NATIONAL AGRICULTURAL TRANSFORMATION STRATEGY 2025–2029

MINISTRY OF AGRICULTURE AND IRRIGATION

PREPARED WITH THE SUPPORT OF

Acronyms

ADSP	Agriculture Development Strategic Plan
AIMS	Agricultural Information Management Systems
ATS	Agriculture Transformation Strategy
ATMIS	African Union Transition Mission in Somalia
AUSSM	African Union Support and Stabilization Mission in Somalia
CD	Capacity Development
CGIAR	Consultative Group on International Agricultural Research
CIAD	Center for Innovation and Agripreneurship Development
COPE-Africa	Center of Phytosanitary Excellence Africa (COPE)
EAC	East African Community
ENSO	El Niño Southern Oscillation
FGS	Federal Government of Somalia
FMS	Federal Member States
FSNAU	Food Security and Nutrition Analysis Unit
GDP	Gross Domestic Product
IDP	Internally Displaced People
IPPC	International Plant Protection Convention
ITCZ	Inter-Tropical Convergence Zone
KEPHIS	Kenyan Plant Health Inspectorate Service
MOAI	Ministry of Agriculture and Irrigation of Federal Government of Somalia
NAF	National Agriculture Forum
NPPO	National Plant Protection Organization
NTP	National Transformation Plan
PESTEL	Political, Economic, Societal, Technical, Environmental, and Legal
SARIS	Somalia Agricultural Regulatory and Inspections Services
SME	Small and Medium Enterprise
SOCC	Somalia Operations Coordination Committee
SWALIM	Somalia Water and Land Information Management
SWOT	Strengths, Weaknesses, Opportunities, and Threats

IBRD 33483R


SOMALIA
SELECTED CITIES AND TOWNS
REGION CAPITALS (PRE-WAR)
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
REGION BOUNDARIES (PRE-WAR)
INTERNATIONAL BOUNDARIES
ERITREA
REP. OF YEMEN
DJIBOUTI
ETHIOPIA
KENYA
Gulf of Aden
INDIAN OCEAN
Saylac
Caluula
Maydh
Sunud Ad 2,408 m
Ceerigaabo
Boosaaso
Hurdiyo
Xaafuun
Bullaxaar
Baki
Burao
Hargeysa
Garadag
Qardho
Bandarbeyla
Laascaanood
Garoowe
Eyl
Gaalkacyo
Hiiraan
Dhuusa Mareeb
Hobyo
Ferfer
Beledweyne
Ceel Buur
Xuddur
Luuq
Buulobarde
Garbahaarey
Baydhabo
Wanlaweyn
Jawhar
Cadale
Buurhakaba
Baardheere
MOGADISHU
Marka
Bu'aale
Baraawe
Bilis Qooqaani
Jilib
Jamaame
Kismaayo
AWDAL
WOQOOYI GALBEED
TOGDHEER
SANAAG
BARI
SOOL
NUGAAL
MUDUG
GALGUDUUD
BAKOOL
HIRAAN
GEDO
BAY
BANADIR
MIDDLE SHABELLE
LOWER SHABELLE
MIDDLE JUBA
LOWER JUBA
Dhahar
Kar Kar Mts.
Juba
Shabelle
To Dese
To Addis Ababa
To Kibre Mengist
To Imi
To Mado Gashi
To Nairobi
10°N
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0 50 100 150 200 Kilometers
0 50 100 150 Miles
GSDPM Map Design Unit
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SOMALIA
JANUARY 2016

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Term	Explanation
Self-Reliance	A quality of people who can rely on their resources; people who are resilient to economic, social, and environmental shocks and changes
Farming	Farming refers to the broader practice of agricultural production, which encompasses activities like cultivating land, raising livestock, and managing various agricultural resources Farming involves the systematic and large-scale production of food, fibre, and other agricultural commodities.
Cropping	Cropping is a specific aspect of farming that focuses solely on the cultivation of crops Cropping involves the planning, planting, growing, and harvesting of crops, such as grains, fruits, vegetables, and other plant-based products.
Sustainability	Practices and consumption of resources that can endure without long-term negative social, economic, or environmental impacts
Competitive	Successfully able to meet competition; through worker skills, farming practices, products, and businesses that are efficient, profitable, and of sufficient quality to gain a satisfactory share of the market in competition with products and services from elsewhere
Commercialization	The transformation from subsistence production (production for own consumption) to production for the sale of surplus products and services
Agribusiness	A general term for small, medium, and large businesses and cooperatives involved in farming, processing, and marketing of agricultural products, and businesses providing products and services specifically to the agriculture sector, such as farm machinery, fertilizer, agro-veterinary products, and advisory services
Agro enterprise	Commercial farms, agricultural cooperatives, livestock herding groups, or other organizations, including for-profit businesses, non-profit entities, and non-government and government agencies that carry out commercial agricultural activities
Inclusive	Pluralistic; "inclusive development" includes women, youth, disadvantaged groups, minority ethnic groups, *janajati*, people in remote areas, not just the mainstream or majority
Food poverty	Poverty related to food; inability to obtain sufficient food or adequate nutrition seasonally, chronically, and within geographic, demographic, or social groups Usually measured regarding the monetary equivalent of a basket of foods needed to provide a certain number of calories and other nutrients

Executive Summary

This document presents the Federal Ministry of Agriculture and Irrigation's (MoAI) proposed five-year Agriculture Transformation Strategy (ATS) and related intervention for the period 2025 – 2029 in response to the government's call for formulating a National Transformation Plan. The objective of this transformational strategy is to fundamentally and significantly reduce or eliminate existing institutional and structural barriers to the sector's productivity and growth in the five years with primarily goals of increasing agriculture's contribution to the economy, farmer incomes, employment, and improve food security. It sets out strategic objectives and related broader interventions to achieve measurable outcomes guided by appropriate indicators and targets in line with Ministry's mandate and functions, and key policy objectives. As such it provides a framework within which the Ministry of Agriculture and Irrigation will discharge its functions in line with its vision, mission and objectives.

Agricultural transformation can offer Somalia a sustainable path to development. Indeed, crop and livestock have been historically and continue to be by far the most important economic activities in Somalia, together accounting for up to 70% of Gross Domestic Product (GDP), 50-60% of employment and 90% of export earnings. Before the civil war, crop production was second in importance to livestock concerning its shares of GDP and export earnings. It was also crucial for food security with the country becoming almost self-sufficient in main staples in 1989. However, conflict and recurrent droughts and floods linked to climate change effects have negatively impacted on crop production, leading to a significant decline in both area cultivated and productivity over the past four decades. The same factors caused a largescale rural population displacement and depopulation of the countryside with much of historic agricultural labour force now residing camps for Internally Displaced Persons (IDPs). Nevertheless, the crop sector continues to be important for domestic food consumption and to lesser extent export, in particular sesame, lemons, onion and fruits. Somalia currently relies heavily on food imports to meet 50-60% of its food demand. In addition to the declining domestic production, a rapid urbanisation and associated shift in consumer preferences toward imported foods such as cereals, vegetables oils, and confectionary and canned products, among others, have also driven the food imports.

There is a real prospect to transform the agriculture as key pre-requests for greater production and productivity are already in place. With an abundance of fertile land, labour and largely underutilised water, Somalia has the resources endowments necessary for a significant expansion of agricultural production to drive economic growth and prosperity as a sustainable path to poverty reduction. Reducing chronic food insecurity and widespread poverty is the country's primary development challenge; therefore, growing the agricultural sector is key to achieving a transformational impact. In this regard, the preparation of the ATS is a critical step toward ongoing government effort to restore and expand the agriculture's contribution to the national economy through increased rural employment and incomes and food security. Medium to long-term strategic planning of recovery and thereafter development of the sector is therefore critical to address chronic food insecurity, improve incomes and gradually substitute food imports. A dual approach to this effort is essential to account for fundamental difference in farming practices and designation of farm output, so that tailored interventions are designed and implemented to address effectively diverging underlying institutional and structural challenges. Somalia has two farming systems: irrigated commercially oriented system and rainfed subsistence farming. The irrigated systems produce a wide range of marketed crops, largely produced along the riverine basins in the southern and central regions including maize, sesame, vegetables and fruits and rice, while rainfed crops include sorghum and cowpea, and to lesser extent maize, sesame and millet across the country with the output primarily used for household consumption. While these two systems share some common challenges, such as impact of climate change and uncertainties associated with conflict, they also face other different institutional and structural

constraints that need to be addressed targeted transformative policy interventions. The constraints faced by the irrigated systems include (a) limited and inconsistent surface water availability due to dilapidated prewar irrigation and flood control infrastructure in southern Somalia; (b) inefficient river water use, increased soil salinity, and water logging, resulting from the lack of farm level planning and regulatory oversight of use irrigation water; (c) poor soil fertility management, as inputs such as manure and commercial fertilizer are either used in a suboptimal way or not used at all; (d) low-quality seeds and the retail availability of only a few seed varieties and plant tissues. The constraints faced by rainfed farming systems include (a) lower and more erratic rainfall than in the past, resulting in more frequent and intense cycles of droughts and floods; (b) deteriorated water harvesting and storage reservoirs; (c) poor soil management, resulting in very low moisture retention and inadequate internal drainage, leading to excess water run-offs and soil erosions; and (d) very low-input farming techniques.

This ATS seeks to tackle these multiple structural and institutional constraints to expand production and improve productivity of the subsector and farmers' incomes. For this purpose, small and medium agribusiness enterprises (SME) are critical to link smallholder producers to national markets, meet food demand and create jobs. The goal is to promote a more resilient and sustainable agriculture as the driver of rural economy recovery and growth, in line with the priorities set out in the National Transformation Plan (NTP), 2025-2029. The NTP identifies the boosting agricultural productivity and development of value chains as a primary objective for the crop sector and accordingly articulates a series of priority interventions intended to reduce or eliminate the above institutional and structural constraints. The NTP identified a set of overarching priority interventions including promoting adoption of climate smart agriculture, developing irrigation infrastructure to improve access to water, establishing storage facilities and improving road infrastructure to reduce post-harvest losses and promote marketing of agricultural produce, and re-establishing research and extension services to improve crop practices and good agricultural practices. The ATS is also fully aligned with the Riverine Irrigation Strategy (2025-2030) developed to strengthen riverine water resource management in the context of weak national governance for effective water use and the transboundary agreements for upstream water abstraction. The strategy aims to enhance agricultural productivity, improve water resource governance, and ensure climate resilience by focusing specifically on riverine irrigation, given its strategic importance for food security and rural development in the country's southern regions.

The overall development and growth of agriculture is anchored in two strategic goals:

- Increasing crop productivity through the introduction and adaption of more modern farming practices and technologies that allow a more efficient and sustainable use of agricultural input, including seeds, land, water, agrochemicals and labour.
- Developing agricultural value chains through the improvement of producer organisations such as associations and cooperatives to derive economies of scale, improve access finance and new markets.

The implementation ATS will require strong partnerships among the Government, private sector, development partners, and other non-state actors. A sector-wide approach and strong coordination mechanisms will be instrumental in the strategy's success.

On that basis, the ATS provides a set of strategic goals and practical interventions that will enable the Ministry to provide clear policy levers and pathways to transform agriculture. Specifically, the ATS identifies eight strategic priorities and 24 interventions as summarised in Table 1. Under each intervention a set of associated implementation activities are further identified in the respective sections of the strategy. Short term priorities refer to immediate actions MOAI can take within one to two years (2025-2026) in order to

improve productivity within the existing far, while medium to long term priorities refer to actions that it can take within 3-5 years timeframe.

Table 1: Strategic priorities and interventions

Priority	Interventions
Short-term priorities (2025-2026)	
Building administrative and technical capacities of Ministries of Agriculture and Irrigation at both Federal and Member state levels	1. Develop and adopt a staff recruitment and retention program based on transparent competency framework to increase productivity and accountability 2. Training of Ministry staff 3. Create up-to-date farm registration system 4. Compiling agricultural statistics in partnership with Somalia National Bureau of Statistics (SNBS) 5. Re-establishing agro-meteorological data collection networks and early warning systems
Strengthen phytosanitary services	1. Establish independent governing Board of Management for Somalia Agricultural Regulatory and Inspections Services (SARIS) 2. Establish a governance model for coordination of delivery of phytosanitary services across the country. 3. Develop basic levels of technical skills and infrastructure across the country 4. Introduce phytosanitary service fees and charges 5. Develop appropriate level of technical competencies for registration of pest control and fertiliser products
Supporting development of SMEs and Agribusiness Value Chains	1. Development of agribusiness services and market linkages. 2. Improvement of on-farm storage and district level aggregation infrastructures
Medium & Long-term priorities (2027-2029)	
Re-establish National agricultural research and extension Services	6. Revival of agricultural research and extension stations. 7. Rehabilitation of agricultural training institutions.
Rehabilitate riverine irrigation infrastructure and improve water access for rainfed agriculture	1. Rehabilitating irrigation and flood control infrastructure in line with Riverine Irrigation Strategy 2025 2. Enhance rain/groundwater harvesting techniques and management
Increase agricultural mechanization and farm inputs use to increase cultivated area and farm productivity	1. Promote the use of agricultural mechanization technologies. 2. Promote farm inputs use and crop diversification
Strengthen internal and external coordination, and accountability	1. Strengthen interdepartmental coordination 2. Strengthen National Agricultural Forum (NACF) 3. Strengthen coordination with international development partners
Promote Partnerships for Agricultural Research, Trade and Investment to support a sustainable growth in the sector.	1. Build partnerships for development of phytosanitary services and agrochemicals 2. Build partnerships for research and extension services 3. Build partnership for agricultural trade and investment

1. Country profile

Geography

Somalia is situated in the Horn of Africa and is the continent's easternmost country, extending from just south of the Equator northward to the Gulf of Aden. The country has the second longest coast of continental Africa, 3, 333km stretching from the red sea to Indian Ocean. The country shares land borders with Djibouti, Ethiopia and Kenya. The country occupies an important geopolitical position between Eastern Africa and the countries of Arabia and southwestern Asia, with its extensive territorial waters, through which an estimated 12 percent of global trade passes via the Suez Canal.

Figure 1: Somalia Geography

Source: World Atlas

Somalia's total land area is 637,660 Km squared of which 30% is classified as desert land that is unsuitable for agricultural production, 45% is covered by rangelands suitable for livestock grazing, 14% is covered by forest or woodland, and the remaining 13% (8.1 million ha) is classified as arable land[1].In terms of topography, Somalia is mostly made up of plateaus, plains and highlands reaching the peak at Golis Mountain in Northeastern region. There are two main rivers in Somalia namely, the Juba and Shabelle. Both run from the Ethiopian Highlands south-easterly across Somalia to the Indian Ocean. Only 1.8 percent of territory is currently used as arable land mostly located in the inter-riverine areas in the South-central regions, whilst the vast majority of territory is arid or semi-arid rangeland.

Population

The World Population Review estimated that the population of Somalia is 18.14 million[2], with a growth rate of 3.11% and fertility rate of 6.12 births per woman. 46.5 % of the population lives urban (8,434,610 people in 2023) and remainer in rural environment. Somali youth make up 60 percent of the Somali labour force. Literacy rate is 40 percent for the total population 15 and above which decreases rapidly with age. It stands at 52.2 percent for adolescents (15-19 years), but only 35 percent for youth 30-35 years.

Somalia has a large diaspora community both internationally and regionally, with external considerable flows of remittance accounting for about quarter of the national GDP.

Climate

Climate in Somalia is influenced by a number of factors, including the Inter-Tropical Convergence Zone (ITCZ), monsoonal winds and ocean currents, jet-streams including the Somali Jetstream or Somalia Current, easterly waves, tropical cyclones, and neighbouring Indian Ocean and Red Sea conditions. Somalia is

[1] FSNAU (Food Security and Nutrition Analysis Unit), & SWALIM.

[2] Somalia's 2023 population is estimated at 18,143,378 people at mid-year according to UN data. (https://www.worldometers.info/world-population/somalia-population/)

generally arid and semi-arid with two seasonal rainfall seasons. Annual mean temperature is close to 30°C throughout the country. Average monthly temperatures reach their maximum during the *Gu* season in the months of March through June. *Xagaa*, from June to September mark the hottest season in the north, while *Jilaal* December to March mark the hottest weather for the south. The Gu rain season starts as early as the second half of March. Precipitation intensifies in April across the country, except for the north-eastern coastline which receives the least amount of rainfall during this season. In June, rainfall starts to reduce in most parts of Somalia. The second rainy season, *Deyr* is characterized by a shorter duration and less amounts of precipitation in the months of October to the end of November (Figure 2). The El Niño Southern Oscillation (ENSO) influences Somalia's climate variability in several ways, bringing more rainfall and flooding during El Niño and droughts in La Niña years.

Precipitation is generally low and unpredictable across the country and takes the form of showers or localized torrential rains, subject to high spatial and temporal variability. The average annual rainfall is about 200 mm in most parts of the country. Only the northern coastline receives significantly less rainfall (only up to 50 mm). Rainfall in the south is higher at approximately 400 mm and highest in the southwest with around 600 mm rainfall on an annual average. The southern coastline continues to receive little rainfall. Significant rains occur in July through August. The climate is hot and dry, with uneven rainfall, resulting in a severely degraded natural environment increasingly affected by cyclical droughts and floods.

Somalia is highly vulnerable to climate change, marked increase in number of natural hazards and population affected from 1980 to 2020[3] (Figure 3). By the end of the century, average temperature in Somalia is likely to exceed that experienced by any nation now or across all of human history[4]. Rainfall trends are uncertain: a moderate increase in rainfall is the most likely outcome over the course of the century, but Somalia could either become significantly more arid (close to a pure desert country like Qatar) or significantly wetter (becoming a generally semi-arid country like Kenya). If realized, such changes would have profound effects on both natural and agricultural ecosystems. The limited availability of water for both rain-fed and irrigated agriculture, as well as livestock, would likely continue to result in highly seasonal and variable agricultural production in the country due to limited climate adaptation capacity of the country.

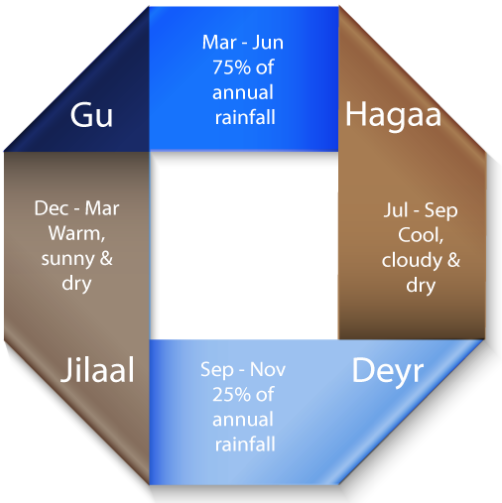

Figure 2: Somalia Seasonal average rainfall pattern
Source: Somali Water and Land Information management

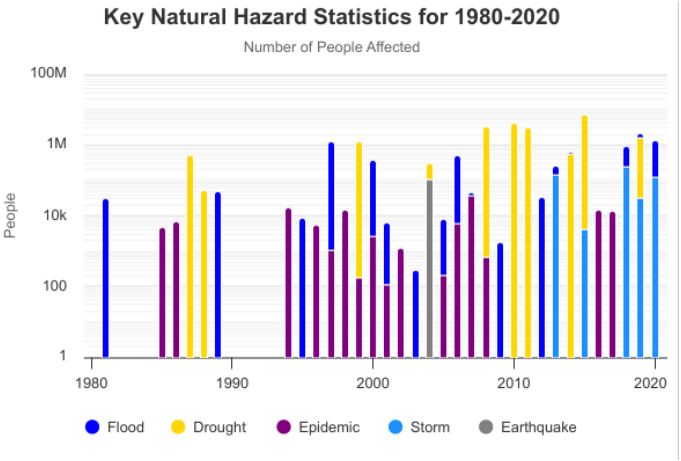

Figure 3: Key Natural Hazard Statistics for 1980-2020
Source: World bank

[3]Somalia - Vulnerability | Climate Change Knowledge Portal (worldbank.org)
[4] "World Bank. 2023. Somalia Climate Risk Review. Washington, DC: World Bank. http://hdl.handle.net/10986/40076 License: CC BY-NC 3.0 IGO."

Administrative framework

Somalia is a Federal State composed of two levels of government: the federal government and the federal member states, which include both state and local governments. The Federal Republic of Somalia officially consists of six federal member states namely Galmudug, Hirshabelle, Jubaland, Southwest, Somaliland and Puntland, and Banadir Region Administration The country is further subdivided into 18 regions and 95 districts. In the absence of fully adopted Constitution and administrative laws governing inter-government relations, coordination of policies, including those related to agriculture is weak.

Economy

After two decades of civil strife led to complete state collapse and considerable loss of human and physical capital, Somalia has made tremendous progress toward rebuilding its economy and institutions over the past decade, with support from the international partners including International Monetary Fund, World Bank, European Union and United States. Somalia's efforts to strengthen its institutions have been strongly supported by international partners, including through financing and extensive capacity development (CD) support[5]. On the back of sustained reforms, Somalia reached the Heavily Indebted Poor Countries Initiative Completion Point (HIPC CP) in December 2023, obtaining significant debt relief. Total debt relief amounted to US$4.5 billion, reducing the country's external debt to 6.4 percent of GDP by end-2023, compared to 64 percent of GDP at end-2018. Debt relief is expected to facilitate access to new external financing from multilateral and bilateral partners to support inclusive growth and poverty reduction.

Real GDP growth projections for 2024 and 2025 are 4.0 percent on account of stronger exports and remittances. Agriculture (crop and livestock) continues recovering from the 2021-22 drought and livestock exports have been gaining market share. Remittances are projected to remain strong supported by a favourable growth outlook in several host countries. The current account deficit[6] is forecast at 8.9 percent of GDP in 2024, on the back of strong growth in livestock exports and expected moderation in the demand for food imports. Inflation is expected to continue a downward trend to 4.5 percent at end-2024, as commodity prices soften, although the pace is slower than anticipated earlier.

Somalia joined the East African Community (EAC) in March 2024 and has developed a multiyear roadmap for adoption of the customs union and common market. Despite the remarkable progress, Somalia continues to face significant economic challenges. More than half of the population lives on less than US$2 per day. Poverty and inequality challenges are exacerbated by the large number of internally displaced persons (IDPs). Poverty is in particular high among rural and nomadic population. Insufficient access to quality education, which is worse for women and girls, contributes to poverty and constrains economic growth. In addition, Somalia is highly vulnerable to climate shocks that aggravate food insecurity, exacerbate poverty, and hurt growth. Large and sustained investments in human and physical capital—including in health, education, and infrastructure—are needed to improve resilience and support inclusive growth.

[5] International Monetary Fund. Middle East and Central Asia Dept. "Somalia: 2024 Article IV Consultation and Second Review Under the Extended Credit Facility-Press Release; Staff Report; and Statement by the Executive Director for Somalia", IMF Staff Country Reports 2024, 346 (2024), accessed February 14, 2025, https://doi.org/10.5089/9798400297090.002

[6] Somalia sends more money to sources abroad than it receives from sources abroad because of large trade deficit reflecting the difference in the total value of all goods exported and imported. Food imports account for significant proportion of the deficit.

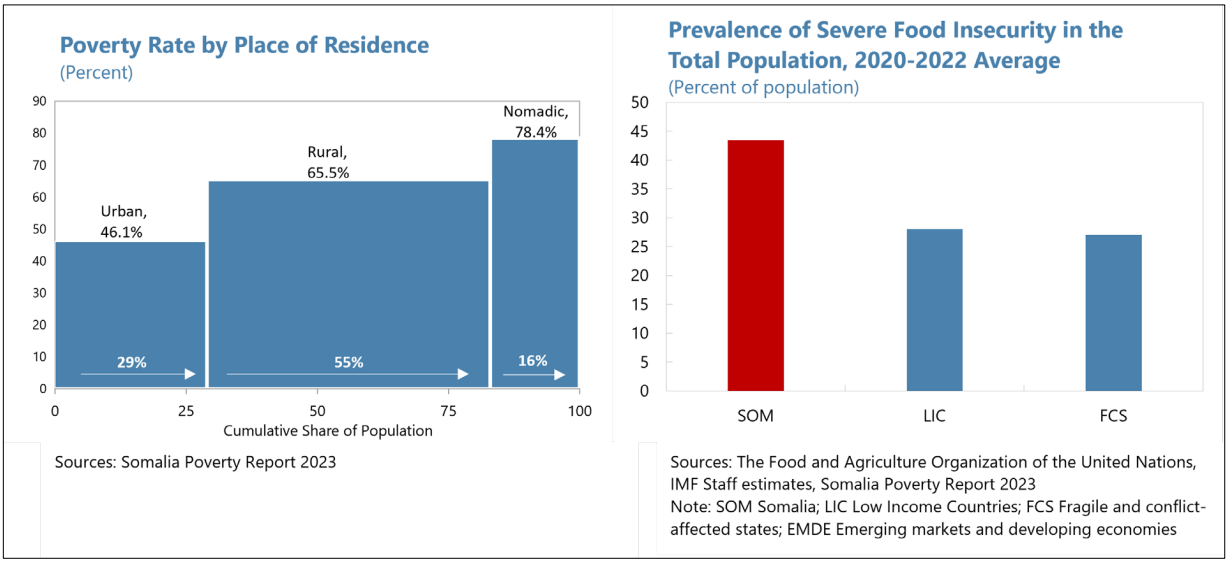

Figure 2: Somalia poverty rate and prevalence of food severe insecurity

2. Overview of Agriculture Sector

Somalia's crop sector has a great potential. The country has considerable natural resource endowments including 8.2 million arable fertile land, large young population and two major rivers capable of supporting largescale irrigation in vast areas of the fertile land. Annual average precipitations and temperatures can also support at least two seasonal rainfed farming cycles in most parts of the country. The Juba River has an estimated annual flow of 5.9 billion cubic meters and transverses over 1000km, while the Shabelle River contributes around 2.4 billion cubic meters annually over 1200 km, although both increasingly face reduced flow due to upstream activities7. However, only about 3 million hectares of arable are cultivable due to lack of adequate irrigation infrastructure and mechanisation, with 2.3 million under rainfed conditions and 700,000 hectares suitable for either pump or recession-controlled irrigation8. Only a fraction of the irrigable land is irrigated and cultivated (less than 20 percent of potential and about half of irrigated land before the war). Almost two-thirds of cultivable land is in the fertile areas along and between the two major rivers in the southern regions. It is worth noting that most crop production is undertaken in these areas by small-scale subsistence farmers with an average of 0.2–3.0 hectares of land. A smaller area cultivated in the northwestern regions and some oasis and coastal cultivated areas in the northeastern regions constitute the remaining third.

Although only a fraction of the available fertile land and water resources were utilised, agriculture production was historically a very prominent economic activity in Somalia. Before the civil war, crop production was second in importance to livestock in terms of its shares of GDP and exports. It was also crucial for food security as the country was almost a self-sufficient to meet domestic consumption and food imports were relatively small compared to current levels. The lack of consistent and updated official statistics, such as agricultural census and surveys, makes it difficult to assess the agriculture's current contribution to the economy, but it is believed that it remains second, albeit a distant second, after livestock

[7] FAO, European Union and CIRAD. 2022. Food Systems Profile – Somalia. Catalysing the sustainable and inclusive transformation of food systems. Rome, Brussels and Montpellier, France. https://doi.org/10.4060/cc0074en

[8] Zanini, Gianni; D'Alessandro,Stephen Paul; Phipps-Ebeler,Verena; Ngumbau, Catherine Mwende; Sanginga, Pascal; Seevinck, Julia; Cherrou, Yamina; Read, Andrew; Akester, Stephen. Rebuilding Resilient and Sustainable Agriculture in Somalia: Volume 1 - Main Report (English). Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/781281522164647812

which continues to be the largest economic activity. Somalia has two distinct farming systems: irrigated and rainfed farming systems. Irrigated farming systems are based mainly on small and medium-scale gravity9 and pump irrigation, which are used to produce maize; sesame; fruits (banana, lemon and other citrus fruits, guava, mangoes, papaya, watermelon, and dates); and vegetables, for both subsistence and markets. Sesame and dry lemon are the only two crops currently exported.

The irrigated crops are primarily concentrated along the banks of the Juba and Shabelle rivers in southern and central Somalia which cover a catchment of about 220,872 square kilometers and 296,972 square kilometers, respectively. However, irrigated crops are also produced in a limited areas in western Somaliland and Puntland scattered oases along dry riverbeds and underground streams. Both these areas rely on surface water from springs and shallow wells typically with small one-piston petrol or solar powered pumps although spate irrigation is used in some areas. Irrigated systems in these two areas produce fruit trees (citrus, banana, guava, mango, papaya, date palm, and tamarind) intercropped with vegetables (tomato, chili, onion, watermelon, cabbage, and lettuce) and coupled with semi-nomadic pastoralism (camels, goats and cattle) in Somaliland, and fruit trees (date palm, citrus, and tamarind) and vegetables, mainly for the local market and some limited fodder in Puntland.

Rainfed agriculture is low-input subsistence farming system geared primarily toward meeting the needs of rural households. This system is common throughout the country where irrigation is not feasible, except on the coastal sandy plains and in high limestone areas. There is little or no mechanisation or input used, and production is seasonal governed by rain patterns. The major rainfed crops are sorghum, cowpea, and, to a more limited extent, maize grown in four main cropping systems. These systems include:

- **Sorghum basket zone located in the Bay agro-pastoral high-potential livelihood zone** with good fertility with productive vertisols (soils with a high content of expansive clay that forms deep cracks in drier seasons or years) and calcisols (soils with a substantial secondary accumulation of lime). This zone, which covers the Qansahdhere, Baidoa, and Dinsoor districts as well as some areas of the Burhakaba district, has some of the highest rainfall in Somalia (500–600 millimetres) and an altitude of 100–500 meters above sea level. The zone produces almost half of sorghum production in Somalia and significant maize, cowpea, sesame and groundnut under an agro-pastoral farming system with cattle reared more than other species.
- **The Bay-Bakool agro-pastoral zone** which has a rainfed agriculture combining livestock with farming in flood-recession areas (runoff water from higher land areas, particularly Burhakaba and Dinsoor districts). The agricultural potential is lower in this zone as the rainfall tends to be highly cyclical, with a pattern of sufficient rains occasionally resulting in droughts and crop failure.
- **The Shabelle and Juba riverine valleys** have rainfed sorghum, sesame, and cowpea crops combined with irrigated crops, such as maize, sesame, fruit trees, and horticulture.
- **The coastal cowpea belt zone** which is mainly dependent on livestock (mainly camel and goats) is classified as an agro-pastoral zone, with no limitation in access to land in this zone, shifting cultivation is practiced on farms that are abandoned after three years. Cowpea is the major crop grown in both the Gu and Deyr seasons as this more resistant to water stress, sorghum cultivation is rare and typically takes place in the Deyr season.
- **Sorghum zone is in the northwestern agro-pastoral region of Somaliland**, encompassing four main rainfed cereal-producing areas of around Borama and Baki in Awdal and Gabiley and Hargeisa in Woqooyi Galbeed. Annual rainfall can exceed 500 millimetres. Alongside sorghum khat and millet

[9] H. A. Houghton-Carr, C. R. Print, M. J. Fry, H. Gadain & P. Muchiri (2011): An assessment of the surface water resources of the Juba-Shabelle basin in southern Somalia, Hydrological Sciences Journal, 56:5, 759-774

production are common. Crop residue is used in this zone as a seasonal animal feed due to drier climate.

The productivity of both irrigated and rainfed systems has been hampered by a combination of factors that ensued the collapse of central Somali state in 1991. These factors include protracted civil and subsequent and still ongoing terrorist insurgency, and recurrent droughts and flooding linked to climate change effects which together caused largescale population displacements leading to considerable loss of rural labour force in Southern and Central regions of Somalia, and fragile and degraded natural environment due to weakened natural resource governance over the past three decades. These factors affect the two farming systems in different ways and each system also faces its own other unique challenges as detailed in Section four. As result, the agricultural output has declined significantly over the past four decades, leading to a chronic food crop deficit in Somalia and considerable growth in food imports. It estimated that the local production meets only 22 percent of per capita cereal needs, and even in the best agricultural seasons, domestic production provides only about 40–50 percent of per capita cereal needs10. The value of food imports rose by a factor of 14, reaching USD 1.17 billion in 2020, up from an annual average of about USD 82 million in the late 1980s11.

This strategy is designed to identify a set of practical policy priorities and intervention measures intended to remove or alleviate the constraints to agricultural productivity and growth. The goal is to increase farmers' incomes, improve food security, create greater rural employment and economic prosperity while protecting environment.

3. Governance for Agricultural Sector

The Ministry of Agriculture and Irrigation of Federal Government of Somalia (MOAI) has overall policy remit on formulating policies, legal and regulatory frameworks, standards, strategies, and plans for agricultural transformation. It is the lead government institution designated to improve food systems, food security, agricultural and agropastoral livelihoods, irrigation infrastructure, with overall responsibility on the development of crop sector. The Federal Ministry of Agriculture and Irrigation is responsible for all agricultural and irrigation development strategies in Somalia. The Ministry has currently 10 departments including:

1. Department of Planning and Statistics
2. Department of Agri-business and Cooperative Development
3. Department of Food Security, Food Systems and Climate Resilience
4. Department of Research and Extension
5. Department of Crop Production
6. Department of Plant Protection
7. Department of Irrigation, Land Use and Meteorology.
8. Department of Mechanisation, Technology and Innovation
9. Department of Administration and Finance
10. Department of Human Resources, Public Relations and Communications.

[10] Zanini, Gianni; D'Alessandro,Stephen Paul; Phipps-Ebeler,Verena; Ngumbau, Catherine Mwende; Sanginga, Pascal; Seevinck, Julia; Cherrou, Yamina; Read, Andrew; Akester, Stephen. Rebuilding Resilient and Sustainable Agriculture in Somalia: Volume 1 - Main Report (English). Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/781281522164647812.

[11] African Union, 2023 Dakar 2 Somalia Country Food and Agriculture Delivery Compact, https://www.afdb.org/sites/default/files/documents/publications/somalie_country_food_and_agriculture_delivery_compact.pdf

Alongside the departmental structure, the ministry also has a semi-autonomous agency, Somalia Agricultural Regulatory and Inspections Services (SARIS), which is responsibility for plant protection including implementation of regulatory control measures encompassing quarantine measures, seed inspection and certification, fertiliser quality inspection and certification, pest control products inspection and certification, and the introduction of the related subsidiary instruments.

It is worth pointing that MOAI worked closely with its Federal Member States (FMS) counterpart Ministries of Agriculture in developing this strategy through extensive consultations. The implementation of this envisages a full participation of the planning and execution of the resulting action plans

Organisational Structure

The Ministry is led by a Minister, supported by a Deputy Minister and State Minister. A Director General oversees day-to-day operations of difference departments each led by a Department Director. Across the 10 departments, there are 47 divisions led by Divisional Heads.

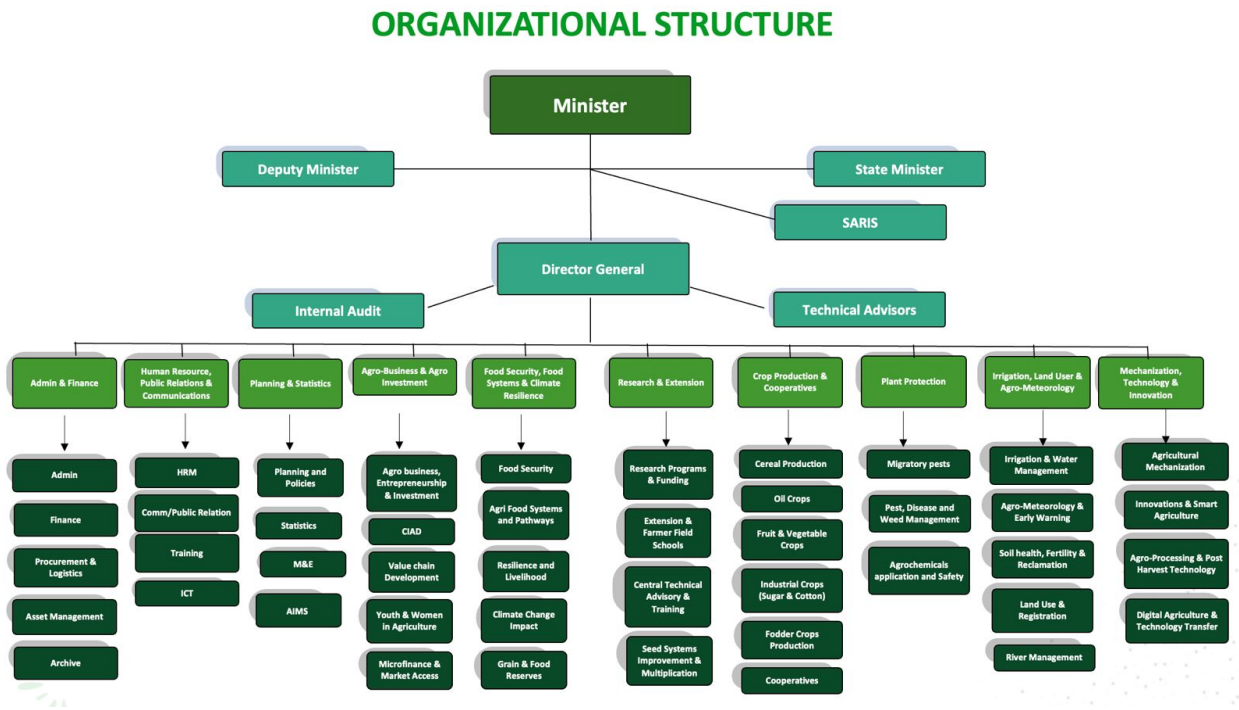

Figure 3: Organisational Structure of MOAI

Mandate and core functions

The mandate and core functions of the MOAI include:

- Developing and implementing agricultural policies, laws, and regulations to create an enabling business environment for agricultural value chains.
- Increasing land under cultivation to increase output and farmer incomes.
- Rehabilitation and governance of irrigation and flood prevention infrastructure to support efficient use of water resources and reduce food risk and mitigate its impact on farming communities.

- Establishing Agricultural research and extension services to improve farming practices and increase productivity.
- Adaption climate-smart agriculture and environmentally friendly technologies to reduce impact of climate change while safeguarding natural environment.
- Manage and control pests and diseases in crops including regular and transboundary pests and their outbreaks to protect crop and environment and promote agricultural trade.
- Regulate and control the quality of inputs, produce, and products from the sector to promote trade and protect producers and consumers from fraud and sales of substandard goods.
- Creating an enabling environment for agriculture investment and innovation.
- Development of agricultural value chain and market system.
- Collect, maintain, and manage Agricultural Information Management Systems (AIMS).
- Integrated Farming and Fodder Production.
- Introduce and promote new technologies, approaches, and adoption of innovative ways of agricultural production.
- Improved seed systems and availing improved high-yielding varieties (drought tolerant, pests and diseases resistant).
- Coordinate Nationwide agricultural programs and projects.
- Develop meteorology and early warning systems of MOAI.

Vision

Promote sustainable agricultural transformation capable of enabling farmers to produce sufficient and nutritious food for all Somalis and contribute more to the economic prosperity of the nation through greater employment, farmer incomes and export earnings, while protecting environment.

Mission

Modernise Somalia's agriculture sector by making it more climate resilient and promoting efficient use of input and technology to increase both land under cultivation and crop yields in order to enable farmers to become more productive, profitable and environmentally responsible.

Objectives

Strategic Priorities of the Ministry aims to facilitate and provide a roadmap for sustainable agricultural development by:

- Increasing agricultural productivity and developing agricultural value chain to improve farmer incomes and improve food security.
- Creating a enabling business environment to promote agricultural investment, trade and innovations to support a sustainable growth in agriculture sector.

The vision and mission of the MOAI guided the preparation of the strategy to ensure the priorities and interventions identified are relevant and can support overall policy goals and specific objectives in the next 5 years.

4. Process for formulating Agricultural Transformation Strategy

To prepare this strategy, a comprehensive technical analysis and consultations with the relevant stakeholders at both Federal and FMS levels were conducted. This effort attempted to establish the external factors, such as political, social, technical, legal environments, that can enable or hinder future effort to build more resilient and sustainable agriculture in Somalia, and then the existing internal strengths, weakness, opportunities and threats to the MOAI and its member state counterparts in implementing the strategic priorities and intervention identified. The goal was to identify a set priorities and interventions that government can adopt a reform agenda for the strategic development of the sector in context and line with the NTP.

PESTEL Analysis

The acronym PESTEL stands for *Political, Economic, Societal, Technical, Environmental, and Legal* aspects of the working environment. A PESTEL analysis is used to identify systematically threats and weaknesses which can be used in a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis of external (i.e. outside MOAI and its state counterparts) for the purpose of this strategy. Political factors include government policies, leadership, and change; foreign trade policies; internal political issues and trends; tax policy; regulation and de-regulation trends. These analyses are critical, as they allow the MOAI to consider these external factors to enhance the implementation of future strategic actions by tapping into on the enabling factors and removing barriers to the sector's reform.

Political Analysis

The Federal Government of Somalia continues to pursue its key national priorities, including the constitutional review process, the electoral framework, and the fight against Al-Shabaab. In May 2024, the Parliament adopted constitutional amendments to the first four chapters of the 2012 Provisional Constitution, which cover the governance system and electoral framework, reaffirming the Government's commitment to a "one-person, one-vote" electoral model. The process of the constitutional review is ongoing, and the next phase will address issues of power- and resource-sharing under Somalia's new federal model.

In the absence of fully adopted constitutions and/or administrative laws governing the intergovernmental (FGS-FMS) relationships, the implementation of the reform agenda envisaged by this strategy will likely rely largely on collaborative agreements between the federal MOAI and its member state counterparts on a case-by-case basis. The MOAI therefore needs to cultivated positive collaborative relationships with the state ministries to create and maintain a conducive environment for the coordination required for effective implementation of this strategy.

The successful implementation of the strategy is also contingent government's ability to secure access to rural areas of southern and central regions of Somalia where the bulk of agricultural land production takes place and additional land available for expansion. This requires freeing and stabilizing to maintain a full control of rural districts to undertake developmental programmes and provide services to farmers in these areas. Recent developments in the security front appear to support such goal. African defence ministers have approved on February 25th, 2025, a detailed deployment strategy for the African Union Support and

Stabilization Mission in Somalia (AUSSOM), marking a critical phase in Somalia's security transition[12]. The meeting occurred as Somalia nears the completion of the African Union Transition Mission in Somalia (ATMIS), a mission designed to hand over security responsibilities to Somali forces after nearly two decades of African Union peacekeeping presence. The two-day ministerial meeting of the Somalia Operations Coordination Committee (SOCC) outlined the framework for deploying 11,900 personnel under AUSSOM. These forces—comprising military troops, police officers, and civilian support staff—will play a pivotal role in stabilizing Somalia, countering al-Shabaab, and supporting governance structures.

Economic Analysis

GDP growth accelerated from 2.4% in 2022 to 2.8% in 2023. Growth was driven by services and the agricultural sector's (including crop, livestock and fisheries) recovery from drought in 2022 and by household consumption and investment. A deceleration in global inflation boosted remittances, and the return of rains improved livestock output and growth. As part of ongoing monetary and exchange rate policy reforms, Somalia is implementing a currency exchange program to gradually replace US dollars and counterfeit Somali shillings with new Somali shillings by 2026[13].

Somalia's public debt-to-GDP ratio plummeted from 64% in 2018 to 6.4% in December 2023 as Somalia reached the completion point in the Heavily Indebted Poor Countries (HIPC) debt reduction initiative, and its debt classification improved from in debt distress to moderate. The current account deficit was 12.4% of GDP in 2023, reflecting a rising trade deficit (estimated at 61% of GDP in 2023) driven by reduced livestock exports because of the drought 2022[14], while the poverty declined from 69% in 2021 to 54.4% in 2022. Youth unemployment remained high at 30.1% in 2022, well above the 21.7% overall unemployment rate.

Regarding the implementation of this strategy, Somalia has yet to achieve structural transformation of its economy, with progress stymied by fragility arising from conflict, climate change, institutional weaknesses, and a weak business environment, including the existing complex land tenure and licensing regulations which currently hinder the sector's investments. Indeed, services' share of employment rose marginally, from 55.9% in 2020 to 56% in 2021, and the industry's share rose from 15% in 2020 to 17.7% in 2021, while agriculture's share of employment declined from 39% in 2020 to 26.3% in 2021.

This combination of increased domestic food demand[15] and the low out to domestic crop production has led to a further increase in food imports. Somalia's most common imported food commodities are raw sugar, rice wheat flour, tea, powdered milk, and cooking oil. The most recent imports are led by Raw Sugar which represents 11.8% of the total imports of Somalia, followed by Rice, which accounts for 7.41%[16]. Other agro-based imports include inorganic fertilizers, pesticides, livestock medicines, fishing equipment, agricultural implements, and machinery, etc.

[12] Press release, Addis Ababa, 26/02/2025; https://www.peaceau.org/uploads/pr-somalia-meeting-26-feb-25.pdf.

[13] Source: African Economic Outlook (AEO) 2024

[14] World Bank. 2024. Somalia Economic Update, Ninth Edition: Addressing Climate Change Challenges for Economic Growth. © World Bank.

[15] Around 3.8 million people were living in internal displacement because of conflict and violence at the end of 2023.

[16] https://tradecouncil.org/somalia-economic-statistics-2019/

Social Analysis

Somalia's population is estimated at over 16 million and is extremely young[17]. An estimated 46 percent of the Somali population are children (age 0-14) and 27 percent are adolescents and youth (age 15-29). Together they make up almost three quarters of the Somali population. The average fertility rate is 6.6 children per woman. Forty-two percent of the population are urban dwellers (Estimated 48 percent female and 52 percent male), 23 percent are rural (estimated 49 percent female and 51 percent male), 26 percent are classified as nomadic (estimated 48 percent female and 52 percent male) while 9 percent are IDPs. In the IDP population, an estimated 51 percent are female whereas 49 percent are male. Somali diaspora forms an important part of the population and can be found all around the world.

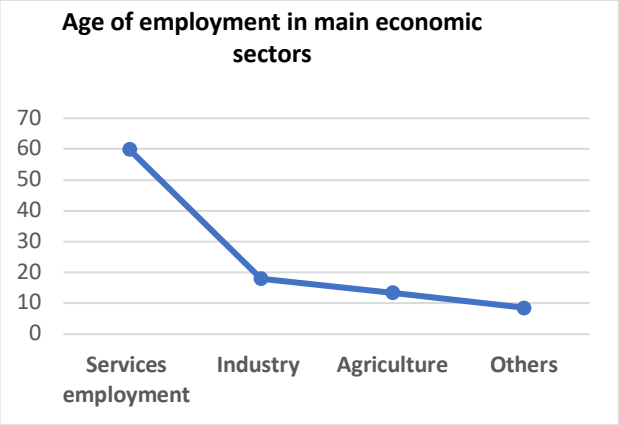

Figure 4: average age of employment in the main economic sectors in Somalia

The civil war had a big impact on the social aspect of Somali life. The social fabric was torn apart, farmers were displaced, and this resulted in a lack of manpower and labour for agricultural activities in the fields. Rural communities are highly dependent on natural resources; for this reason, they are very vulnerable, because even the smallest changes in the ecosystem greatly influence their livelihoods. With no reliable means of livelihood, people lost their purchasing power causing high poverty prevalence in Somalia[18].

Agricultural production has been greatly disrupted by actual conflict and war that induced mass displacement migrations and loss of lives, alongside the frequent droughts and floods linked to climate change. While specific data on displaced people due to conflict is not readily available, it is estimated that not less than half of the 2.6 million IDPs are believed to be displaced due to conflict and insecurity.

Despite largescale rural displacement and resulting rapid urbanization, about 49 percent of the population (8.8 million people) still lives in rural areas, of which slightly more than half derive their livelihood directly from nomadic pastoralism, slightly less than half from crop cultivation.

Technological Analysis

The farmers in most of rural Somalia depend on traditional farming practices and knowledge and skills transferred from generation to generation. These traditional knowledge and skills are insufficient in the face of changing climate, depleted soils, and research and extension services as discussed in Section 5. The farmers have not been able to adapt to climate change through introduction of new climate-resilient crop varieties and farming techniques. They also have not been unable to access basic inputs to maintain productivity including tractors and fertilisers. The largescale rural displacements resulting from recurrent droughts and floods, and conflict has compounded the situation.

[17] National Economic Council (2023). State of the Economy Report 2023 - Volume 1. NEC Publications, Federal Republic of Somalia.

[18] Somalia National Bureau of Statistics, Federal Government of Somalia, Somalia Poverty Report 2023.

Ecological Analysis

Climate change is intensifying a wide variety of risks including but going well beyond the cycle of acute drought and flooding[19]. By the end of the century, average temperature in Somalia is likely to exceed that experienced by any nation now or across all of human history. Rainfall trends are uncertain: a moderate increase in rainfall is the most likely outcome over the course of the century, but Somalia could either become significantly more arid (close to a pure desert country like Qatar) or significantly wetter (becoming a generally semi-arid country like Kenya). If realized, such changes would have profound effects on both natural and agricultural ecosystems. In the case that drier conditions happen, chronic climate stress on crops will increasingly affect productivity and may drive livelihood systems to greater rates of failure. Locust outbreaks are also likely to increase in frequency. Stress on other natural resource–based systems will intensify.

Legal Factors Analysis

With the advent of the federal system in Somalia, there is a new mindset in the MOAI and among many farming communities of Somalia to start reviving productive commercial farming. The Federal Ministry of Agriculture and Irrigation, in collaboration with state ministries and relevant other public entities, has developed agricultural policies and laws to support economic growth and remove several constraints through a range of public policy interventions, resettling of rural population back to productive farming activities under the flagship *Beero oo Barwaaqo Somalia* (BBS) initiative, restoration of agricultural research and extension services to be financed under the World Bank financed Food Systems Resilience Project (FSRP), rehabilitation of riverine irrigation infrastructure as articulated in the new Riverine Irrigation Strategy (2025-2030) with the support of the European Union. There is also a firm political commitment to improve uptake of modern agricultural technologies and creating enabling business environment through regulation of markets for input with the recent establishment of the new Somalia Agricultural Regulatory and Inspection Services (SARIS) authority. There are also several other relevant draft bills including National Food Security Policy, National Agricultural Cooperatives Policy, National Extension Policy and National Agricultural Land Use Policy.

SWOT Analysis

To establish strategic goals and interventions for the next five years, a comprehensive SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis was conducted based on the literature review and consultations at the federal and FMS levels. Internal (strengths and weaknesses) and external (opportunities and threats) factors were considered to help evaluate what variables can be changed in the future for strengthened strategic planning of agriculture in Somalia. This analysis is conducted at the federal and state levels and consolidated in Table 1 below. In all states' MOAI of the FMS consulted, the institutional support and capacity-building needs have been reflected as a challenge and a priority. This is stated both as a strength in an existing institution and as a weakness in terms of gaps within the structures of the existing institutions. These inherent characteristics has been reflected in the respective priority interventions in relation to the specific comparative advantages of each FMS institutions. Going forward, the MOAIs can build on the existing institutional strengths to achieve its desired strategic objectives, while using the weaknesses and threats as entry points for putting in place corrective strategic measures as summarised in the SWOT Matrix:

[19] "World Bank. 2023. Somalia Climate Risk Review. Washington, DC: World Bank. http://hdl.handle.net/10986/40076 License: CC BY-NC 3.0 IGO."

Table 2: Strength, Weakness, Opportunities, Threat (SWOT) Analysis

Strength	**Weaknesses**
1. Availability of the agriculture ministers and department and basic human resources 2. Enabling policy and legal framework 3. Effective MOAI leadership that can influence strategic direction and bring professionals, NGOs, the UN, and others together. 4. Large arable land available for production expansion 5. Country proximity to major markets 6. Large farmers have access to capital for investment 7. Collaborative mechanisms between MOAI and agricultural cooperatives and stakeholders. 8. Presence of young entrepreneurs	1. Limited government funding capacity to invest key sectoral programmes 2. Lack of effective enforcement capacity to implement agricultural policies and regulations 3. Low labour supply for agricultural production due to the large rural displacement 4. Absence of national strategies for promoting agricultural economic recovery 5. Inadequate capacity to disseminate agricultural technology innovations 6. Low adoption of modern agricultural technologies in farming and use of farm input 7. Weak monitoring and evaluation system in externally funded programs 8. Limited access to credit among farmers 9. Weak information and data management systems 10. Poor road infrastructure to facilitate markets
Opportunities	**Threats**
1. Supportive policies and a favourable political climate as agricultural development and food security are top priorities for both federal and member states 2. Growing focus on value-addition activities as most externally funded programs place emphasis on this a path to development and poverty reduction in Somalia. 3. Accreditation and membership to regional and international bodies such as IFAD, FAO, and DLCO-EA which can facilitate access to technical and financial assistance. 4. Establishing collaboration among the relevant institutions such as universities, research organizations, the UN, and other international bodies. 5. Growing availability of affordable new technologies for farmers 6. Supportive development partners willing to invest in building a more resilient and sustainable agriculture in Somalia 7. Rapid urbanisation driving demand for food in Somalia 8. Availability of national, regional, and global markets 9. Old government-owned facilities and land available for rehabilitation and re-use across the regions. 10. Availability of significant river water resources in regions with the large unused fertile arable land to expand agricultural production.	1. Ongoing widespread insecurity in Southern and Central regions of Somalia. 2. Recurrent floods/drought that frequent cause crop failure in the context limited disaster risk management capacity and worsening climate change impact 3. Limited budgetary capacity which affects the implementation of agricultural programmes. 4. Land disputes in the absence of enforceable land tenure laws and up-to-date land registration system 5. High cost of marketing agricultural products due to multiple roadblocks by militia and/or criminal gangs collecting illicit taxes in Southern and Central regions. where bulk of agricultural production takes place. 6. Emerging pests and diseases in the context of emerging yet not operational phytosanitary services 7. Weak agricultural standards for food safety and quality in the context of changing market requirements and consumer preferences 8. High poverty levels among rural population which embedment to human capital development 9. Weak governance, and high levels of corruption.

5. Constraints to agricultural productivity and growth

The above detailed comprehensive literature review and SWOT and PESTEL analyses allowed to identify a set of existing internal and external constraints to existing MOAI ability to rebuilding a resilience and sustainable agriculture in Somalia were identified. In this section, identifies the specific structural and institutional constraints to agricultural productivity and growth.

Structural Constraints to Irrigated Systems

In addition to the ongoing insecurity issues in much of the rural areas of southern regions of Somalia, the main structural constraints faced by the irrigated farming systems include the following:

- **Lower and inconsistent availability of irrigation water at a farm level due to the dilapidated state of prewar irrigation and flood control infrastructure along the two main rivers and the absence of maintenance and largescale rehabilitation projects.** The agricultural infrastructure, built mostly in the 1970s and 1980s, suffers from underinvestment in operations and maintenance, and mismanagement after the collapse of the central government. Most of the public infrastructure, such canal, barrages and dams, fell into disrepair and rivers frequently break their banks causing extensive floods in both urban environment and farmlands. Changes in upstream activities in Ethiopia, including building of new dams and greater water abstraction for agricultural use, have also reduced downstream flows in Somalia as detailed in the new the Riverine Irrigation Strategy (2025-2030). It is worth noting though that some of these some primary and secondary canals, barrages, as well as riverbanks have been repaired recently or are being repaired under international programs in Somalia.
- **Weak water management, on and off farm** due to poor capacity in planning of water uses at farm level and absence of effective regulatory oversight, which in turn results in inefficient water use, increased salinization, and land that is more prone to water logging. The weak river water abstraction governance is also responsible for largescale flooding.
- **Poor soil fertility management**, because inputs such as manure, fertilizer, and pesticides are used in a suboptimal way or not used at all, partly because of their high cost and limited availability in remote areas due to badly deteriorated roads.
- **Use of low-quality seeds and the lack of diversified varieties available on the market**, resulting in low yields and high susceptibility to climate shocks and plant pest and disease in the absence of research and extension services and therefore lack of introduction of improved seed and varieties and farming techniques.
- **Limited mechanized farming**. Most farmers use handheld tools to till the land, because of the high cost of machinery. The machinery pool available for land preparation, supplementary pump irrigation, and maintenance of its irrigation systems is in a poor state, costly to operate, and inefficient.

Structural Constraints to Rainfed Systems

Rainfed agriculture faces both similar and different types of structural challenges which require targeted approach to address the challenges, including:

- **Lower and more erratic rainfall** often resulting in more frequent and intense cycles of droughts and floods pose constraints for rainfed agriculture, especially in the absence to drought tolerant and/or early maturing varieties.
- **Poor soil management,** resulting in soils with very low moisture retention and inadequate internal drainage, which cannot support crops to maturity.
- **Low or no input farming techniques** for staple foods, a traditional low-risk response to increasingly erratic rainfall conditions but limiting farmers' ability to achieve potential crop yields.

Institutional constraints to both irrigated and rainfed systems

The main institutional challenges faced by both irrigated and rainfed agriculture including **lack of up-to-date farm registration records and enforceable land tenure laws, research and extension services, limited managerial and technical skills, phytosanitary services to control pest and disease, and market access**. A complete registry of farms up to 1990 survived and currently kept by MOAI, but regardless of any historic proof of owners, landholders who left their farms in southern Somalia during the civil war are largely still unable to reclaim their land, because of the ongoing insecurity, the weakness of traditional arbitration, and the absence of effective judicial and enforcement capabilities[20]. Land registration was also historically closely linked with government programs aimed at establishing modern corporate agriculture, with various laws and programs passed in the 1970s promoted the establishment of state farms, cooperatives, and large private plantations under state leasehold tenure. These programs concentrated land ownership, displaced local landholders, and decreased tenure security for landholders without leasehold rights. Furthermore, the high costs of leasehold acquisition and complicated land registration procedures at the time gave wealthier and better-connected individuals an advantage in acquiring leasehold title. Landlessness therefore remains pervasive in the countryside, with roughly 55% of farmers still not full ownership titles of the lands they till[21]. It is also worth pointing out that the last agricultural census survey has been done 1986. There is little known about the sectors structure and level of economic activities 22 beyond non-statistical largely qualitative assessments by international programmes FAO Somalia's Food Security and Nutrition Analysis Unit (FSNAU).

The research and extension services providing through specialist government experimental stations based in Afgoye, Baydhabo, Kismanyo and Aburiin became defunct with the collapse of state in 1991. The absence resulted of the absence of extension and research services resulted in widespread of inappropriate farming techniques and seed and banana propagation materials over time. In the absence of government-supported higher and vocational education institutions, community and privately supported schools and universities emerged throughout the country over the past three decades. Some offer degree programs in crops, livestock, and fishery sciences; however educational standards are poor, and often no meaningful fieldwork and practical experience in the field is either offered as part of the programs or impossible due to security concerns in most part of the country. As result, Somalia currently suffers from an acute shortage of skilled technicians and professionals for the agricultural sector.

[20] Zanini, Gianni; D'Alessandro,Stephen Paul; Phipps-Ebeler,Verena; Ngumbau, Catherine Mwende; Sanginga, Pascal; Seevinck, Julia; Cherrou, Yamina; Read, Andrew; Akester, Stephen. Rebuilding Resilient and Sustainable Agriculture in Somalia: Volume 1 - Main Report (English). Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/781281522164647812.

[21] Burman, J., A. Bowden and A. Gole 2014: Land Tenure in Somalia: A Potential Foundation for Security and Prosperity. February 2014. Broomfield: Shuraako.

[22] Somalia - Agricultural sector survey (English). Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/696601468113357127.

Somalia does have a fully operational National Plant Protection Organisation (NPPO) capable of delivering phytosanitary services to control pest of disease across the country to protect crop and environment and promote agricultural trade. Although the parliament has passed on 19th November 2024 a new law establishing NPPO, Somalia Agricultural Regulatory and Inspection Services (SARIS), this is yet to be operationalised.

The marketing of agricultural products is a major challenge faced by the producers and traders in Somalia, especially in Southern Somalia due to dilapidated rural road infrastructure and multiple roadblocks often demanding illicit payments. In many cases the produce perishes and/or the additional costs imposed by the multiple payments renders it unmarketable resulting substantial losses to producers. The most commonly used grain storage practices in the main rainfed grain cultivation areas in the Bay and Bakool regions are traditional Bakaar, an underground storage pits lined with clay. This system is highly prone to moisture contamination, particularly during the rainy season. Bacterial and fungi contaminations are very common including a significant hazard from mycotoxins, a highly toxic dark mold produced by fungi when grain is not very dry at storage time or is affected later by the seepage of water. The health hazards posed by mycotoxins —including stunted growth, delayed development, liver damage, and liver cancer—have even more serious effects than the economic loss associated with product losses or lower market prices. Indeed, average grain losses in southern Somalia are estimated at 20–30 percent of the total harvest which, in aggregate terms amounts to 50,000–80,000 tons of cereals a year, valued at $15–$20 million[23]. Furthermore, the lack of adequate rural storage and processing facilities often force farmers to sell their output at a very low prices especially when there is an excess supply in the market. The lack of market information and therefore proper production planning at farm level contribute to over production and seasonal price collapses.

Finally, the lack of nationally adopted constitution or administrative law enabling effective coordination of national agricultural policies and strategies poses major risks to the implementation of this strategy and any resulting reform agenda, including delivery of key services to farmers and the monitoring and evaluation of the effectiveness of these services in the future.

It is worth pointing out that, despite the multiple institutional and structural challenges, certain subsectors are already performing well due to favourable market conditions. For example, Somalia is consistently among 15 largest sesame producers globally and certain amount of dry lemon is also exported to Middle Eastern markets and Turkey. However, the lack of effective agricultural trade policy, domestic banking sector fully integrated with international finance system to provide trade financing products that reduce the risk of exporting, phytosanitary services and sustained international marketing effort hampers the export of high value crops with strong global demand.

[23] Zanini, Gianni; D'Alessandro,Stephen Paul; Phipps-Ebeler,Verena; Ngumbau, Catherine Mwende; Sanginga, Pascal; Seevinck, Julia; Cherrou, Yamina; Read, Andrew; Akester, Stephen. Rebuilding Resilient and Sustainable Agriculture in Somalia: Volume 1 - Main Report (English). Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/781281522164647812.

6. Strategic priorities

The Agricultural Transformation Strategy (ATS) for the period of 2025-2029 is the successor to the draft Agriculture Development Strategic Plan (ADSP) for 2021-2025[24]. The ATS establishes the priorities and initiatives that will govern its implementation over the next five years. The agricultural transformation strategy is intended to contribute to long-term national economic development and enhance food security and farmer incomes. It identifies a total of 8 priorities and 24 interventions intended to drive sustained agricultural recovery and growth capable of helping reducing poverty through dependable rural employment and more consistent access to nutritious and safe food. The overarching strategic objective underlying the identification of these priorities and interventions is to increase agricultural production and productivity to meet a greater proportion of domestic food demand and promote export of high value crops over the next five years, while protecting the environment.

Short term priorities

Short-term priorities are achievable within the timescale 1-2 years and typically do not entail pre-requisite activities such as skills or infrastructure that should be put place before a priority can effectively implemented. The short-term priorities identified for this strategy include:

1. Building administrative and technical capacities of Ministries of Agriculture and Irrigation at both Federal and Member state levels

The MOAI's ability to implement this strategy and other important programs in the next five years will largely be contingent upon the administrative and technical skills of its workforce, as well as availability of operational capability, systems and facilities which are critical for delivering services to farmers, mobilising resources necessary to invest in agricultural development programs, and monitor and evaluate these programs. The institutional capacity gaps of the MoAI emerged as a top priority, in terms of existing deficits in its administrative and technical capabilities. Key administrative skills critical for the implementation of this strategy include advanced written and oral communication, discretion and confidentiality, ICT, organisational skills to balance several tasks and meet competing deadlines at any time, and record and document management. Key technical skills include advanced agricultural sciences and economics, as well as familiarity with the relevant analytical packages and systems to support effectively program and policy development, implementation, and monitoring and evaluation, and also deliver high quality evidence and advice to Ministers and Senior Officials.

Agro-mereological data collection and early warning systems are also weak and the government currently depends on external programs such as FSNAU and Somalia Water and Land Information Management (SWALIM) to inform policy and disaster risk management decision makings in relation to extreme weather events, pest outbreaks and flood events. This comprehensive strategy will empower farmers with crucial climate information, enable proactive responses to weather extremes, and safeguard agricultural land from flood damage, ultimately fostering a more resilient and productive agricultural sector. There is an acute need to rebuild these administrative and technical skills and data and information systems across the departments of the MOAI and its counterpart FMS ministries to support staff of these departments effectively to fulfill their respective mandates and undertake the reforms necessary to transform the agricultural sector in Somalia. The capability gaps are more severe in FMS ministries where there are more

[24] The draft agriculture development strategy 2021-2025 was submitted to the Parliament and received many discussion sessions but was not endorsed.

severe financial and human resource constraints. Finally lack of up-to-date farm registration is a major barrier to effective policymaking and farmers' access to credit and financing, as well as farm services.

Key areas of capacity building interventions include:

a) **The Ministry will develop and adopt a staff recruitment and retention program based on a transparent competency framework.**

This framework will define the administrative and technical skills and behaviours expected of civil servants. Competencies are the skills, knowledge and behaviours that lead to successful performance work including the ability of staff member to set direction within their department, division or subdivision and engage effectively the relevant internal and external stakeholders to produce results in relation to specific assigned roles and responsibilities. The program will be integrated into the existing civil service grading system to provide adequate remuneration and career progression path to staff based on their performance. The Ministry will provide institutional support to FMS ministries to help implementing this program.

b) **Training for the Ministry staff**

Key staff of MOAI and its FMS counterpart ministries will be formally trained using an effective skills development program to ensure they can build the administrative and specialist technical skills required for effective performance of their duties. The development program will set annual targets based on the competency framework and facilitate effective assessment of performance against the targets.

To ensure effective implementation of this strategy, the Ministry will seek external technical assistance to build in-house capabilities in key areas including policy and program development, implementation and monitoring and evaluation, as well as filling any related infrastructural and equipment needs.

c) **Create up-to-date farm registration system**

In partnership with the relevant FMS authorities, the Ministry will carry out a farm registration system to create complete administrative records proofing legal ownership and tenancy, and size of agricultural land. The farm registration records will also form the basis for future agricultural census and surveys.

d) **Compiling agricultural statistics**

In partnership with Somalia National Bureau of Statistics (SNBS), the Ministry will collect agricultural census to fill the current acute data gaps on agriculture sector. A census of agriculture is a statistical operation for collecting, processing and disseminating data on the structure of agriculture, including size of farm holdings, land tenure, land use, crop area harvested, irrigation, livestock numbers (agropastoral households), labour and other agricultural inputs.

e) **Re-establishing agro-meteorological data collection networks and early warning systems**

Farmers need up-to-date and accurate meteorological data to plan their activities and mitigate risks. To address the growing uncertainties related to climate variability and associated disaster hazards, The Ministry will use a multi-pronged approach to revive the agro-meteorological networks at regional and district levels to collect real-time weather and other relevant data to establish robust early warning systems to anticipate droughts, floods, cyclones, pest outbreaks and weather forecasting, so that the government and farmers can implement more effective mitigate natural disaster risks.

h) **Re-establishing national food reserves**

The Ministry will develop an action and start consultations on this across the country to re-establish national food reserves that can be used in events of food security crisis. Food reserves offer crucial benefits by enhancing food security, stabilizing prices, and providing a safety net during crises. Government will also

use this as a policy lever to stimulate agricultural production and investment to support long-term economic growth.

2. Strengthening Delivery of Phytosanitary Services

Strengthening the controls of pest and disease has emerged as a key priority. Evidence gathered through the literature review and consultation highlighted that Somalia has very weak pest and disease controls. Recent outbreaks of desert locust and fall army worm and their widespread infestations, leading to significant economic losses and livelihoods is a testimony of the risks posed by pest to Somali agriculture. To address these challenges, MOAI has established SARIS which is responsible for delivery of phytosanitary services and controls of agrochemicals and seed quality. Consistent with the legislation establishing SARIS and in line with international and regional practices, the MOAI has established the new regulatory agency designated as an independent National Plant Protection Organisation (NPPO) charged with the responsibilities to fulfil national obligations under the International Plant Protection Convention (IPPC). These obligations including prevention of introduction and spread of harmful pest and disease to protect crop and environment and promote international trade. However, the agency is legally established in November 2024, it has to yet be operationalised to deliver the mandated controls across the country. In line with the five-year plan for SARIS (2024-2028), three interventions were identified under this priority.

a) **Appointing Board of Management for SARIS**

The Ministry will appoint an Independent Board of Management (IBM) which is responsible for strategic leadership and oversight of operations of SARIS. The Board, to be appointed by the Minister of MOAI, will include representatives of all relevant stakeholders, including border agencies (customs, immigration, port and airport authorities, food safety and animal health agencies); government ministries (environment, trade and commerce, finance and FMS MOAI); private sector(producers, importers, exporters, traders and processors that are key clients and beneficiaries of the NPPO and are involved in the production, marketing and consumption chain) and consumers associations.

b) **Establish a governance model for coordination of delivery of phytosanitary services across the country**

The Board of Management, in consultation with the Ministry and its state FMS counterparts, will identify an appropriate organisational structure determining how the roles, power and responsibilities are assigned, controlled and coordinated, and how information and communication flows among the different levels of management and stakeholders at FGS and FMS levels. In this context, the Board will guide the operational activities based on science evidence and in reflection of the national policy priorities, and resource efficiency and coordination needs within the context of the two-tier federal system consisting of the FGS, in this setting responsible for overall policy and law-making to enforce IPPC obligations effectively, and the Federal Member States (FMSs) performing delegated official controls within their territorial jurisdiction under the direct oversight of the Board of Management. The trust of this governance model is that it will allow technical and scientific decision-making free from political interference across the federal system.

c) **Develop basic levels of technical skills and infrastructure across the country**

SARIS will recruit skilled staff to build senior leadership, basic administrative personnel for operational management of the organisation, and technical competences in phytosanitary controls in stepwise driven by demand for the phytosanitary services. The key technical officers to be capacitated under a strategic partnership with a regional NPPO. Laboratory facilities and border posts will be established across the regions in consultation with FMS authorities. Once built the basic competences and infrastructure, SARIS, as first steps toward delivery of phytosanitary services, will gather evidence required to create a National

Pest list, for example, using the Center for Agriculture and Biosciences International (CABI) and other peer review resources.

d) **Introduction of phytosanitary service fees and charges**

In the context of limited government budgetary resources, the long-term financial sustainability of SARIS will depend on its ability to raise funds from external sources such as private sector cost recovery scheme for its phytosanitary services. The Ministry will draft and then request cabinet approval for introducing this bill to the parliament a legal instrument setting the charging structure and fees for statutory plant health services such as import and export inspections, sampling and testing. In line with the globally adopted principle that the costs of statutory services should be borne by users who benefit directly from a service, additional charges must also be applied to recover cost associated with the provision of any ancillary services or facilities or the issue of any authorisation, certificate or other document. Once introduced, these charges and fees will be adjusted periodically to align them closely to the changes in the cost of delivering the service to individual users over time.

e) **Developing appropriate level of technical competencies for registration of pest control and fertiliser products**

In consultation with other relevant government line ministries and agencies, the Ministry will create administrative and technical capabilities for the registration of pest control and fertiliser products to prevent trade to counterfeit products and food safety and quality of pesticide use, including pre-harvest intervals, MRLs. The Ministry will create the analytical services and research capabilities supporting the control of agrochemicals.

3. Supporting development of SMEs and Agribusiness Value Chains

The Ministry will support both financially and technically the development of farmer groups, associations and cooperatives to promote farmers' adoption of good farm management practices, new agricultural technologies and sustainable farming practices, as well as enhancing farmers' bargaining power and enables them to sell their products at higher prices and access input and finance at lower costs. The Ministry will also support of the expansion of outsourcing services provided by agricultural cooperatives to individual farmers outside their membership help to increase productivity.

Most rural main road and bridges have fallen into disrepair in Southern Somalia and often become unpassable in rain season. Deteriorated main and feeder rural roads and bridges increase the time and costs of transporting crops to markets, undermining incentives to expand horticulture crops.

a) **Development of agribusiness services and market linkages.**

Ministry will support the emergence of a dynamic agribusiness industry linking farmers and consumers to drive growth in the agricultural and the rural nonfarm sectors. Development of agribusiness industry in Somalia is critical to provide inputs to the farm sector, and it also link the farm sector to consumers through the handling, processing, transportation, marketing, and distribution of food and other agricultural products. By promoting the development of well-targeted public-private sector partnerships and corporate social responsibility initiatives, the Ministry will promote smallholder participation and create better investment climate for small and medium enterprises to improve competitiveness within the emerging agribusiness industry. The goal is creating vibrant domestic agribusiness subsector capable of supplying high value products that can compete with and substitute food imports in the future. Emphasises will be placed on policy measures supporting products and value chains with the highest export potential in both regional and international markets, including development of product quality and safety standards, and certification. Sesame, citrus and bananas are identified as priority value chains.

Under this intervention the Ministry will also improve the rural road infrastructure to support better access to markets. The ministry will work closely with the Ministry of Public Works and Housing to rehabilitate and expand critical rural road networks.

b) **Improvement of on-farm storage and district level aggregation infrastructures**

The ministry will promote development of on-farm storage facilities to improve quality and minimize post-harvest losses. As part of this the ministry will support farmers transitioning harvest storage from underground to overground facilities to reduce both the harvest losses and contamination of harmful contaminants such as pathogenic bacterial and fungi. The Ministry will also promote cooperatives and farmers' associations to develop collective storage facilities for product aggregation. For this purpose, government will work close with international programs supporting agriculture and Gargaara facility to promote access to finance among cooperatives and farmer associations, as well as individual farmers. The ministry will run an awareness campaign to promote product quality and safety, so the consumers are able to better appreciate and more willing to pay for the improved product attributes.

Medium- and long-term priorities

Medium- and long-term priorities are achievable within a timeframe of 3-5 years. Typically, there are some pre-requisite conditions for effective implementation of medium- and long-term interventions, in terms of supporting skills, policies, laws or infrastructure investments. The long-term priorities identified for this strategy include:

1. Agricultural National Research and Extension Services

Evidence from the literature review and consultation led to conclude increasing agricultural productivity and maintain this over time requires access to effective research and services. Agricultural research is critical to develop and transfer solutions to agricultural problems of high national priority and provide information access and dissemination, whilst agricultural extension and advisory services support farmers and rural producers through training, information, and brokering linkages to markets and services. Extension services thus provide the critical connection from agricultural innovation and discovery of solutions to durable improvements at scale, as farmers and other actors in the rural economy learn, adapt, and innovate with new technologies and practices. Extension services also will help smallholder farmers adapt to and mitigate climate change, conserve biodiversity, and protect the environment while feeding their families and their countries. These services empower farmers and rural producers to cope with evolving agricultural challenges, such as the growing importance of standards, labels, and food safety; and shocks, such as price increases for agricultural inputs.

Under this priority, two main interventions were identified:

a) **Revival of agricultural research and extension stations**

On the onset of the civil war in 1990, all government-run research and extension services collapsed, and all remain closed except Aburiin, in Somaliland. These stations specialised both in irrigated (Central Agriculture Research Station in Afgoe, and Jilib Research Station) and rainfed agriculture (Bonka Dryland Research Station, Biodoba, and Aburiin Dryland Research station, Aburiin. The Ministry will develop a roadmap for rehabilitation of the research and extension stations, equip them and recruit research and extension staff to restore these critical services to farmers. As part of this effort, the Ministry will establish partnerships with local universities, and regional and international research institutions, including CGIAR centres—including ICRISAT, ILRI, and ICARDA to enable access to cutting-edge technologies in drought-resilient crops,

livestock productivity, and climate-smart agricultural practices, tailored for Somalia's context.. Public Private Partnerships in the delivery of research and extension services will also be part of the roadmap.

b) **Rehabilitation of agricultural training institutions**

There were also 10 agricultural training schools aimed at preparing specialist technicians across the country to meet demand for extension services and support farmers to access and adopt output of agricultural research. The technicians also supported trials and pest and disease control and eradication campaigns, as well as national agricultural development programs and projects. The ministry will rehabilitate all school facilities and re-open them in the coming 5 years.

2. Rehabilitate riverine irrigation infrastructure and improve water access for rainfed agriculture

Before 1990, Somalia had large-scale flood control and irrigation schemes, consisting of barrages, canals, and other infrastructure in the middle and lower reaches of the Juba and Shabelle rivers. The canal system consisted of primary, secondary, and tertiary canals, with water flow controlled by barrages or weirs. Pumped irrigation systems also existed along the rivers, where large pumps moved water from the rivers to the extensive network of canals. The vast majority of this infrastructure is no longer functioning, and as result the area under both controlled or flood recession irrigation has declined significantly. Similarly, water reservoirs for rain fed agriculture and livestock, and road infrastructure have fallen into disrepair over the past three decades in most parts of the country. Rehabilitation of the irrigation and rain harvest infrastructure is critical increasing agricultural productivity and growth.

Farming activities in the drier Northwestern (Somaliland) and Northeastern (Puntland) regions rely on surface water from springs and shallow wells, typically using small one-piston petrol or solar powered pumps, as well as spate irrigation. Alongside the establishing farming activities, there is also emerging horticultural production under greenhouses around main cities and towns across the country. Access to good quality water is critical to support the productivity of these activities.

Under this priority, two main interventions were identified:

a) **Rehabilitating irrigation and flood control infrastructure in line with Riverine Irrigation Strategy 2025**

Establishing a robust and comprehensive policy and legal frameworks to address the multifaceted structural and institutional challenges in managing effectively irrigation systems in Somalia is critical. As part of this, the Ministry will review the existing policies, legislation, and strategies governing riverine irrigation and strengthen them to better reflect the new two-tier federal governance system of Somalia and meet the current needs of users. The Ministry will also strengthen existing institutional capacity for water resource management, with more clearly defined roles and responsibilities of FGS and FMS by equipping these institutions with adequate resources to coordinate access and utilisation among various stakeholders. Specifically, the Ministry will enhance capacity and knowledge exchange in irrigation governance by creating a network of trained professionals capable of designing, implementing and managing irrigation projects and programs across the country in line with national policies and laws. This new capability will lay foundations for establishing a dedicated National River Authority responsible for implementation of new policy and legal frameworks to strengthen governance for water resource management for the benefits of all stakeholders.

To improve water distribution efficiency and reduce water losses and flooding, the Ministry will also conduct a comprehensive assessment of status of the irrigation infrastructure and accordingly develop a

comprehensive plan for rehabilitation of existing infrastructure, including canals, barrages, and riverbanks in coordination with ongoing projects. Departmental targets and performance indicators will be set to monitor the progress.

A second assessment of water reservoirs, including key dams, will also be carried and outcome used to prepare a plan for rehabilitation of the reservoirs.

In order to improve transboundary water governance, the Ministry will work closely with relevant national stakeholders to develop a strategy that allows a mutually agreeable common ground with the upstream stakeholders to achieve equitable and sustainable use of shared river water resources as supported by a transparent joint monitoring and management systems.

b) **Enhance rain/groundwater harvesting techniques and management**

The Ministry will support the development of small-scale irrigation systems through expansion of the number of shallow wells, earth dams, cemented berkads to increase horticultural production across country and access to water for livestock among agropastoral communities. The ministry will also promote the use of efficient irrigation systems through demonstration of use micro-irrigation systems allowing both efficient use of water and delivery of fertilisers, considering soil properties, crop biology, available water, timing, distribution methods, and climatic factors.

3. Increase agricultural mechanization and farm inputs use to expand cultivated area and crop productivity

Somalia's agricultural sector faces a double challenge: low mechanization and limited access to agricultural inputs for small and medium scale farmers. Agricultural mechanization, combined with other inputs and support to boost agricultural production and productivity, has been demonstrated to increase the efficiency of farm labour. Limited or lack access to agricultural machinery such as tractors, water pumps, and farm implements is therefore major constraints to expanding area cultivated and improving the productivity. Old pre-war agricultural machinery stock managed by the government is now obsolete and mostly unusable due to lack of maintenance. Limited service is currently provided by private companies or international projects providing assistance to farmers. The pool of machinery created through the private provision or projects is small too to reach most farmers. The security challenges also limit access to certain areas of the Southern regions of Somalia. High cost of mechanisation is in particular a hurdle to small scale farmer's ability to increase productivity. Additionally, small scale farmers often struggle to afford key inputs including fertilizers, pesticides and improved seeds, further constraining the productivity and farm income.

a) **Promote the use of agricultural mechanization**

To address the acute need for access to affordable mechanisation, the Ministry will support existing private service in partnership with international programs providers to increase pool of tractors, water pumps and farm implements. The Ministry will also support cooperative and farmer association in accessing financing for acquisition of affordable tractors, motorized hand tractors, as well as other farm equipment and machinery such as threshers, and driers to boost productivity through expansion of cultivated land and increased yield at farm level.

b) **Promote farm inputs use and crop diversification**

The Ministry will work with commercial banks and input traders to improve farmers' access to agricultural inputs through credit programs or government subsidized distribution channels respectively to incentivise a sustainable use of fertilisers, quality seeds and plant protection products. The ministry will also provide technical assistance to farmers through the re-established research and extension services to facilitate greater use input through trials and demonstration of improved crop varieties, fertilisers and pesticide applications. As part of this effort, the Ministry will also support farmers to enhance their resilience to climatic shocks through dissemination of climate-smart agricultural technologies including use of intercropping, drought-resistant varieties and cover crop in between main crops to diversify income and improve soil structure.

4. Strengthen internal and external coordination, and accountability

The Ministry's ability to develop and implement effectively policies, strategies and programs largely contingent upon functioning of its internal and external coordination structures and mechanism. Internal coordination refers to the processes and structures within the Ministry to align different departments, teams, and employees to work towards shared policy, strategic and programmatic goals, while external coordination focus on establishing connections and managing relationships and interactions between the Ministry and key external entities such as other federal government line ministries and agencies, FMS ministries of agriculture and development partners. The process for internal coordination involves consultation, bargaining, compromise and agreement between departments on the discharge of their respective functional responsibilities toward shared ministerial goals. Such coordination require development of common implementation plans and monitoring and evaluation of the policies, strategies and programs with clear reviews against pre-agreed and timebound targets and milestone.

The external coordination with FMS ministries of agriculture is in particular important for effective policymaking and implementation of national strategies and programs as much of actual implementation take place at regional and district levels and local administrative systems are better place to lead these activities, in term of possessing greater understanding of local challenges and actors, such as farmers and service providers, and lower transaction costs involved.

Finally, coordination with international development partners is critical to ensure that their programs and activities are aligned with the Ministry's priorities as articulated in this strategy.

a) **Strengthen interdepartmental coordination**

The Ministry will develop new Terms of Reference allowing to hold regular a monthly coordination meeting to ensure departments have common implementation plans allowing effective coordination in all shared activities and these plans are fully consistent with the overall Ministry policy and strategic and programmatic goals. The meeting will be chaired by the Minister or Director General, and it will be minuted to ensure that the meeting records capturing action points are circulated after each meeting and the completion of the action points is verified in the next meeting.

b) **Strengthen National Agriculture Forum (NAF)**

The ministry will also strengthen inter-ministerial (FGS and FMS) coordination structures for this strategy implementation. At present, there is not a fully functioning coordination arrangement between MOAI and its FMS counterpart ministries. To fill this gap, MOAI will review and operationalise the old Terms of Reference for National Agricultural Forum (NAF) to create a strengthened coordination structure allowing holding regular pre-scheduled coordination meetings at a ministerial, DG and Departmental Director levels, with an inbuilt accountability system. The different leadership levels will discuss emerging issues and activities, assess ongoing policy and program implementation activities against specified targets and

milestones, and take any necessary actions in a timely manner, as well as facilitating experience sharing. To ensure accountability, all meeting will be minuted and the completion of actions pointed verified at the next meeting. Any issues outstanding at Departmental Director level or requiring authorisation or decision will be escalated to Director General level. The Director General levels will in turn escalate any issues outstanding to Ministerial level.

c) **Strengthening coordination with international development partners**

At any year, there are dozens of international projects design or implemented across Somalia. To ensure that these projects are aligned with this transformation strategy, the Ministry will establish an effective coordination structure with donors funding and implementing partners of these project, so that the Ministry is fully involved in both the programming and implementation activities. The ministry will use AIMS systems to create a live project data face allowing donors and implementing agencies to provide up-to-date information on new project underdevelopment and being implemented including their regional and population coverage. As part of this new coordination structure, the Ministry will also work closely with the partners to develop a joint project monitoring and evaluation in line with the M&E framework developed for this strategy.

5. Promote Partnerships for Agricultural Research, Trade and Investment to support a sustainable growth in the sector.

There are acute needs to develop advanced technical capabilities and systems for key priority areas identified by this strategy, including strengthening of phytosanitary services, agrochemical controls, and re-establishment of research and extension services in Somalia. For example, phytosanitary controls involve various capabilities to protect against pests and diseases, including surveillance and identification, inspections, and international collaboration all aimed to prevent the introduction and spread of harmful organism in order to protect crop and environment, and promote agricultural trade. Similarly, the approval of pesticides requires advanced analytical capacity to ascertain that their active substances do not have any immediate or delayed harmful effects on human or animal health, directly or through drinking water, food, feed or air, or exposure in the workplace or through cumulative and synergistic effects, and they also do not have unacceptable effects on the environment, particularly with regards to non-target species and biodiversity. Equally, developing research and extension capabilities demands building collective skills, knowledge, tools, and processes required by researchers and extension professionals to effectively conduct research, disseminate knowledge, and facilitate the adoption of innovations.

Building the necessary advanced capabilities in these areas is substantive investment over decades. Such financial burdens and long lead times can be mitigated by establishing long-term strategic partnerships with the relevant regional and international agricultural research organisation. The regional and international agricultural trade of agriculture also requires close collaboration with the relevant phytosanitary services. Access to attracting inward investments and innovation and promote accessing to regional and regional markets also requires leadership, diverse technical skills and systems to build enabling business environment including creating conducive agricultural regulatory framework and directing across government the development relevant public services directed at firms and markets, as well as ensuring efficiency with which regulatory framework and public services are combined in practice.

a) **Building partnerships for development of phytosanitary services and agrochemicals**

The Ministry will tap into existing regional NPPO capabilities to develop in-house capacity for delivery of phytosanitary services. In particular, the Ministry will formalise existing collaboration with the Kenyan Plant Health Inspectorate Service (KEPHIS) and seek access support via the Center of Phytosanitary Excellence

Africa (COPE - AFRICA) through regional mechanism to rapid and cost effectively building basic competences and systems capability over the next two years. More importantly, under this formal government-to-government partnership agreement the Ministry will seek technical support to develop a range of capabilities including:

- phytosanitary certification system including ePhyto remotely accessible by business operators;
- seed certification system, in partnership with seed industry;
- domestic surveillance and control systems;
- development of subsidiary regulation for operationalisation of SARIS and pest notification systems;
- and information management system.

a) **Building partnerships for research and extension services**

The Ministry will establish partnerships with the Consultative Group on International Agricultural Research (CGIAR) to accelerate agricultural transformation to strengthen the sector's resilience against shocks to climate shocks. This partnership will help resourcing and building capacity through development of agricultural research and innovation systems, and extension service equipping farmers with the science and technologies they need to increase area cultivated and crop productivity.

b) **Building partnership for agricultural trade and investment**

The ministry will develop public-private partnerships (PPPs) for sustainable trade involving collaboration between governmental entities, private sector companies, civil society organizations and international partners to promote responsible business practices in agricultural trade in the two commodities with highest export potentials: sesame and banana. PPPs will help addressing structural and institutional constraints to productivity and growth of these two value chains by fostering innovation, knowledge exchange and multi-stakeholder collaboration. Through these partnerships investments will be promoted in the two value chains.

Cross-cutting issues

Two cross-cutting issues identified by this transformation strategy are digital agriculture and improving youth and women participation in the rebuilding of resilience and sustainable agriculture in Somalia. Digital agriculture can contributes in various ways towards the achievement of Somalia's agricultural development objectives as set out in this strategy, including supporting agricultural innovation systems through bridging the gap between researchers, academia, extension agents and farmers, sustainable farming with improved access to information and knowledge, disaster risk management through effective early warning systems, enhanced market access for inputs and produce, as well building traceability systems for food quality and safety. Digital agriculture can support the future activities of the Center for Innovation and Agripreneurship Development (CIAD) – a pioneering initiative in modernizing Somalia's agriculture through knowledge transfer, skills training, research and the promotion of advanced farming techniques, digital technologies and sustainable solutions.

Youth and women face challenges in achieving equitable participation in agricultural value chains. Youth have limited access to employment opportunities and in the absence specialist vocational training and apprenticeship programs they lack experience and connection to successfully access job opportunities. Pervasive informality of job market with most recruitment taking place through social networks in Somalia also disadvantages youth. Women are actively engaged in agriculture, comprising 50 percent of the agricultural labour force. Women are underrepresented in the formal labour force and actively engage in

the shadow economy through informal employment opportunities. Their limited participation in decision-making and training, and their limited access to agricultural resources, capital and information affects their productivity. Women also face marginalization in access to agricultural extension services and credit results in less food production and contributes to continued heightened food insecurity in the country.

The Ministry will implement the expanded digitalization agenda encompassing farmer e-wallets, mobile-based extension services, and integration with market pricing platforms. As part of this effort will be made to improve farmer literacy, smartphone penetration, and weak internet infrastructure in rural areas. The implementation approach will focus on inclusivity and accessibility by prioritizing technologies that work with basic mobile devices. This includes the use of Unstructured Supplementary Service Data (USSD) and SMS-based platforms, which enable farmers to interact with services without requiring internet access or smartphones. Additionally, applications with voice command capabilities in Somali and other local languages can help bridge literacy gaps and expand usability among underserved populations. Digitalization is a cornerstone of Somalia's modern agricultural agenda. The strategy emphasizes the expansion of the Agricultural Information Management System (AIMS) to include real-time, geo-tagged data on farmers, inputs, and markets. It will support the development of digital extension platforms that deliver advisory content through mobile devices in Somali and other local dialects. Additionally, it promotes e-commerce platforms that directly link producers with markets, input suppliers, and financial institutions to enhance value chain efficiency and transparency.

The Ministry will also establish a dedicated Climate Risk Financing and Green Investment frameworks through the relevant national frameworks and collaborating with accredited institutions operating in the country to strengthen the resilience of the crop production sector. This component will promote access to climate adaptation funds, develop weather-indexed crop insurance schemes, and enhancing accessing to green finance grants to support smallholder farmers investing in climate-smart practices. Priority investments will include drought-tolerant seed varieties, efficient irrigation systems, soil restoration techniques, and climate-resilient post-harvest infrastructure. The Ministry will work closely with development partners, financial institutions, and climate finance mechanisms such as the Green Climate Fund (GCF) to mobilize resources and build financial protection systems for farmers. By reducing the financial risks associated with climate shocks, this strategy will enhance productivity, protect farmer incomes, and accelerate the transition to a resilient and sustainable crop production system across Somalia.

a) **Promoting applications of digital agriculture**

The Ministry will enhance the Agricultural Information Management System (AIMS) to serve as a centralized data repository for real-time agricultural performance monitoring, policy planning, and decision-making. To support climate adaptation, the Ministry will also use SWALIM's remote sensing and GIS technology for real-time monitoring of water resources, soil health, and drought/flood early warnings. This will improve irrigation planning and natural resource conservation. Furthermore, the farmers will receive digital extension services by E-Fidiye platform through SMS, mobile apps, and online platforms that provide real-time market prices, weather forecasts, and agronomic best practices.

b) **Mainstreaming youth and women empowerment**

To ensure a resilient and inclusive transformation of Somalia's agriculture sector, the National Agricultural Transformation Strategy will mainstream and operationalize several critical cross-cutting priorities that address socioeconomic inequities that disadvantage youth and women in accessing economic opportunities. Somalia has one of the youngest populations globally, with over 70% under the age of 30.

This youth bulge presents both a challenge and a significant opportunity for agricultural revitalization. The strategy aims to establish Youth Agribusiness Incubation Hubs in key regions to promote entrepreneurship, enhance skills, and improve access to markets. It will encourage youth-led innovation through digital agriculture, mobile advisory services, and mechanization technologies. Furthermore, the inclusion of youth quotas in public investment programs and agricultural employment initiatives will ensure meaningful participation of young people in the sector.

Similarly, women constitute a substantial portion of the agricultural labor force in Somalia but continue to face systemic barriers in land ownership, access to finance, and leadership roles. The strategy is committed to ensuring at least 50% representation of women in farmer organizations, cooperatives, and extension services—aligning with CAADP Kampala Declaration goals to empower African women in agriculture. It also seeks to expand access to women-targeted grants, credit schemes, and land certification programs. In addition, the strategy promotes the role of women as leaders in agro-processing, horticulture, and crop value chains, especially where they already have strong community participation.

7. Conclusions

The Agricultural Transformation Strategy is intended to help the MOAI to significantly reduce or eliminate existing institutional and structural barriers to the sector's productivity and growth in the five years, with the primarily goals of increasing agriculture's contribution to the economy, farmer incomes, employment, and improve food security. The strategy identified eight strategic priorities and 24 related interventions addressing the structural and institutional obstacles across the irrigated and rainfed farming systems in Somalia. Although the two systems share some common challenges – namely exposure to increasingly more severe cyclical droughts and floods linked to climate change effect and pervasive insecurity across the country leading together to largescale rural labour force displacements, they also face other different challenges unique to each system. The challenges face by the irrigated system include lower and inconsistent availability of irrigation water at a farm level due to the dilapidated state of prewar irrigation and flood control infrastructure along the two main rivers and the absence of maintenance and largescale rehabilitation projects; weak water management, on and off farm due to poor capacity in planning of water uses at farm level and absence of effective regulatory oversight; poor soil fertility management, because inputs such as manure, fertilizer, and pesticides are used in a suboptimal way or not used at all; use of low-quality seeds and the lack of diversified varieties available on the market, resulting in low yields and high susceptibility to climate shocks and plant pest and disease; and limited mechanization.

The structural challenges faced by rainfed systems include poor soil management, resulting in soils with very low moisture retention and inadequate internal drainage, which cannot support crops to maturity; and low or no input farming techniques for staple foods, a traditional low-risk response to increasingly erratic rainfall conditions but limiting farmers' ability to achieve potential crop yields. The institutional challenges acutely faced by both farming systems include lack of up-to-date farm registration records and enforceable land tenure laws, research and extension services, limited managerial and technical skills, phytosanitary services to control pest and disease, and market access.

The comprehensive priorities and interventions articulated in this strategy are intended to help MOAI in tackling effectively these multiple complex challenges in order to build a more resilient and sustainable agriculture in Somalia over the next five years. Implementation of this strategy could therefore potentially have considerable socioeconomic impact as agricultural transformation can offer Somalia a realistic path to sustainable development. Indeed, key pre-requests for greater agricultural production and productivity are already in place. With an abundance of fertile land, labour and largely underutilised water, Somalia has the natural and human capital endowments necessary for a significant expansion of agricultural production to

drive economic growth and prosperity which are the only dependable sustainable path to poverty reduction in the longer term. Reducing chronic food insecurity and widespread poverty is the country's primary development challenge; therefore, growing the agricultural sector is key to achieving a transformational impact. In this regard, the preparation of the ATS is a critical step toward ongoing government effort to restore and expand the agriculture's contribution to the national economy through increased rural employment and incomes and food security

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Annexes

TRANSFORMATIVE BANKABLE PROJECTS FOR AGRICULTURAL DEVELOPMENT

#	Bankable Program title	Pillar	Proposed activities	Target areas	Beneficiaries HH	Expected Outcomes
1	**Somali Agricultural Legal Framework and Institutional Strengthening Program (SALISP)**	Governance & Institutional Strengthening	Develop strategic policies, regulatory frameworks, capacity building, centralized agri-database, M&E systems	National	FGS and FMS agriculture institutions	Effective agricultural governance and improved institutional capacity
2	**Irrigation Infrastructure Development Program (IIP)**	Water & Irrigation	Rehabilitate canals, construct dams, drip/sprinkler systems, governance systems for sustainable water use	National	1.000,000	Year-round water access, reduced flood/drought risks, and increased irrigated acreage.
3	**Agri-Meteorology and Early Warning Program (AMEWP)**	Climate & Resilience	Install weather stations, early warning systems, flood/drought monitoring tools, pest surveillance	National	1.500,000	Improved forecasting and disaster preparedness
4	**Soil and Plant Health Program (SPHP)**	Soil & Pest Management	Land mapping, soil fertility, pest control, IPM training	National	500,000	Enhanced soil and plant health for sustainable agriculture
5	**Seed Systems Development Program (SSDP)**	Seeds & Inputs	Develop breeding capacity, seed certification, private sector empowerment	National	1,000,000	Improved seed access and productivity
6	**Agricultural Mechanization and Digitalization Program (AMDP)**	Mechanization & Technology	Machinery access, vocational training, mobile extension tools, e-voucher systems	National	300,000	Modernized agriculture and improved productivity
7	**Transforming Priority Crops Program (TPCP)**	Crops & Value Chains	Farmer training, processing, cooperatives, export facilitation, infrastructure investment	National	1.500,000	Boosted yields, exports and market access of 7 target crops.
8	**School Feeding Project (SFP)**	Nutrition & Community Development	Provide school meals, build infrastructure, nutrition education, link to local farmers	National	1.00,000	Improved child nutrition and local agriculture linkage
9	**Beero oo Barwaaqee Soomaaliya (BBS)- Farming For Prosperity in Somalia**	Integrated Farming	Integrated farming, mechanization, climate-smart practices, rural livelihoods	National	1.00,000	Modernized farming and resilient rural economies
10	**Forage Development and Resilience Program (FDRP)**	Livestock & Fodder	Climate-resilient fodder production, market linkages, PPPs, preservation facilities	National	50,000	Enhanced feed security and livestock productivity
11	**Integrated Markets, Finance and Agro-Trading Program (IMFTP)**	Markets & Trade	Storage infrastructure, market systems, microfinance access, trade facilitation	National	800,000	Reduced post-harvest loss and improved income of small scale farmers
12	**Youth and Women Farmers Empowerment Program (YWFEP)**	Social Inclusion	Skills training, grants, market linkages, innovation incubation	National	100,000	Youth/women empowerment and improved food security
13	**Somali Food Systems Pathways Program (SFSPP)**	Food Systems	Climate resilience, trade, gender, digital innovation, displacement adaptation	National	200,000	Sustainable food systems and resilience

AGRICULTURAL PRIORITY AREAS AT FEDERAL MEMBER STATES

PRIORITY AREAS OF GALMUDUG STATE

#	Priority Need	Pillar	Proposed activities	Unit	Target areas	Budget	Beneficiaries HH	Expected Outcomes
1	Water Resource Management	Dryland Irrigation	Borehole and installation of solar system	10	Cadado,Galkacyo, Dhusamareeb, Abduwaq, Xarardheere, Guriceel	1,000,000.00	700,000	Increase land under cultivation, increase production, Water for irrigation,
			Water catchments	30		3,000,000.00		
			Spate Irrigation					
2	Crop pests and diseases	Assessment	Comprehensive impact assessment of major pests	1	Cadado, Galkacyo, Dhusamareeb, Abduwaq, Xarardheere, Guriceel	100,000.00	1100,000	Properly managed pests and diseases
		Monitoring system	Developing monitoring systems for three major pests	3		70,000.00		
3	Farm Input	Seeds	Certified cereals seeds (four value chains developed)	4	Cadado, Galkacyo, Dhusamareeb, Abduwaq, Xarardheere, Guriceel	800,000.00	100,000	Increase production
		Fertilizers	Organic fertilizers – 3 products	4		3,500,000.00		
		Pesticides	Ecofriendly-products	3		1,00,000.00		
4	Mechanization	Tractors	Tractors with implements	100	Cadado,Galkacyo, Dhusamareeb, Abduwaq, Xarardheere, Guriceel	5,500,000.00	300,000	Increase farms under cultivation
		Handheld Tractors	Motorized hand tractors	100		300,000.00	300,000	
5	Agricultural Infrastructure	Feeder Roads	Farm to Main roads (Km)	50	Cadado,Galkacyo,	1,000,000.00	200,000	Access to markets, Value

		Rural Bridges	Rural bridges	200	Dhusamareeb, Abduwaq, Xarardheere, Guriceel	5,500,000.00	500,000	chain development
6	Cooperatives Development and, Commercial farms and small farm capacity building	Cooperative Formation and Management	Strategy	1	Cadado,Galkacyo, Dhusamareeb, Abduwaq, Xarardheere, Guriceel	100,000.00	100,000	Build formidable cooperates, aggregation, act as entry points.
			Good Agricultural Practices (GAP)	10		200,000.00		
		Cooperatives, commercial and smallholder farmer training						
7	Research and Extension Development	Research Stations	One main research station and substation	2	Cadado,Galkacyo, Dhusamareeb, Abduwaq, Xarardheere, Guriceel	3,700,000.00	100,000	Develop seed varieties that are drought tolerant, early maturity, high yield
		Seed and varieties development	Trails and testing	15		1,900,000.00		
		Extension centres	Construction of extension /training centers	5		500,000.00		
8	Value chain Development	Post-harvest technology	Threshers, metallic silos, driers,	100	Cadado,Galkacyo, Dhusamareeb, Abduwaq, Xarardheere, Guriceel	3,000,000.00	200,000	Value addition, SME's, PHL, market-oriented, employment
		Market and distribution	aggregation centers	10		4,000,000.00		
		Agro-processing and light industries	2 value chains/value addition	2		6,800,000.00		
9	Fodder Production	Dryland Fodder Production	100 HA of land under fodder production	100	Cadado,Galkacyo, Dhusamareeb,	1,800,00.00	50,000	Tackle climate change, animal fattening,

		Irrigated Fodder Production	200 HA of land under fodder production	200	Abduwaq, Xarardheere, Guriceel	900,000.00		
10	Soil fertility management	Mapping	Digital soil mapping and sampling	1	Galmudug	200,000.00	Galmudug	Soil knowledge improved
		Database	Creating database	1				
11	Capacity Building	Human Capacity Development	Ass. On Human Capacity Development/implement	400	Cadado,Galkacyo, Dhusamareeb,	400,000.00	5,000	Human capital, systems, policy and regulations, knowledge transfer.
		Infrastructure	Rehabilitation/construction of MoAI district offices	5	Abduwaq, Xarardheere, Guriceel	500,000.00	5 districts	

PRIORITY AREAS OF HIRSHABELLE STATE

S/N	Priority Need	Pillar	Proposed activities	Unit	Target areas	Budget	Beneficiaries HH	Expected Outcomes
1	Water Resource Management	Dryland Irrigation	Borehole and installation of solar system	20	Beletweyne, Jowhar, Jalalaqsi, Bula-Burte Balcad	2000,000.00	700,000	Water agriculture irrigation,
			Water catchment	30		2,000,000.00		
		Riverine	Canal (primary and secondary)	100		5,000,000.00		
			River embankment (km)	200		4,500,000.00		
			River desilting (km)	150		12,000,000.00		
2	Crop pests and diseases	Assessment	Comprehensive impact assessment of major pests	1	Beletweyne,	100,000.00	200,000	Properly managed pests and diseases

					Jowhar, Jalalaqsi, Bula-Burte Balcad			
		Monitoring system	Developing monitoring systems for five major pests	5	Beletweyne, Jowhar, Jalalaqsi, Bula-Burte Balcad	100,000.00		
3	Farm Input	Seeds	Certified cereals seeds (four value chains developed)	4	Beletweyne, Jowhar, Jalalaqsi, Bula-Burte	200,000.00	500,000	Increase production
		Fertilizers	Organic fertilizers (varieties introduced)	3		700,000.00		
		Pesticides	Ecofriendly-3 products	3		250,000.00		
4	Mechanization	Tractors	Tractors with implements	10	Beletweyne Jowhar Jalalaqsi Bula-Burte	600,000.00	300,000	Increase farms under cultivation
		Handheld Tractors	Motorized Hand tractors	100		300,000.00		
		Other farm equipment & machinery	Threshers, metallic silos, driers, aggregation centers	50		700,000.00		
5	Agricultural Infrastructure	Feeder Roads	Farm to main roads (Km)	200	Beletweyne, Jowhar, Jalalaqsi, Bula-Burte	2,000,000.00	500,000	Access to markets, Value chain development
		Rural Bridges	Rural bridges	20		5500,000.00		
6	Cooperatives Development and, Commercial farms	Cooperative Formation and Management	Strategy	1	Beletweyne, Jowhar, Jalalaqsi, Bula-Burte	100,000.00	100,000	Build formidable cooperates, aggregation, act as entry points,

	and small farm capacity building	Cooperatives, ccommercial and smallholder farmer training	Training	10		200,000.00		
7	Research and Development, and Extension	Research Stations	One main research station and substation	2	Beletweyne, Jowhar, Jalalaqsi, Bula-Burte	1,000,000.00	Hirshabelle	Develop seed varieties that are drought tolerant, early maturity, high yield
		Seed and varieties development	Trails and testing	7		180,000.00		
		Extension centres	Construction of extension /training centers	5	Beletweyne Jowhar Jalalaqsi Bula-Burte Balcad	500,000.00	5 Districts	Available extension services
8	Value chain Development	Post-harvest technology	Threshers, metallic silos, driers,	100	Beletweyne Jowhar Jalalaqsi Bula-Burte	500,000.00	200,000	Value addition, SME's, PHL, market-oriented, employment
		Market and distribution	Aggregation centers	10		1000,000.00		
		Agro-processing and light industries	2 value chains/value addition	2		300,000.00		
9	Fodder Production	Dryland Fodder Production	100 HA of land under fodder production	100	Beletweyne Jowhar Jalalaqsi Bula-Burte	100,000.00	50,000	Tackle climate change, animal fattening,
		Irrigated/Riverine Fodder Production	200 HA of land under fodder production	200		200,000.00		
10	Soil fertility, Land reclamatio	Mapping	Digital soil mapping and sampling	1	Beletweyne Jowhar	200,000.00	Hirshabelle	Soil knowledge improved
		Database	Creating database	1				

	n and Soil Conversation				Jalalaqsi Bula-Burte			
11	Capacity Building	Human Capacity Development	Ass. On Human Capacity Development/implement the recommendations	1	Beletweyne Jowhar Jalalaqsi Bula-Burte	400,000.00	50,000	Human capital, systems, policy and regulations, knowledge transfer.
		Institutional Capacity	Institutional Capacity/continuous	1		200,000.00		
		Expertise and consultancies support	Expertise and consultancies support Buildings			200,000.00		
		Buildings	Rehabilitation/construction of MoAI district offices	5		500,000.00	5Districts	Capacity of MoAI improved

PRIORITY AREAS OF JUBALAND STATE

	Priority Need	Pillar	Proposed activities	Unit	Target areas	Budget	Beneficiaries HH	Expected Outcomes
1	Water Resource Management	Dryland Irrigation	Borehole and installation of solar system	10	Rain fed districts	1000,000.00	400,000	Increase land under cultivation, increase production, Water for irrigation,
			Water catchment	30		1,200,000.00		
		Riverine irrigation	Canal (primary and secondary)	100	Kismayo, Luk, Dolow, Bardhere	10,000,000.00	500,000	
			River embarkment (km)	200		5,000,000.00		
			River desilting (km)	150		12,000,000.00		
2		Assessment	Comprehensive impact	1	Kismayo, Luk,	100,000.00	500,000	Properly managed pests and diseases

	Crop pests and diseases		assessment of major pests		Dolow, Afmadow, Jamame, Bardhere, Beled hawo, Garbaharey			
		Monitoring system	Developing monitoring systems for major pests	5		100,000.00		
3	Farm Input	Seeds	Certified cereals seeds (four value chains developed)	3	Kismayo, Luk, Dolow, Afmadow, Jamame, Bardhere, Beled hawo, Garbaharey			Increase production
		Fertilizers	Organic fertilizers – products	4		3,500,000.00	500,000	
		Pesticides	Ecofriendly-products	3		4,000,000.00	500,000	
4	Mechanization	Tractors	Tractors with implements	30	Kismayo, Luk, Dolow, Afmadow, Jamame, Bardhere, Beled hawo,	1,800,000.00	300,000	Increase farms under cultivation
		Handheld Tractors	Motorized Hand tractors	200		6,00,000.00	300,000	
5	Agricultural Infrastructure	Feeder Roads	Farm to Main roads (Km)	200	Kismayo, Luk, Dolow, Afmadow, Jamame, Bardhere, Beled hawo,	4,000,000.00	200,000	Access to markets, Value chain development
		Rural Bridges	Rural bridges	20		5500,000.00	500,000	
6	Cooperatives Development and, Commercial farms and small farm capacity building	Cooperative Formation and management	Strategy Training	1	Kismayo, Luk, Dolow, Afmadow, Jamame, Bardhere, Beled hawo,	100,000.00	100,000	Build formidable cooperates, aggregation, act as entry points,
		Cooperatives, commercial and smallholder farmer training	Good Agricultural Practices (GAP)	20		400,000.00		

7	Research and Development and Extension	Research Stations	One main research station and substation	2	Kismayo, Luk, Dolow, Afmadow, Jamame, Bardhere, Beled hawo,	3,700,000.00	100,000	Develop seed varieties that are drought tolerant, early maturity, high yield
		Seed and varieties development	Trails and testing	8		1,900,000.00		
		Extension centres	Construction of extension /training centers	5	Kismayo, Luk, Dolow, Afmadow, Bardhere	500,000.00	5 districts	Available extension services
8	Value chain Development	Post-harvest technology	Threshers, metallic silos, driers,	100	Kismayo, Luk, Dolow, Afmadow, Jamame, Bardhere, Beled hawo, Garbaharey	3,000,000.00	200,000	Value addition, SME's, PHL, market-oriented, employment
		Market and distribution	Aggregation centers	10		4,000,000.00		
		Agro-processing and light industries	2 value chains/value addition	2		6,800,000.00		
9	Fodder Production	Dryland Fodder Production	100 HA of land under fodder production	100	J Kismayo, Luk, Dolow, Afmadow, Jamame, Bardhere, Beled hawo, Garbaharey	1,800,00.00	50,000	Tackle climate change, animal fattening,
		Irrigated Fodder Production	200 HA of land under fodder production	200		900,000.00		
10	Soil fertility management	Mapping	Digital soil mapping and sampling	1	Jubaland	1200,000.00.	Jubaland	Knowledge on Soil improved
		Database	Creating database	1				
11	Capacity Building	Human Capacity Development	Ass. On Human Capacity Development/impleme	400	Jubaland state	400,000.00	5,000	Human capital, systems, policy and regulations,

			nt the recommendations					knowledge transfer.
		Institutional Capacity	Institutional Capacity/continuous	1		600,000.00	5,000	
		Expertise and consultancies support	Expertise and consultancies support Buildings	20		2,000,000.00	5000	
		Buildings	Construction of offices and Furniture	30		4,000,000.00	12,000	

PRIORITY AREAS OF SOUTHWEST STATE

S/N	Priority Need	Pillar	Proposed activities	Unit	Target areas	Budget	Beneficiaries HH	Expected Outcomes
1.	Water Resource Management	Dryland Irrigation	Boreholes and installation of Solar System	50	Rain fed districts	5,000,000.00	1,200,000.00	Increase land under cultivation, production, Water for irrigation and drinking
			Water catchments	60		6,000,000.00		
			Installation of drip irrigation system	100	Rain fed districts	1,000,000 .00		
		Riverine irrigation	Canal (primary and secondary)	100	Lower Shabelle	10,000,000.00	800,000	
			River embarkment (km)	200		5,000,000.00		
			River desilting (km)	150		12,000,000.00		

			Installation of a complete Solar Water Pump System for irrigation	60		1,000,000.00		
2.	Crop pests and diseases	Assessment	Comprehensive impact assessment of major pests	1	Southwest	100,000.00	500,000	Properly managed pests and diseases
		Monitoring system	Developing monitoring systems for five major pests	5	Southwest	100,000.00		
3.	Farm Input	Seeds	Certified cereals seeds (four value chains developed)	4	Southwest	800,000.00	500,000	Quality seeds, fertilizers and pesticides for increased production.
		Fertilizers	Organic fertilizers-products	3		700,000.00		
		Pesticides	Ecofriendly – products	3		250,000.00		
4.	Mechanization	Tractors	Tractors with implements	25	Southwest	1,500,000.00	300,000	Increased land under-cultivation
		Handheld Tractors	Motorized Hand tractors	300		900,000.00		
5.	Agricultural Infrastructure	Feeder Roads	Farm to main roads (Km)	200	Both riverine and rain-fed districts	4,000,000.00	500,000	Access to markets improved.
		Rural Bridges	Rural bridges	20	L/Shabelle	5500,000.00		

6	Cooperatives Development and, Commercial farms and small farm capacity building	Cooperative Formation and Management	Strategy	1	Southwest	100,000.00	100,000	Structure Farmer produce organization
		Cooperatives, commercial and smallholder farmer training	Good Agricultural Practices (GAP)	20		400,000.00		
7	Research and Development, and Extension	Research Stations	Main research stations and substation	3	Baidoa, Afgoi and Huddur	2000,000.00	3 Districts	Functional research centres
		Seed and varieties development	Trails and testing	15	Baidoa, Afgoi and Huddur	200,000.00	3 Districts	
		Extension centres	Construction of extension /training centres	7	3 Riverine districts & 4 rainfed districts	700,000.00	7 Districts	Available extension services
8	Market, Storage and Value Chain Development	Market	Construction of Market Facilities (Vegetables, Fruits & Grains)	8	Afgoi & Baidoa	1,200,000.00	400 individuals	Improved livelihoods
		Storage facilities	Construction of storage facilities	2	Afgoi & Baidoa	400.000.00	10 cooperatives	Post-harvest Losses reduced
		Post-harvest technology	Threshers, metallic silos, driers,	100	Baidoa, Hudur, Burhakabo, Afgoi	500,000.00	200,000	
		Market and distribution	Aggregation centres	10		1000,000.00		
		Agro-processing and light industries	2 value chains/value addition	2		6800,000.00		
9	Fodder Production	Dryland Fodder Production	100 HA of land under fodder production	100	Baidoa, Hudur, Burhakabo, Afgoi	1800,000.00	50,000	Improved availability of fodders

		Irrigated/Riverine Fodder Production	200 HA of land under fodder production	200		900,000.00		

10	Soil fertility management	Mapping	Digital soil mapping and sampling	1	Southwest	1200,000.00	Southwest	Improved knowledge on Soil
		Database	Creating database	1				
11	Capacity Building	Human Capacity Development	HR capacity needs assessment	1	Southwest	50,000.00	MoAI staff	Comprehensive report
			Short-term training for MoAI staff on Breeding, Climate Smart Agriculture, Irrigation, IPM, Financial Management etc.	5	Southwest MoAI	100,000.00	100 MoAI staff	Overall capacity of MoAI staff improved
			Long-term capacity building (MSc and PhD) on Soil, breeding, plant pathology, Irrigation, extension and Entomology	10	MoAI staff	500,000 .00	10 MoAI staff	
			Expertise and consultancies support Buildings	15	MoAI	1,500,000.00	MoAI	
		Infrastructure	Need assessment of MoAI office facilities at the district level	1	Southwest	60,000.00	All MoAI facilities at respective districts	Comprehensive report
			Rehabilitation/construction of MoAI district offices	7	Southwest	700.000,00	7 Districts	Capacity of MoAI improved


FEDERAL REPUBLIC OF SOMALIA
MINISTRY OF AGRICULTURE AND IRRIGATION

KM4, MoAI HQ, Hodan District
Mogadishu Somalia

www.moa.gov.so | info@moa.gov.so