 2025), e-vouchers and input payments can go digital now. Sharia-compliant credit and Takaful insurance can follow.

Climate and early-warning services. Demand is proven: 55% already receive weather information. The Roadmap aims for 2 million farmers receiving climate advisories by 2028 (MoAI, 2026).

Solar power. Nearly one in five surveyed households (18.9%) already use solar. Solar charging at digital service points is included in the Roadmap's largest investment line.

A financing pipeline. The Roadmap sets out about USD 37 million of investment and the Strategy USD 5.72 million, with AfDB, the World Bank, FAO and WFP already engaged (MoAI, 2025; MoAI, 2026).

FIGURE 23
What Farmers Want Funded First



Scale 0–50%. Share ranking each area as first priority; other answers make up the remainder. Source: Needs Assessment.

Turning the Four Challenges Into Opportunities

CONSTRAINT	PRACTICAL RESPONSE	WHAT ALREADY EXISTS
Digital skills	Voice and IVR in Somali, audio and picture formats, trained digital agents in each district	Call centre, radio advisories, extension network
Electricity	Solar charging hubs at cooperatives, markets and digital service points	18.9% of households already use solar
Internet	Rural connectivity through the DTS target of 55% of rural households connected (MoCT and ITU, 2025); offline-capable apps; SMS and USSD that need no data	11.5 million mobile connections; 3G, 4G and 5G networks in towns (DataReportal, 2025)
Devices	SMS, USSD and voice for basic phones, shared devices through cooperatives, affordable handset schemes	85% phone ownership, mobile money on any phone (MoCT and ITU, 2025)



NATIONAL ALIGNMENT

Digital Agriculture in the Digital Transformation Strategy 2025–2030

The national Digital Transformation Strategy plans to scale sector platforms in health, education and agriculture in 2027–2028. Agriculture can build on these national identity, payment and connectivity systems.

35%

of farmers using digital agricultural services by 2030

100,000

farmers on digital advisory platforms by 2030

55%

of rural households connected by 2030

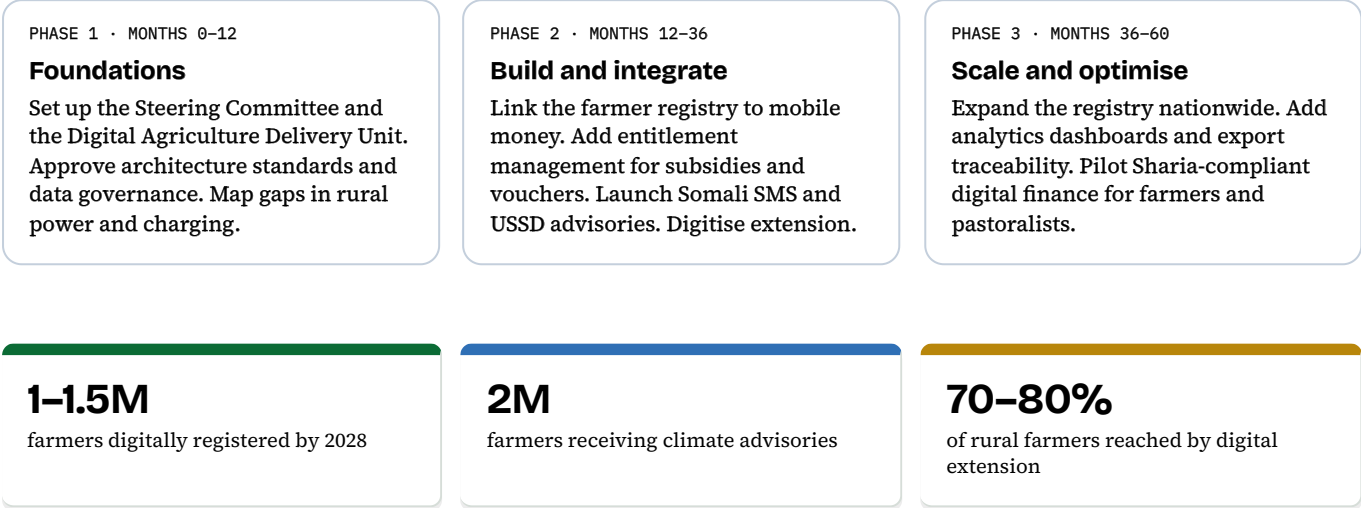
70%

of cash transfers made digitally by 2030

Source: Digital Transformation Strategy 2025–2030.

18 Pathways to Scale

Scaling up means moving from separate projects to one national system. The Roadmap sets three phases over five years and three results to reach by 2028.



Eight Actions to Scale Up Digital Agriculture

- 1 **Build one backbone.** Connect SOFAREP, the national ID, the e-voucher app and mobile money, and bring e-Fidiye and the call centre under one portal with shared data standards.

3 **Keep services voice-first and in Somali.** Grow the call centre, IVR, SMS, USSD and radio. Reserve apps for extension agents, cooperatives and lead farmers.

5 **Teach digital skills through people.** Train extension agents, cooperatives, agro-dealers and young people as digital agents who register and support farmers face to face.

7 **Earn trust.** Adopt clear consent and data protection rules, verify traders, provide a complaints channel and work through community leaders.
- 2 **Extend registration nationwide.** Move from 16 districts to all Federal Member States, using the NIRA number as the unique farmer identifier and registering pastoralists as well.

4 **Put power and connectivity first.** Install solar charging at service points, agree zero-rated agricultural data with operators, and plan rural network expansion with MoCT and the NCA.

6 **Widen access to devices.** Support affordable handsets and shared access points, and design onboarding that reaches women and low-literacy users.

8 **Finance and coordinate for the long term.** Pool partner funding behind the Strategy and Roadmap, add a government budget line, partner with telecoms and report progress yearly.

Main Risks and How to Manage Them

RISK	WHY IT MATTERS	RESPONSE
Dependence on project funding	Most platforms are project-based and may stop when a project ends	Pooled partner financing and a government budget line
Continued fragmentation	Separate systems confuse farmers and waste resources	Shared standards enforced by the Delivery Unit
Loss of trust in data use	Only 6.8% of farmers have no concerns about their data (MoAI, 2026)	Consent, clear rules in Somali and a complaints channel
Weak power and connectivity	Services fail where phones cannot be charged or connected	Solar charging hubs and offline functionality

18.1 Investment and Partnerships

The Roadmap separates investment into two layers: USD 30.7 million for the foundations (section 4.4) and USD 6.34 million for the services farmers use directly. The figures below show how the second layer is divided.

FIGURE 24

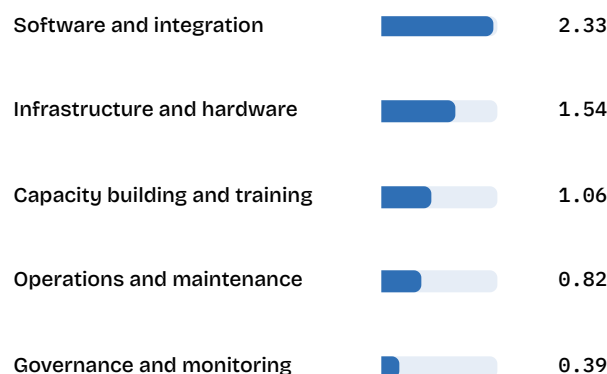
Farmer-Facing Services by Use Case, USD Million



Scale 0–1.6. Total USD 6.34 million. Source: Roadmap, Table 4 (MoAI, 2026).

FIGURE 25

Farmer-Facing Services by Type of Spending, USD Million



Scale 0–2.4. Total USD 6.34 million. Source: Roadmap, Table 4 (MoAI, 2026).

Who Does What

GOVERNMENT

Lead governance and standards, host the Delivery Unit, own the registry and integrate with NIRA.

DEVELOPMENT PARTNERS

Align financing with the Strategy and Roadmap, fund shared infrastructure before new pilots, and use national systems.

PRIVATE SECTOR

Provide voice, SMS and USSD channels, payment rails and rural coverage, and build Somali-language services on the shared backbone.

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Profile

Eng. Dirie Abdi Mohamed has served as Director of the Department of Agricultural Technology and Innovation (DATI) at the Ministry of Agriculture and Irrigation since November 2024. He leads the Ministry's work on agricultural mechanization, digital agriculture and innovation, including the national farmer registry, digital farmer services and the coordination of these programmes with the Federal Member States.

He led the development of the National Digital Agriculture Strategy and Action Plan 2025–2029, working closely with FAO; the Somalia Digital Agriculture Roadmap 2025–2028, working closely with the World Bank; and the National Agricultural Mechanization Policy.

From April 2025 to April 2026 he served as Project Coordinator at the Ministry of Agriculture and Irrigation for Leveraging Digital Systems for Emergency Preparedness and Response to Food Crisis in Somalia (EmergenSys). The project, funded by the African Development Bank, focused on seed digitalization and the national farmer registry, and he worked with FAO as the implementing partner.

Eng. Dirie holds an MSc in Agricultural Engineering, with a specialization in Agricultural Machinery and Technology, from Azerbaijan State Agricultural University.



FEDERAL REPUBLIC OF SOMALIA

Ministry of Agriculture and Irrigation

Department of Agricultural Technology and Innovation

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