



Global Food Security Strategy (GFSS)

Mali Country Plan

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Acronyms

ACLED	Armed Conflict Location & Event Data Project
ADB	African Development Bank
ADF	Africa Development Foundation
AGIR	GOM's Strategic Resilience Plan
AGRO	Agence Ecofin
AICCRA	Accelerating Impacts of CGIAR Climate Research for Africa
BIFAD	The Board for International Food and Agricultural Development (USAID's advisory board)
CAADP	Comprehensive African Agriculture Development Programme
CDCS	Country Development Cooperation Strategy
CFR	Council on Foreign Relations
CIAT	International Center for Tropical Agriculture
CLTS	Community-Led Total Sanitation
CMDT	Compagnie Malienne pour le Développement des Textiles (Malian cotton parastatal)
CREDD	GOM's Strategic Framework for Economic Recovery and Sustainable Development
DANIDA	Danish International Development Agency
DHS	Demographic and Health Survey
DRA	GOM's Regional Directorates of Agriculture
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FEWS NET	Famine Early Warning Systems Network
FFP	USAID's Food For Peace Program
FOLA	Focus on Land in Africa
FtF	USAID's Feed the Future Program
GI	Global Initiative
GIZ	German Agency for International Cooperation
GFSS	USAID's Global Food Security Strategy
GDP	Gross Domestic Product

GEC	Executive Cooperation Group (of development actors in Mali)
GOM	Government of Mali
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
ICRAF	Center for International Forestry Research
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IDP	Internally Displaced Person
IER	Institute of Rural Economy
IFPRI	International Food Policy Research Institute
IIED	International Institute for Environment and Development
IITA	International Institute of Tropical Agriculture
INSTAT	National Institute of Statistics, Mali
IPCC	Intergovernmental Panel on Climate Change
IPR/IFRA	Rural Polytechnic Institute and Applied Training
IRD	Institut de Recherche pour le Développement
IsDB	Islamic Development Bank
ITA	International Trade Administration
JICA	Japanese International Cooperation Agency
KOICA	Korea International Cooperation Agency
MCC	Millenium Challenge Corporation
MFAN	Ministry of Foreign Affairs of the Netherlands
MSU	Michigan State University
MINUSMA	United Nations Multidimensional Integrated Stabilization Mission in Mali
NAIP	GOM's National Agriculture Investment Plan
NEDA	Netherlands Development Assistance
NGO	Non-Governmental Organization
NME	Norwegian Ministry of Environment
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OEC	Observatory of Economic Complexity
OECD	The Organization for Economic Cooperation and Development
PAHO	Pan American Health Organization
PAMN	GOM's Multisectoral Nutrition Action Plan
PARI	Program for Accompanying Research for Agriculture Innovation
RFSA	USAID's Resilience Food Security Activities

RFZ	USAID's Resilience Focus Zone
SAP	Système d'Alerte Précoce
SIDA	Swedish International Development Cooperation Agency
SMART	USAID's Standardized Monitoring and Assessment of Relief and Transitions
TAFS	Transitions Agroécologiques pour des Systèmes Alimentaires Durables
TOC	Theory of Change
UN	United Nations
UNDP	United Nations Development Program
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNSC	United Nations Security Council
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government
VACS	Vision for Adapted Crops and Soils
WAEMU	West African Economic and Monetary Union
WFP	World Food Program
WHO	World Health Organization
WITS	World Integrated Trade Solutions
ZOI	Zone of Influence

Section A: Country Context

A.1 Overall country and policy context

The Government of Mali (GOM) and USAID have achieved many successes in nutrition, resilience, and agricultural growth through their aligned policy goals and investments. Between 2013 and 2018, stunting rates of children under five decreased from 38 percent to 27 percent and wasting rates decreased from 13 percent to 9 percent (USAID, 2021a). More than 680,000 Malians have access to annual rainfall forecasts (produced in partnership with USAID) to adapt their agricultural calendar to shifting weather patterns and enhance their resilience to climate change (USAID, 2019). Mali's agricultural sector is growing at an annual rate of 4 percent (Collins et. al., 2022). Nevertheless, the Malian people still face many challenges, including droughts, persistent malnutrition, widespread poverty, socio-political instability, and a deteriorating security situation. Since 2020 the decreasing trend in wasting, stunting, and malnutrition rates have reversed and are now on the rise. USAID's Standardized Monitoring and Assessment of Relief and Transitions (SMART) surveys show that Mali is no longer on track to achieve the objective of the World Health Assembly to reduce wasting to less than 5 percent by 2025.

Feed the Future (FTF) Mali is aligned with the GOM's development objectives and strategies. Through Mali's National Agriculture Investment Plan (NAIP) 2015-2025 (GOM, 2014) and the Strategic Framework for Economic 75% recovery and Sustainable Development (CREDD) 2019-2023 (GOM, 2019), the GOM advances the agricultural sector as the engine for national economic growth and the central means for tackling hunger, malnutrition, and poverty. The NAIP and the CREDD are implemented in alignment with the GOM's Multisectoral Nutrition Action Plan (PAMN) 2021-2025 (GOM, 2021), and Strategic Resilience Plan (AGIR) 2015-2035 (GOM, 2015a). The NAIP, CREDD, PAMN, and AGIR overlap and reinforce each other, collectively guiding agricultural development policy in Mali. The Global Food Security Strategy (GFSS) Country Plan for Mali will support these priorities and approaches through FTF and complementary investments in agriculture and food systems.

A.2 Poverty, hunger, and nutrition trends

Poverty

The number of Malians living below the US\$2.15 a day international poverty line increased from 15 percent in 2018 to 19 percent in 2022 - an additional 4.3 million people entered 'extreme poverty' (World Bank, 2023c). The dual impact of the security crisis and the pandemic contributed to the rise of the extreme poverty rate (World Bank, 2023a). Mali ranks 186 out of 191 countries on the Human Development Index (UNDP, 2020b). Sanctions from the Economic Community of West African States (ECOWAS) and West African Economic and Monetary Union (WAEMU), along with the impacts of Russia's invasion of Ukraine on prices slowed the GDP growth rate by an estimated 1.8 percent in 2022 (World Bank, 2023a.). Approximately 90 percent of people living in poverty in Mali are in the densely populated, rural areas of the south (Ibid.).

At the national level, rapid population growth exacerbates poverty – the additional 700,000 people born into Mali's strained education and health systems every year compounds Mali's systemic poverty (OECD, 2016). While international aid combats poverty by trying to increase the poor's access to education, health, and livelihood services, rural Malians combat poverty by having more children. Mali's population growth rate is 3.3 percent (finances.ml), Malian women have 6.3 children on average (INSTAT, 2018), and 69 percent of the population are youth (under 25 years old) (UNESCO, 2022). Rural families use this approach to combat poverty (by producing large families) for several reasons. Firstly, agriculture in many parts of the country is a labor-constrained system – a large family can

mobilize more labor and produce more food. Secondly, legions of youths from rural areas emigrate to Malian cities and abroad to find employment, and experience tremendous social pressure to send money back to their rural family through remittances.

Mali is a rapidly urbanizing country as a result of migration to cities and growth within urban centers. Mali's urban population jumped from 37 percent of the population in 2011 to 45 percent in 2021 (Statista, 2021). Bamako is one of the fastest growing cities in the world. While good data on domestic remittances sent back to rural areas are hard to find, international remittances sent to Mali were 1.1 billion in 2021 (Statista, 2022). An estimated 23 percent of Malians receive remittances from abroad (IRD, 2010). Rural Malian households often save their remittances to maintain food security during the lean season (World Bank, 2011). Large families have the potential to grow more food, receive more remittances, and maintain greater food security. Furthermore, in the absence of a state welfare system, parents have better prospects later in life if they have many children to take care of them. Thus, Malian poverty and population growth are fastened in a complex and mutually causal relationship.

Hunger

Most Malian households are unable to meet their food and non-food basic needs, leading to detrimental coping mechanisms and a reliance on food assistance. In 2022, 1.84 million Malians faced acute food insecurity (FAO, 2023a) and a third of the Malian population needed humanitarian assistance, including 3.2 million children, 2.9 million women, and 800,000 people with disabilities (Reliefweb, 2021). Eastern Mali is experiencing the worst of the food insecurity with Mopti and Tombouctou regions under Phase 2: "Stressed" according to FEWS NET classifications, and Gao and Menaka under Phase 3: "Crisis" (FEWS NET, 2023). The Food and Agriculture Organization (FAO) projects 1.25 million people will face high levels of acute food insecurity and 1.5 million children under five will suffer from acute malnutrition in its Humanitarian Response Plan for 2023 (FAO, 2023b).

Despite its large rural population and the importance of the agricultural sector, Mali relies on imports to meet 70 percent of the food people consume daily (FAO, 2023b), owing to a variety of factors including national demand for many types of food products that are not locally produced on a wide scale. Imports have become more expensive in recent years. Mali's GDP experienced negative growth in 2022 as a result, in part, of the economic sanctions imposed on Mali by ECOWAS. The sanctions increased prices of food, undermined the purchasing power of vulnerable households, and constrained their access to food (Ibid). Inflation caused by unfavorable economic conditions at the national and international levels negatively affected food security in Mali (Reliefweb, 2023b). Compounding these issues, the war in Ukraine has disrupted supply chains and impacted international commodity prices. In 2022, the prices of coarse grains were up by 125 percent compared with the previous year (FAO, 2023b).

Malnutrition

In addition to caloric deficiencies, rural Malians suffer from high rates of anemia, micronutrient deficiencies, and stunting (see in previous subsection). Access to nutritious diets is a major concern. The causes of malnutrition are multidimensional, incorporating issues of access to nutritious foods, food safety, safe drinking water, family size, birth intervals, women's empowerment, and education (USAID, 2014).

In terms of malnutrition, 1.48 million children suffered from acute malnutrition in 2022, a 19 percent increase from the year before (Reliefweb, 2023a). The prevalence of wasting in 2022 among children 6-59 months was 11 percent (12 percent for boys and 9 percent for girls) (INSTAT, 2022), and the prevalence of stunting was 22 percent (25 percent for boys [World Bank, 2022a] and 19 percent for

girls [INSTAT, 2022]). Girls aged 6-59 months and women aged 15-49 suffer from anemia at rates of 82 and 63 percent, respectively (INSTAT, 2018). Malnutrition indicators are consistently higher among rural children than in their urban counterparts; prevalence of stunting among rural and urban children is 29 percent and 17 percent (respectively), wasting is 9 percent and 8 percent, and underweight is 20 percent and 13 percent (DHS, 2018). In the first 1,000 days of life, only 40 percent of Malian infants benefit from exclusive breastfeeding in their first six months and only 9 percent of children aged 6-23 months obtain a minimum acceptable diet (USAID, 2021a). Only 42.5 percent of women of reproductive age in the former Resilience Focus Zone (RFZ) achieved minimum dietary diversity, and only 24.6 percent of children 6-23 months did (FtF, 2022). About a quarter of households in the RFZ experienced moderate or severe hunger according to the Household Hunger Scale (Ibid.).

Obesity is also a growing concern, especially among women. The prevalence of overweight and obesity in 2021 was 26.9 percent (Seidu, 2021). The rising prevalence of obesity strains the healthcare system and is a key risk factor for several noncommunicable diseases (PAHO, 2016). 2.1 percent of Mali's population (ages 20-79) had diabetes in 2021 (World Bank, 2021a).

A.3 Constraints within the agriculture and food system

The agriculture sector contributed 36 percent to the national gross domestic product (GDP) while employing 68 percent of the economically active population in 2021 (World Bank, 2023). While the majority (68 percent) of the economically active population in Mali were engaged in agriculture, 10 percent were engaged in industry and the remaining 22 percent worked in services. Labor productivity in agriculture increased from about \$1,200 per person in constant 2015 US dollars in 2010 to nearly \$1,500 in 2019. Labor productivity in services was stagnant fluctuating between \$2,800 and \$3,000 from 1991 to 2019. Industry saw an increase in labor productivity from \$2,800 in 1991 to nearly \$5,400 in 2019, however, it was stagnant from 2010 to 2019 (World Bank, 2023).

Food supply

Cereals are the primary food commodities grown in Mali (ITA, 2022), with maize, rice, millet, and sorghum as the top four measured in tons produced as well as harvested area. In 2021, Malian farmers harvested an estimated 3.6 million tons of maize, 2.4 million tons of rice, 1.4 million tons of millet, and 1.2 million tons of sorghum (FAOSTAT, 2021a). These four cereals were cultivated on a total of 6 million ha (FAOSTAT, 2021b). The average annual growth rate in cereal production between 2005 and 2015 was 12.5 percent (Republique du Mali, 2016). In 2021, the country produced over 8.8 million metric tons of cereals (World Bank, 2021b). Livestock production is an integral part of agriculture in Mali (USAID, 2018), furnishing almost all of the organic soil amendments that Malians apply to their soil. In addition to food crops, cotton is the other major agricultural commodity grown in Mali, with about 700,000 ha cultivated in 2021 (FAOSTAT, 2021b), mostly in the Southern region of Sikasso (Westerberg et al., 2020).

Maize, sorghum, cowpea, fruits, and groundnut are widely grown in the Soudan-Guinean zone in Southern Mali, with cattle, sheep, and goats raised as livestock. Commonly grown tubers and vegetables in this zone include cabbage, okra, tomato, and onion. Millet, sorghum, maize, and cowpea are widely grown in the Soudanian zone in Southern Mali, with farmers raising sedentary livestock and transhumant herders utilizing rich fodder resources of this zone during drought years. Rice and sorghum are grown in the Sahelian zone in Northern Mali, with pastoral livestock rearing common; camels, cattle, goats, and sheep are the most commonly raised species in this zone. The Saharan zone's production is mostly confined to nomadic stock raising, with little sorghum production (CIAT, 2021).

Among the constraints to crop production in many parts of Mali are labor (not necessarily land) (Ollenburger, 2019), followed by lack of access to agriculture equipment and inputs (traction, plows, donkey-carts, fertilizer, improved seeds, etc.), and the financial means to purchase these technologies. These constraints are difficult to consider in isolation because they create a vicious cycle. Rainfall variability hinders investment in equipment/inputs. Extensive agriculture is a logical response to climatic uncertainty but is characterized by low productivity. As a result, dryland agricultural production systems in the Sahel are characterized by low levels of capital accumulation and investment (Bernard et. al., 2008). This is reflected in low rates of borrowing to intensify agricultural activities. For example, 90 percent of Malian farmers use animal traction to plow their fields (Touré et. al., 2020); they are discouraged from taking out loans to purchase a tractor because of the risk of defaulting on the loan as a result of a “catastrophic” year(s) of low rainfall. Mechanization in rural Mali is mostly carried out by equipment owners who provide services to farmers rather than by farmers themselves. That is, tractor owners sell their services to farmers who generally pay between 10,000-25,000 CFA per hectare to have their soil turned; the farmer clients bear the risk of a poor harvest.

The effects of low yields are further compounded by food losses and waste, which are the result of inefficient functioning of food systems. Post-harvest loss (PHL) refers to the quantitative and qualitative loss of food in various post-harvest operations. 'Loss of food' is also defined as food available for human consumption but not consumed. In Mali, food losses are dominated by cereals, seconded by legumes. In the case of cereals, post-harvest losses are only significant in the case of sorghum and bagged maize, due to damage caused by insects and rodents. For example in the Sikasso region, the quantity of food lost increased from 90,157 tons metric in 2007 to 292,327 tons metric in 2017 (<http://archive.aphlis.net/>)

Expanding irrigation infrastructure can help to address rainfall variability, with different amounts of scaling possible depending on the specific crops and production systems in different regions of the country. Overall, Mali has 1.24 million km² of total land, and 173,000 km² of arable land (NME, 2005). However, only 2,358 km² (0.01% of arable land) are irrigated (Country Reports, 2023). In the center of the country (Segou Region) the Office du Niger manages large-scale irrigation infrastructure, historically for cotton but more recently for rice and sugarcane production. In other regions of the country, small-scale irrigation systems are being invested in by many partners. The National Program of Proximity Irrigation is investing in pumps, canals, and water retention mechanisms to irrigate high-value crops, and individual wells are also being invested in for horticultural production. Most of these projects are focused around the Niger River plain, the Inland Delta, Mopti, and Tombouctou regions.

Low soil fertility is also a major cause of low yields in Mali after rainfall variability (IITA, 2019). Malian soils generally have low levels of soil organic matter, nitrogen and phosphorus. Sandy soils predominate and tend to be acidic, while small patches of clay soils in Mali are neutral to alkaline (Bagayoko et. al., 2000; FtF, 2016). Chronically poor soils in Mali are exacerbated by population expansion, because farmers can no longer fallow fields as frequently due to livelihood and food security demands. As a result, they rely increasingly on chemical and organic soil amendments. With the recent rise in global fertilizer prices, the Government of Mali has begun to subsidize purchases of organic fertilizers (TAFS). Practices disseminated to combat declining soil fertility include agroecology¹, zai² pits, sustainable intensification, and microdosing of fertilizers.

¹ Agroecology is a holistic and integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of sustainable agriculture and food systems (FAO, Agroecology Knowledge Hub).

² Zai is a common conventional soil rehabilitation management practice, mainly in the Sahel zone, where organic matter is buried in a small pit to help restore fertility and conserve water in the soil.

The Ministry of Agriculture determines the crops eligible for fertilizer subsidies, and their main criteria is the crop's profitability (Theriault, 2019). Malian farmers receive subsidies for 100 percent of the recommended fertilizer rates for cotton, rice, and maize, but only 35 percent of the recommended rates for microdosing their principal subsistence grains – millet and sorghum (Haider, et. al., 2019; Theriault, 2021). Even with the subsidies, Malian farmers generally do not have the money to acquire enough fertilizer for all their fields. The average fertilizer application rate across all crops in Mali is 37 kg/ha (World Bank, 2021c), far below recommended rates. Malian farmers in cotton-growing zones access subsidized fertilizer via CMDT, in the Segou Region via the Office du Niger, and via the GOM's Regional Directorates of Agriculture (DRAs) by submitting a voucher of their production intentions. This system works well for farmers working with CMDT and the Office du Niger, but the DRAs cover large zones and are underfunded, causing delays in the submission of vouchers (Theriault et. al., 2021). In addition to the subsidy, CMDT provides cotton farmers with a fertilizer loan that is repaid at the end of the agricultural campaign. Farmers in the cotton belt have voiced growing disinterest in cultivating cotton because of the “onerous” labor demands, the higher risk of crop failure, and the preference for growing food crops to support subsistence needs. However, farmers continue to plant cotton to gain access to the fertilizer loans. Testimonies suggest that some farmers secretly apply subsidized fertilizer to produce other crops, such as sorghum, millet, and corn. The GOM supports cotton production (via CMDT) because cotton is the country's second largest source of export revenues, behind gold. In 2021, Mali exported \$93 million in raw cotton (OEC, 2022).

The livestock sector accounts for approximately 40 percent of Mali's agricultural GDP and 15 percent of national GDP. Livestock production engages some 85% of farmers and additional members of the population along the livestock value chain, generating income for approximately 30% of Malians (World Bank, 2023b). Livestock is also a significant export sector, with cattle export revenue accounting for 3 percent of total exports in 2021 (Ibid.). According to official counts in 2021, the livestock sector in Mali consists of 12.8 million cattle, 29.2 million goats, 21.2 million sheep, 88.3 million swine/pigs, 1.3 million camels, and 54,703 chickens (FAO, 2023c). Overall livestock holdings have expanded significantly in the last 10 years, driven by increases in the population of goats (77 percent increase), sheep (78 percent), and cattle (40 percent) (Ibid.).

Livestock is one of Mali's core economic sectors; approximately 85 percent of Malians own ruminant livestock, especially women. Unfortunately, poor productivity and marketing constraints limit the ability of ruminant livestock to provide secure livelihoods. However, if properly captured, the livestock sector offers great opportunities, as domestic and regional demands for animal source food is expected to continue to grow, catalyzing the expansion of the Malian ruminant livestock value chains, potentially leading to increased incomes, food security and nutrition outcomes for millions of Malians. The socio-economic welfare of semi sedentary livestock-owning households is inexorably interwoven with the socio-economic welfare of the more sedentary crop cultivating farming households.

Encouraging the adoption of “Livestock as a Business” attitude and behavior instead of livestock as a way of life, caused changes in the perceptions, attitudes and behavior of livestock-owning households, making them more receptive to adopting improved animal management practices and new technology, especially for intensive animal fattening activities oriented towards producing to meet market demand.

Semi-nomadic pastoralists raise the majority of Mali's livestock and effectively transfer resources (manure) from the arid north (where lower levels of rainfall constrain crop production) to farmers in the south (Umutoni, et. al., 2018). Pastoralists move in response to seasonal changes in water points and pastures. Mobility is the key to their resilience. In the rainy season, semi-nomadic pastoralists depart the southern zones to avoid biting flies, ticks, mud, and conflict with farmers. They lead their herds to the northern zones where there are fewer farmers, more nutrient rich pastures, and seasonal ponds. When

these ponds dry up, they return to the southern zones and drive their cattle to numerous encampments during the dry season in search of adequate pasture and forage. Whereas the relationship between farmers and herders was once complementary, conflict between farmers and herders has become an issue of concern, as described later in this report (World Bank, 2023b).

The main barrier preventing rural populations from growing and accessing more vegetables is a lack of garden infrastructure. Horticultural crops are water intensive and pulling water from Mali's deep water tables is labor intensive. Dry season horticultural production capacity is severely constrained without the aid of motorized pumps. Metal fencing is also necessary to keep livestock (goats in particular) out of rural gardens. USAID Mali supports nutrition-sensitive agriculture activities via community and household gardens. Women do most of the gardening in rural Mali and typically produce vegetables for household consumption, often selling only surplus production.

Increasing international trade, both within West Africa and beyond, can be a powerful tool for increasing food supply and stabilizing prices. USAID/Mali's Africa Trade and Investment activity is undertaking several lines of action to increase business and investment ties between the U.S. and Mali. Likewise, the U.S. Embassy in Mali was instrumental in the creation and launching of the U.S.-Mali American Chamber of Commerce (AMCHAM), which will also focus efforts towards this end.

Food environment

The agricultural sector employs roughly 68 percent of Mali's population and represents a third of the national GDP (ITA, 2022). Without mechanization, labor constraints prevent small farmers from increasing yields and profits, further depressing their agricultural investments and exacerbating their ability to engage additional labor or mechanization. While Mali produces enough food at the national level to feed its population most years, many rural households often fail to produce enough food to feed the family for the entire year (or to sell part of their harvest for money to pay for other household needs). They are often forced to buy grain in the final months before harvest. For vulnerable subsistence farmers, the main problem is producing enough calories for annual consumption. Their inability to engage markets is of less concern.

Mali generally has competitive food markets with a multitude of traders and no single actor exerting undue influence (USAID, 2015). Consequently, the market efficiency for food products, as measured by variation in prices among different locations, is usually high (Ibid). However, the conflict has disrupted market flows, resulting in lower prices for millet and sorghum in southern and western Mali, and higher prices for these essential grains in central and northern Mali, where the conflict is far worse (FAO, 2023a).

Cereal production in Mali has experienced significant growth in the last 20 years, lowering Mali's dependency on imports of cereals. Mali generally produces enough millet, sorghum, and maize to meet domestic needs. For example, in 2019 Mali imported only \$371K of maize. As a result of government investment and sound development policy, Mali's annual rice production has increased from 1 million tonnes in 2000 to 2.8 million tonnes in 2021 (FAO, 2023c). Despite these production gains, 15 percent of the rice consumed in Mali remains imported because of Mali's steadily growing demand for rice (AICCRA, 2023). For example, in 2019 Mali imported \$80M in rice, primarily from Senegal and India (OEC, 2022a; 2022b). Mali also relies on imports to meet domestic demand for wheat (USAID, 2015), importing \$2.6M in wheat from France, Egypt, and Liberia in 2019 (WITS, 2020). Since the pandemic, the rapid increase in international grain prices have negatively impacted Malians' access to rice and wheat products. Furthermore, annual grain production in 2021 was lower than the recent 5-year average. Rice

production dropped from 2.9 to 2.4 million tonnes and millet dropped from 1.7 to 1.5 million tonnes (FAO, 2023c).

Livestock production accounts for 40 percent of the agricultural GDP, with exports generating over \$100 million annually in foreign exchange and 5 percent of Mali's export revenue (IFPRI, 2020). Mali's livestock production is unable to keep up with the demand for animal products (Ibid), as evidenced by West Africa's increasing dependence on imports of animal products. By 2030, the demand for red meat in West Africa will increase by 6 million metric tons per year, outstripping the supply by roughly 1.7 million metric tons per year (Eeswaran, et. al., 2022).

The major meat markets in Mali are located in the southern population centers. The majority of livestock are raised in the north, where producers have a competitive advantage over crop production and less disease pressure in the arid climate. In northern and central Mali, small-scale middlemen (selling 3-10 animals) dominate the market because livestock markets operate on networks of trust. Middlemen report that if they unknowingly purchase a stolen animal, their investment could be confiscated, and they could be charged with the theft. The network of trust among buyers and sellers also enables middlemen to ensure they do not buy and sell diseased animals. Larger-scale middlemen buy 50-150 animals in regional markets and transport them southward. Middlemen generally transport livestock 'on the hoof' because of poor cold chain infrastructure. This decentralized trust-based system has inefficiencies but provides a major source of employment across the livestock supply chain.

General mistrust for financial institutions hinders rural Malians' access to agricultural loans that can facilitate access to agricultural mechanization, pumps, fencing, and other agricultural inputs. A World Bank survey of Malian adults found that 54 percent of adults reported saving money and 43 percent reported borrowing money, but only 6 percent reported that they borrowed and saved via a formal financial institution (World Bank, 2019). The high costs of providing loans to smallholder Malian farmers results in unaffordably high interest rates (over 12 percent) (Fintrac, 2018; World Bank, 2015). A recent USAID project survey of 600 rural men and women in Mopti and Tombouctou found that only 1 percent of farmers had received a loan from a formal financial institution. Friends, family and savings groups were the primary source of credit for women, while local money lenders were the primary source for men. Formal financial institutions have difficulty providing direct services to smallholder farmers mainly because their loan amounts are too small and the operating costs of serving isolated farmers are too high. Thus, these institutions tend to provide loans to village-level savings groups whose members can guarantee each other's loans (Fintrac, 2018).

Food and water utilization

The horticulture sector provides abundant livelihood opportunities for women and contributes greatly to nutritional needs. However, these value chains are prone to high losses from disease (up to 40 percent according to some), high postharvest losses, and price fluctuations (Diakité et al., 2014). In grain value chains, producers often sell their maize for liquidity in the period immediately after harvest, which saturates markets. Across different crops, the marketing season is often constrained by storage issues (USAID, 2011). Groundnuts and cowpea, crops that play an important role in child nutrition, are often contaminated with aflatoxins due to poor soil fertility and storage conditions. Chronic exposure to aflatoxins can lead to immunodeficiency, stunting, and liver cancer, with diseases resulting from acute exposure to high levels mainly affecting children (AflaControl, 2010). According to Dr. Subroto Mukherjee (USAID/East Africa) the toxins are produced as secondary metabolites by the fungi in temperatures range between 24 and 35°C, within many commodities whenever the moisture content exceeds 7% (10% with ventilation).

Water and sanitation contribute to nutrition outcomes, with children in unsanitary conditions less able to absorb nutrients and undernourished children more vulnerable to fecal contamination from the environment. Only 58.7 percent of urban households in the RFZ have access to basic sanitation service, while only 14 percent of rural households do (Ibid.). In addition, 31.1 percent of rural households practice open defecation, with only 2.1 percent of urban households doing the same (Ibid.).

In addition to localized food and water management issues, national supply chain linkages are a limiting factor to improving the economic performance of Mali's food system. Mali's network of roads and highways is ranked 88th internationally. However, population density in the country is very low, meaning that longer distances are required to connect more remote parts of the country to markets and supply chains (World Data). Other factors which affect the business enabling environment include insecurity, unreliable power supply, the lack of infrastructure, corruption, administrative inefficiency, lack of skilled labor, and a large informal economy (ITA, 2022). Investments in the agro-processing sectors are strongly discouraged by the high cost of energy and its lack of availability near agricultural production areas (USAID, 2011).

A.4 Risk and resilience

Security and conflict

Poor governance has contributed to social unrest and political instability in Mali. The state lacks a significant presence in large parts of the country and struggles to meet the basic needs of citizens, including providing for their security. There is a large, increasingly disaffected population of young people who are faced with limited prospects for economic opportunity and social mobility. Civil society has taken up the work of delivering goods and services in the absence of government intervention by mobilizing communities and resources. Civil society groups have also played an important role in mediating disagreements between different groups and preventing conflict.

The security situation in Mali has been deteriorating for a decade, resulting in significant negative impacts on the food security situation. Following months of anti-government protests, elements of the Malian Armed Forces took control of the government on August 18, 2020. The soldiers briefly installed a former Defense Minister as president of the transition government before retaking control of the government on May 25, 2021. In February 2022, the French government announced that it would withdraw troops from Mali over the course of four to six months following tensions with the ruling junta. The next day, the military government demanded that France withdraw its troops immediately. The government followed up by banning all NGO activities that receive funding or support from France in November 2022. In June 2023, the military government announced that the UN peacekeeping mission (Multidimensional Integrated Stabilization Mission in Mali (MINUSMA)) was no longer welcome in Mali; and the UN Security Council voted to fully withdraw the mission by December 2023. Mali is one of several countries in the Sahel region to succumb to military takeover in recent years. From coast to coast, Guinea, Mali, Burkina Faso, Niger, Chad, and Sudan have all suffered coups since 2020. ECOWAS has sanctioned member countries that have undergone coups, and the ECOWAS engaged with Niger's leadership to decide on progress towards a short transition and other conditions for lifting sanctions (Walsh, 2023). Political instability in Mali and the military government's antagonism towards the UN and other international donors has disrupted food systems and food security interventions (FAO, 2023b).

The conflict is regional; extremist groups flow back and forth between Mali, Burkina Faso, and Niger. Porous borders, vast and uncontrollable desert spaces, limited resources, and weak governance all hinder efforts to defeat extremist groups. Armed groups have intensified attacks in Mali, adversely impacting civilian populations and driving widespread displacement of communities (FAO 2023b).

From 2021 to 2022, the number of civilians killed in Burkina Faso, Mali, and Niger doubled, reaching more than 2,000 people in 2022. The number of civilian deaths is expected to increase further in 2023 (ACLED, 2022; CFR, 2023; UNSC, 2023). Violent extremist groups have increased their attacks throughout Mali, even around Bamako (Reliefweb, 2022). The extremist groups control entire Communes in some regions of the country (UN, 2022), and Mali remains the deadliest place for UN personnel (UN, 2023). Since 2022, the Malian Armed Forces (FAMA) have increased their operational tempo in Mali's central and northern regions, buoyed by the December 2021 arrival of Kremlin-backed Wagner Group forces.

In addition to conflict from extremist groups, inter-Commune conflict, farmer-herder conflict, and socio-political instability are also on the rise, greatly impacting food security (OECD, 2016; Reliefweb, 2021). These multidimensional conflicts have disrupted agricultural production and rural livelihoods (WFP, 2021b) – an analysis of satellite imagery in Mopti and Segou revealed a decrease in agricultural production on 16 percent of farmlands (WFP, 2021a). As a result of the conflicts, a third of the population needs humanitarian assistance (Reliefweb, 2021) and 375,539 Malians are internally displaced (UNHCR 2020; IOM 2023) (compared to 287,450 IDPs in 2020 and 187,100 IDPs in 2019) (WFP, 2021b). The expanding conflict has also constrained the delivery of food aid and other forms of humanitarian assistance. While humanitarian operations have continued throughout the conflict, access to affected populations continues to shrink (FAO, 2023b).

Climate change

Most climate models predict a hotter, drier and increasingly variable climate in Mali as a result of climate change (IPCC, 2022; MFAN, 2018; Monerie et. al. 2021). Rainfall variability is the primary cause of low yields among Malian smallholders (Montaud, 2019). Droughts, floods, and poorly timed rainfall (e.g. dry spells in the middle of the rainy season) hinder crop development. Based on the last 70 years of data, the probability of a very good rainfall year in Mali is 12 percent, a good year is 28 percent, a normal year is 43 percent, a mediocre year is 17 percent, and a catastrophic year is 14 percent (Aune, 2011). Rainfall variability also disincentivizes farmers from investing in inputs. Overall decreases in annual precipitation also cause the water table to drop, which negatively impacts the vegetation and trees that anchor soil and maintain micro-climates for wild and domesticated animals, including fisheries, livestock, and pollinators.

The relationship between climate variability, agro-pastoral livelihoods, and conflict is especially complex and growing more tense. Farmers now raise more livestock and herders grow more crops than ever before. What was once a complementary relationship between separate production systems has evolved into a more competitive relationship, increasing farmer-herder conflict. Also, agricultural lands have expanded with the population and closed off many of the semi-nomadic herders' transhumant migratory corridors, leading to increased farmer-herder conflict. When transhumants' mobility is constrained, they are less resilient to climate change, and they are less capable of transferring resources from the arid north to farmers in the south. Thus, the pastoralists' limited political agency and the increasing farmer-herder conflict negatively impacts food security for both herders and farmers (FOLA, 2019).

Russian Invasion of Ukraine

Supply chain constraints attributed to Russia's invasion of Ukraine have driven higher global prices for fuel, fertilizer, vegetable oil, and wheat. Mali imports 96 percent of its oil products, and global price hikes have made a considerable impact on household consumption due to petroleum's impact on all marketed goods and services in the economy (Diao et al., 2022). The surge in world fertilizer prices is likely to impact the production of major crops that have significant application rates, such as cotton (almost all of

land cultivated for cotton uses chemical fertilizers), maize (75.3 percent of production area uses chemical fertilizers), and rice (44 percent of production area uses chemical fertilizers) (Ibid.).

Extreme poverty increased driven by the erosion of the purchasing power of the most vulnerable, owing to soaring consumer prices and weak economic growth (Ibid.).

COVID-19

As of April 2023, 26 percent of the Malian population had been vaccinated against COVID-19 with about 5.8 million doses of the coronavirus vaccine having been administered in Mali (TE, 2023; WHO, 2023). The low vaccination rate can be explained by Malian's mistrust of authorities (particularly the Global North) and local perceptions that the coronavirus is a lower level concern compared to other threats. The coronavirus' direct impact on food security in Mali was most severe in urban areas, where the rate of mild, moderate, and severe food insecurity increased from 50 to 61 percent, 16 to 19 percent, and 2 to 3 percent respectively as a result of disruptions to global supply chains (Adjognon, et. al., 2021). As a result of the coronavirus, real GDP growth in Mali decreased from 4.8 percent in 2019 to 1.2 percent in 2020, and then partially recovered reaching 3.1 percent in 2021 (OCHA, 2022). These lower growth rates negatively impacted food security in Mali. The coronavirus also caused a precipitous fall in global cotton prices in 2020, and CMDT lowered the guaranteed price of cotton from \$0.46 to \$0.42 USD per kilogram. Malian farmers responded by boycotting cotton production the following year, which reduced (1) agricultural incomes, (2) cottonseed cakes produced to feed livestock, and (3) access to fertilizer (CMDT fertilizer loans is a major source of fertilizer for farmers in the cotton belt) (MSU, 2020). As a result, the GoM decided to increase the price of cotton in subsequent years.

A.5 Inclusive development

USAID stresses the importance of inclusion and empowerment for women and youth. A 2017 Feed the Future report for Mali states: "Women and youth constitute the largest segment of the rural workforce but are nonetheless the poorest and the least involved in the decision-making process" (FtF, 2017). The majority of Malians are engaged in subsistence agriculture (USAID, 2019), and rural communities and households are led by elder males; women only lead households where all the older men have emigrated or died (Meillassoux, 1973). In return for this authority, the elder male leaders are responsible for the security and development of the village and the heads of household are responsible for households' food security, safety, health and education as well as the costs of their marriages (USAID, 2017).

Gender equality and women's empowerment

Mali ranks 184 out of 189 countries on the Gender Inequality Index (UNW, 2021), and 155 out of 166 on the Gender Related Development Index (UNDP, 2021). Gender inequality disrupts access to basic services and constrains women's contributions to society while hindering development of the entire population.

The head of household uses his authority to mobilize household labor and agricultural inputs to grow enough food for the household's annual consumption. The collective plot system is a form of risk pooling that ensures household resources are focused on the production of drought-resistant grains such as millet and sorghum (Guirkinger et. al., 2015). The head of the household manages harvesting of the collective plot, as well as irrigated lands used in cereal production. Subordinate adults in the household each have their own smaller field, which they control entirely. Husbands and wives have separate finances – they each have their own sources of income as well as household expenses for

which they are responsible. For example, women are responsible for farming food that becomes the sauce poured over the cooked grains, and men are responsible for procuring the grain. In exchange for their domination over household labor and resources, men, and particularly older men, are expected to ensure the social harmony of the community and their households (Sborgi, 1998). Any effort to shift culturally entrenched power dynamics must also consider concomitant shifts in social responsibilities.

Increasing women's access to irrigated land must account for culturally entrenched gender power dynamics. Training communities in gender equality or giving women titles to land cannot overcome these structural dynamics – power is a political issue, not a technical issue (Ferguson, 1994). For example, decades ago the government agency, Office du Niger, created 98,000 hectares of irrigated land for cereal production and established men and women's equal access to the irrigated land. However, there are many villages under the purview of the Office du Niger where not a single woman has a title to an irrigated plot, mainly because women pass their irrigated rice fields on to their sons when they die (IIED, 2011). On the other hand, vegetable production is traditionally seen as women's work because vegetables go into the sauce of traditional Malian meals (Wooten, 2003). Thus, USAID/Mali's longstanding approach of creating irrigated lands for women's community gardens effectively empowers women with control over irrigated lands.

Youth

More than half of the population of Mali is 16 years of age or younger, making inclusive youth development imperative for the rapidly growing country (World Factbook). While rural youth unemployment is low, it likely masks the rate of youth underemployment among small scale farmers (Food and Business Knowledge Platform, 2016). Additionally, the rate of employment among those with a university degree between 15 and 24 was twice as high as those without a degree in 2011 (Ibid.). The agriculture sector has significant potential to absorb this segment of the labor force but is often viewed as a last resort among youth.

Improving youth employment and livelihood outcomes in agriculture will require addressing their lack of access to finance. Youth often lack the collateral that banks require, such as land and finances and are therefore unable to successfully apply for loans. Due to this lack of finance, segments of value chains with lower entry costs are favorable to youth participation. It will also be important to address the lack of both skills and motivation to engage in agriculture in order to improve youth outcomes in agriculture.

A.6 Policy context

The policy goals articulated in the GOM's NAIP, CREDD, PAMN, and AGIR align with USAID/Mali's Country Development Cooperation Strategy (CDCS) and other guiding documents. The NAIP and CREDD (2019-2023) present the government's strategy for channeling investments in the agricultural sector and pursuing larger objectives for national sustainable development. The main objectives of PAMN are to reduce mortality and morbidity caused by malnutrition, particularly among Mali's most vulnerable populations.³ The four pillars of AGIR are to (1) strengthen livelihoods and improve social protection for vulnerable groups, (2) strengthen the nutrition of vulnerable households, (3) sustainably strengthen agricultural productivity and incomes of the most vulnerable, and (4) strengthen governance in food and nutrition security.

³ According to PAMN and AGIR, people living in extreme poverty, people affected by the humanitarian crises, disabled people, people living with HIV/AIDS, people in hard-to-reach areas, women of childbearing age, pregnant and lactating women, children 0-5 years of age, children who do not attend school, and adolescent girls.

Government investment is a key driver of agricultural growth. From 2005 to 2014 Mali met the ambitious goal of investing 10 percent of its national budget in agriculture as agreed upon in the Comprehensive African Agriculture Development Programme's (CAADP) Malabo Declaration (Collins et. al., 2022). However, it achieved the CAADP target of an annual agricultural growth rate higher than 6 percent in only four of those years (PARI, 2017). Between 2014 and 2021, Mali fell just short of the ambitious CAADP targets, investing 9 percent of the GOM budget in agriculture and achieving a 4 percent agricultural growth rate (Collins et. al., 2022). The bulk of GOM's investment in agricultural growth goes to fertilizer subsidies, which is particularly important since the price of fertilizer has doubled as a result of supply chain issues associated with the war in Ukraine (IFPRI, 2022). In 2022, the GOM spent \$27 million on agricultural inputs (AGRO, 2022); this was a decrease from the \$50 million it spent in 2017 (FtF, 2018). Ninety percent of its agricultural investments in 2017 went to fertilizer subsidies (Theriault et. al., 2021).

Engagement in the CAADP process will continue to be crucial. CAADP strategic goals involve more than the public budget. Currently CAADP is going through a reform process which could help catalyze the Malian government's reform efforts even further. Political backing of the CAADP process looking toward Kampala 2025 could have demonstration impacts in wider Africa and in specific internal efforts to improve nutrition outcomes, decrease poverty through ag-led growth, enhance agriculture trade, and respond to the climate crisis.

USAID/Mali aims to strengthen the agricultural sector as a vehicle for poverty reduction, improving nutritional outcomes among vulnerable populations, and enhancing the resilience of rural populations. In concert with PAMN, USAID/Mali's Multi-Sectoral Nutrition Strategy implements a package of nutrition interventions across the country through the 1,000-day approach (USAID, 2021a). In concert with AGIR, USAID/Mali stresses the importance of promoting resilience in the face of stresses and shocks associated with climate change, the instability created by the conflict, and COVID-19 (USAID, 2021b). USAID/Mali's resilience portfolio combines complementary programming from Feed the Future, Global Health, Global Climate Change, Democracy and Governance, Education and Food for Peace (USAID, 2016).

Beyond programming, USAID/Mali will actively pursue advancement of the following policy priorities:

1. **Agricultural and Livestock Inputs and Services:** Increase smallholder farmer access to and use of agricultural inputs, particularly organic and mineral fertilizers and improved seed varieties.
2. **Diet Quality:** Increase access to safe and nutritious foods.
3. **Agricultural Trade:** Increase farmer access to national and international markets; increase engagement with and strengthening of the Malian private sector.
4. **Enabling Environment for Private Sector Development:** Increase access to finance for farmers, agricultural producers, and small and medium enterprises (SME).
5. **Resilience and Agricultural Risk Management:** Scale up risk-reduction measures and protections for smallholder farmers.

These will be pursued through engagement with the Government of Mali, through partnerships with the private sector, through collaboration with other USAID activities and other donor projects, as well as through implementation of current and future activities.

A.7 The partnership landscape

The GOM is working to address poverty, hunger, and malnutrition through several approaches, including:

- Reduce mortality and morbidity caused by malnutrition, particularly among Mali's most vulnerable populations
- Improve social protection for vulnerable groups
- Fortify the agricultural sector as the engine for national economic growth and the central means for tackling hunger, malnutrition, and poverty
- Sustainably strengthen agricultural productivity and incomes of the most vulnerable

The USG Global Food Security Strategy is aligned with and supports these objectives by the GOM. Under the guidance of the GFSS, USAID/Mali's Feed the Future (FtF) and Resilience Food Security Activity (RFSA) programs also reduce malnutrition, improve social protection, strengthen the agricultural sector and increase agricultural productivity among vulnerable groups. Other USG partners that contribute to FTF include:

- Per its priority of "leveraging all our resources to ensure access to healthy foods that promote well-being in an equitable way", USDA implements the \$25 million McGovern-Dole International Food for Education and Child Nutrition program in Mali.
- USDA also operates the International Climate Hub, which delivers science-based, region-specific information and technologies—in partnership with USDA agencies and partners—to enable climate-informed decision making, reduce agricultural risk, and build resilience to climate change.
- The Department of State operates the Vision for Adapted Crops and Soils (VACS), which seeks to adapt agricultural systems in Mali and other African countries to the anticipated challenges of climate change. As part of FTF, VACS aims to improve soil health and fertility, identify nutritious and climate-resilient indigenous crops, and marshal the necessary resources to scale up production and provide a sustainable source of nutrition.

Several other international agencies also support the GOM's achievement of these objectives. These include multilateral development partners, non-governmental organizations and civil society organizations, agricultural research institutions and large private sector actors.

Multilateral development partners include: United Nations organizations, World Bank, African Development Bank (ADB), the European Union (EU), The Global Fund, The Vaccine Alliance (GAVI) and the Islamic Development Bank (IsDB). Bilateral development partners include the Japanese International Cooperation Agency (JICA), Netherlands Development Assistance (NEDA), Canadian Development Cooperation and Global Affairs Canada, Denmark, the German Agency for International Cooperation (GIZ), Korea International Cooperation Agency (KOICA), Swedish International Development Cooperation Agency (SIDA), the Swiss Agency of Development and Cooperation (SDC) and Danish International Development Agency (DANIDA). Relevant international and local non-governmental organizations and civil society organizations that are engaged in complementary programming include: the Malian Association for Awareness of Sustainable Development (AMEDD), Action pour la Formation et l'Autopromotion Rurale (AFAR), Sahel Eco, TASSAG, Association Malienne

pour la Sécurité et la Souveraineté Alimentaires (AMASSA) Afrique Verte, the Association of Professional Farmers' Organizations (AOPP), the Malian Association for the Protection and Development of the Environment in the Sahel (AMPRODE SAHEL), Alliance for a Green Revolution in Africa (AGRA), Mercy Corps, Nitidae, Practical Action, Catholic Relief Services (CRS), Center for Agriculture and Rural Development in Mali (CARD), Forum of Agricultural and Rural Advisory Services of Mali (FOSCAR), the Permanent Assembly of Mali's Chambers of Agriculture (APCAM), and the Coordination of Farmers' Organizations of Mali (CNOP).

The current set of organizations that are implementing partners for the 4 core FTF activities--CARE, Cultivating New Frontiers in Agriculture (CNFA), DevWorks, and Research Triangle Institute (RTI)--as well as TetraTech, which currently implements USAID/Mali's main WASH activity, all systematically collaborate with other NGOs, donors, companies, civil society, and engage and advocate with the GoM.

National and international agricultural research institutions generate significant evidence for the Feed the Future programs. These include: Institute of Rural Economy (IER), Rural Polytechnic Institute and Applied Training (IPR/IFRA), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), World Vegetable center (WorldVeg), and the Center for International Forestry Research (ICRAF).

Research and extension activities carried out by national institutions are reinforced by the research-for-development portfolio of Feed the Future Innovation Labs, which partner with Malian and African institutions to carry out iterative research and strengthen local capacity. Innovation Labs currently operating in Mali include: Horticulture; Legume Systems Research; Markets, Risk, and Resilience; Peanut; Small-Scale Irrigation; and Soybean. The Innovation Lab for Food Security Policy Research, Capacity, and Influence, as well as the Innovation Lab for Current and Emerging Threats to Crops, intend to start activities in Mali in the near future.

The Innovation Labs emphasize strengthening the capacity of Malian research institutions by training and dissemination of best practices, which are then able to carry forward the programs and interventions. For example, the previous activities of the Sorghum Millet Innovation Lab are continuing through the work of local institutions such as ICRISAT and IER. Other USAID central mechanisms, such as Partnership for Inclusive Ag Transformation in Africa (PIATA) and Partnership for Ag Seed Technology Transformation in Africa provide similar support.

The local private sector plays a key role in achieving development objectives that are aligned with their business propositions across the agricultural value chains, fertilizer, and financing. Beyond supporting these organizations, USAID frequently convenes private sector actors to understand current context. Partners and frequent collaborators include, but are not limited to, Orange, Syngenta, Toguna Industries, Elephant Vert, Baobab, Kafo Jiginew, Soro Yiriwaso, Zabbaan, myAgro, and SIGEC.

Cooperation among the GOM, development partners, NGOs, agricultural technical services, private sector, and civil society must be strengthened to leverage the latent potential of Malian agriculture. USAID and the GOM facilitate this cooperation via the Peace and Security Working Group and the Health Dialogue Group, as well as the Irrigation Dialogue Group and its WASH subgroup. USAID will continue to participate in regular donor meetings and in thematic group discussions with all stakeholders on the economy and inclusive development in Mali.

Section B: Targeting

B.1 Map of Zone of Influence

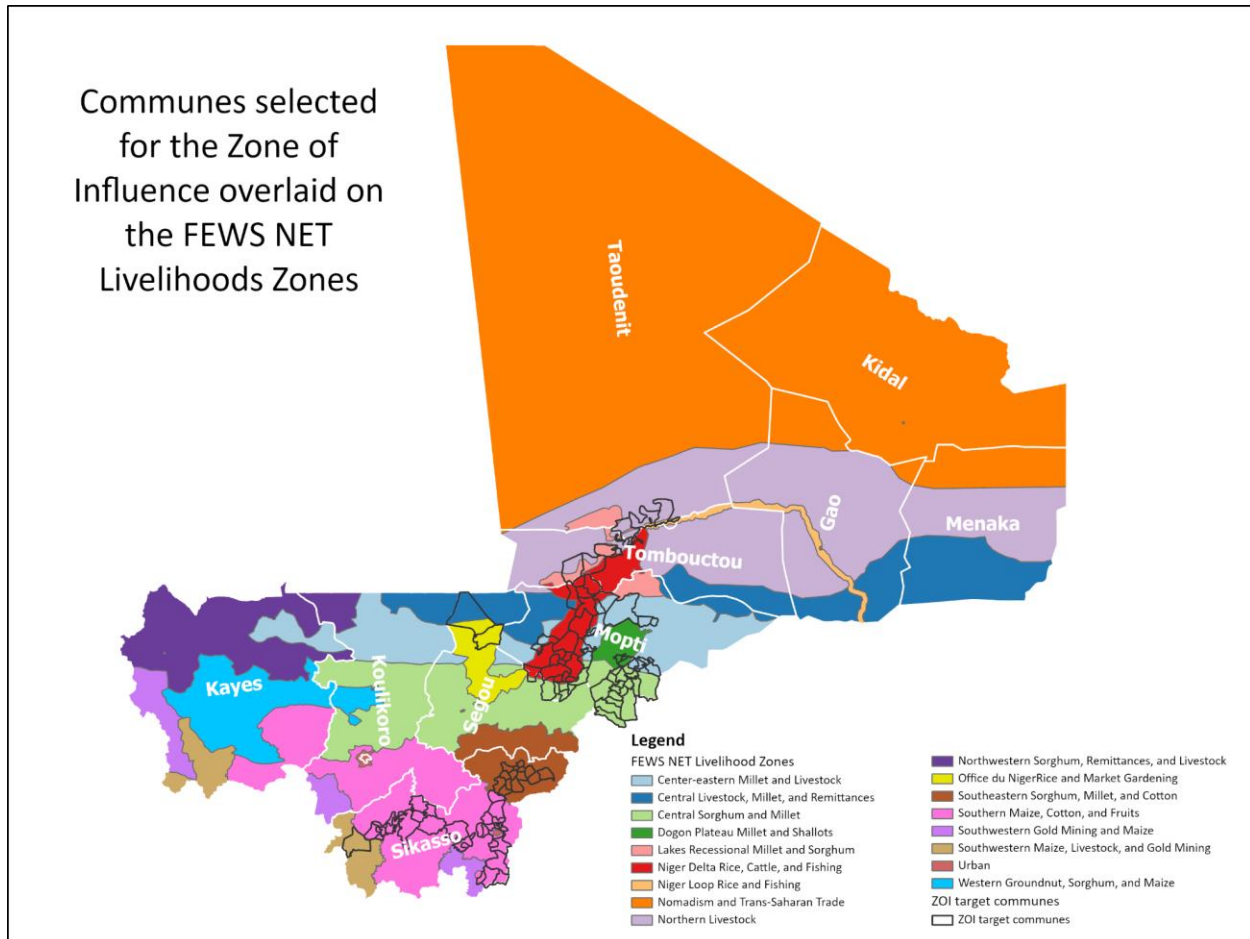


Figure I. USAID Livelihood Zones within the ZOI

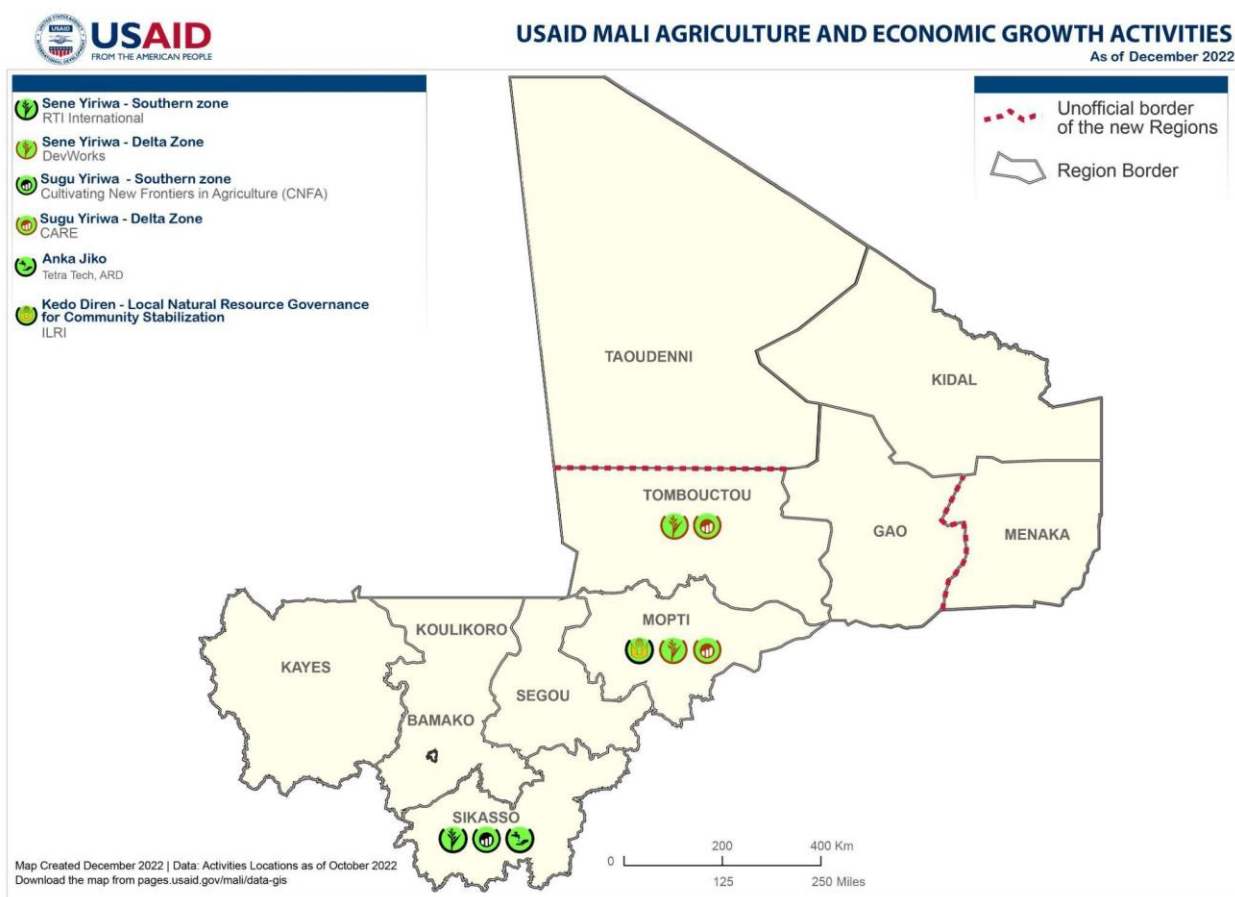


Figure 2. USAID AEG’s activities within the ZOI

B.2 Description of Zone of Influence

General description of target regions

The Zone of Influence (Zoi), depicted in Figures 1 and 2 above, will guide where the United States Government (USG) targets Feed the Future investments from 2023 to 2027. The ZOI is identical to the Zoi used for the previous 2018 Country Strategy and is very similar to the Zoi that was originally chosen in 2011, with the main difference being that all localities in Segou were removed from the Zoi in 2018. Owing to changes in administrative boundaries (particularly subdivision of regions), the present ZOI outlined here contains 125 communes that are located within 18 cercles, which are located in 7 regions: (Bandagara, Bougouni, Douentza, Koutiala, Mopti, Sikasso, and Tombouctou.)

The regions, cercles and communes targeted by the GFSS overlap with the GOM’s priority list of vulnerable communes. According to the GOM’s 2020 report on poverty, Sikasso, Mopti, and Ségou have the highest rates of poverty, and Tombouctou is among the second highest tier of poverty. The report observes that “paradoxically, poverty is more present in regions with strong agricultural potential” (INSTAT, 2020). USAID’s food-security programming has the opportunity to combat poverty via agriculture-led growth that leverages the strong production potential in the ZOI. Consequently, USAID programming must adapt to the unique livelihoods and agro-ecological challenges in each of these zones. For example, roughly a third of Mali’s cereal production occurs in Sikasso because of its higher levels of rainfall and more fertile soils, yet malnutrition remains persistently high in the region (Cooper et. Al.,

2016). Existing USAID programming in Sikasso already emphasizes food security and nutrition as a result. In the northern zones where conflict and droughts have been the worst, and livelihood diversification has been more difficult, USAID programming focuses on resilience. The GFSS strategy for the next five years builds off these location-specific strategies, programmatic successes, and lessons learned.

As noted above, the original target regions for GFSS investment (Tombouctou, Mopti, Segou and Sikasso) were selected in 2011. Working with the GOM and donor organizations, these four regions were prioritized using the following criteria: economic benefits for smallholders, total number of beneficiaries, incidence of poverty, percentage of stunting / wasting, and USAID/Mali impact potential. Overall, Tombouctou and Mopti were selected because they were a nexus of climatic, livelihood, and social instability, while Sikasso and Segou were selected because of their high agricultural potential. Overall, the justification for this selection has not changed. Conflict, malnutrition, and poverty remain serious problems in Tombouctou and Mopti. Malnutrition rates remain persistently high in Sikasso, and the conflict is spreading southward from Tombouctou and Mopti, threatening to engulf Sikasso as well. Sikasso produces a surplus of food while Mopti and Tombouctou are food deficit zones. Investments in these areas have the greatest potential to raise smallholder incomes, reduce poverty, combat malnutrition, and reinforce Mali's self-sufficiency.

Sikasso was selected because it has a persistently high percentage of stunting, a poverty rate of 25 percent (World Bank, 2023d), it is the most populous region, and it the most agriculturally productive region – large amounts of cotton, corn, rice, millet, sorghum, and livestock are produced and processed in the area.

Tombouctou was selected because it has very high rates of stunting and wasting, is a key political region, and is an important point of origin for migrating cattle. Inland lakes enable Tombouctou residents to produce large amounts of rice and livestock, and the development of water access points and improved pasture lands reinforces the mobility and resilience of transhumant pastoralists. Tombouctou's inclusion in USAID's ZOI aims to reduce perceived inequalities by integrating Tombouctou's geographically isolated residents into Mali's larger economy through trade and investment linkages.

Mopti was selected because it is one of the poorest regions in Mali with a poverty rate of 24 percent– and continues to be so (World Bank, 2023d), and it has very high levels of stunting and anemia. Mopti is also the most significant livestock producing region with large amounts of high-quality forage (bourgou) produced in the inland delta.

Two Communes in the irrigated area of Segou were selected because of its high malnutrition rates despite relatively high agricultural yields. In this zone, USAID/Mali focused on rice marketing activities and the institutional sustainability of water management boards and producer organizations. USAID programs leveraged the lessons learned from MCC's previous work in the area on land administration systems. Owing to the completion of the MCC compact, USAID/Mali discontinued programming in Segou in 2018; however, the Mission continued monitoring activities through local entities until 2021.

Specific cercles of focus

The administration of Mali is currently divided into 19 regions and one capital district (Bamako). The regions are subdivided into 49 cercles and 819 communes. Within the present 7 target regions, USAID/Mali selected the target cercles based on (1) humanitarian need, (2) security considerations, (3) malnutrition rates, (4) opportunities to leverage latent agricultural potential, (5) the opportunity to apply

lessons learned and successes of past USAID interventions in the target areas, and (6) opportunities for layering with the GOM, international partners, and other USAID programs (Resilience, Water for the World, and GHSA). USAID/Mali selected the areas of highest agricultural potential via proxies that considered irrigable hectares, livestock populations, and the Communes that the GOM identified for targeted agricultural programming. Layering Feed the Future investments with GOM priorities and USAID's existing Health, Education and resilience programs has unlocked crucial synergies within USAID's development and humanitarian assistance portfolio in Mali. For example, USAID's FtF and GHI interventions overlap to improve nutrition and reduce child mortality among vulnerable populations in Mopti and Tombouctou via the synergy produced from increased food availability and high quality health care.

The administrative cercles targeted in this GFSS span a number of diverse livelihood zones. They include the Northern Livestock zone in the arid north, the Niger Delta and Recessional Lakes zones in the inland delta, the Center-Eastern Millet and Livestock zone, the Central Livestock, Millet, and Remittances, the rocky Dogon Plateau in central Mali, and the Southeastern Sorghum, Millet and Cotton and the Southern Maize and Cotton zones in southern Mali (FEWSNET, 2015). Table I shows how these livelihood zones intersect with the ZOI target regions, population levels, and malnutrition rates (via the proxy of wasting and stunting).

Table I. GFSS Targeted ZOI

Region	Wasting Rates (%) (INSTAT, 2022)	Stunting Rates (%) (INSTA T, 2022)	FEWSNET Livelihood Zone	Cercle	Communes	Population - 2018 Estimates (OCHA, 2023)	
Tombouctou	14.0	14.3	Northern Livestock zone	Tombouctou	Alafia, Bourem-Inaly, Tombouctou-Commune	97,594	
			Northern Livestock zone, Recessional Lakes zone	Goundam	Douekire, Kaneye, Tonka	90,842	
			Niger Delta zone, Recessional Lakes zone	Niafunké	Soboundou, Soumpi	70,714	
			Niger Delta zone	Dire	Arham, Bourem Sidi Amar, Tindirma, Tinguereguif	25,578	
Mopti	11.5	26.0		Ténénkou	Diafarabe, Diondiori, OURO ARDO, OURO GUIRE, Sougoulbe, Tenenkou, Togoro Kotia	85,764	
				Youwarou	BIMBERE TAMA, Deboye, Dirma, Dongo, N'Dodjiga, Youwarou,	108,917	
				Djénné	Dandougou Fakala, Djenne, Fakala, Femaye, Kewa, Madiama, Nema-Badenyakafo, Ouro Ali, Togue Mourari, NIAN SANARIE	230,136	

Region	Wasting Rates (%) (INSTAT, 2022)	Stunting Rates (%) (INSTAT, 2022)	FEWSNET Livelihood Zone	Cercle	Communes	Population - 2018 Estimates (OCHA, 2023)
			Center-Eastern Millet and Livestock zone	Mopti	BASSIROU, Dialloubé, Konna, Korombana, Koubaye, Kounari, Ouroubé Doudde, Sio, Socoura, Soye	244,794
Douentza			Center-Eastern Millet and Livestock zone, Recessional Lakes zone, Remittances zone	Douentza	Dangol-Bore, Douentza, Koubewel Koundia	78,543
			Dogon Plateau zone	Bandiagara	Dandoli, Dourou, DIAMNATI, DOUCOMBO, LOWOL GUEOU, PIGNARI, PIGNARI BANA	35,871
Bandiagara				Bankass	Bankass, Baye, Diallassagou, Dimbal Habbe, Kani-Bonzoni, Koulogon Habe, Lessagou Habe, Ouonkoro, Segue, Sokoura, Soubala, Tori	326,346
			Center-Eastern Millet and Livestock zone	Koro	Dioungani, Madougou, Yoro Barapiireli, Bondo, Dougoutene I, Dougoutene II, Koporo Pen, Koporokendie Na, Koro, Pel Maoude, Youdiou	252,971
Koutiala						
			Millet and Cotton zone	Koutiala	Kapala, Kolonigüe, Koutiala Commune, Logouana, Nafanga, N'Goutjina, Sincina, Sinkolo, Sorobasso, Yognogo, Zangasso, Zebala	355,215
	5.6	23.4		Yorosso	Karangana, Yorosso	48,840
Sikasso				Sikasso	Diomatene, Fama, Farakala, Finkolo Ganadougou, Gongasso, Kaboila, Kafouziela, Kapala, Klela, Kouoro,	537,391

Region	Wasting Rates (%) (INSTAT, 2022)	Stunting Rates (%) (INSTA T, 2022)	FEWSNET Livelihood Zone	Cercle	Communes	Population - 2018 Estimates (OCHA, 2023)
					Natien, Niena, N'Tjikouna, Pimperna, Sikasso Commune, Zanferebougou, Zangaradougou, Zaniena	
			Kadiolo	Kadiolo, Loulouni, Zegoua	155,571	
Bougouni			Southern Maize and Cotton zone	Bougouni	Bougouni, Debelin, Domba, Faradieles, Faragouaran, Kokele, Koumantou, Kouroulamini, Sanso, Zantiebougou	263,038
				Yanfolila	Wassoulou-Balle	63,422
Total				18	125	3,155,835

ML02 Northern Livestock (Tombouctou) – Annual rainfall is less than 200mm per year in this zone. Transhumant pastoralism is the dominant rural livelihood. Mobility is the key to livestock production and resilience in Northern and Central Mali because pastoral resources (pasture and seasonal lakes) are spatially and temporally dispersed. However, pastoralists face elevated risks of violence and theft when they attempt to herd their cattle outside of their village. The conflict inhibits pastoralists' resilience and production (GI, 2023). The poorest households produce small quantities of sorghum in recessionary lakes. The lack of livelihood diversity in this zone makes the rural population particularly vulnerable to shocks and stresses (FEWSNET, 2010).

MLI3 Center-Eastern Millet and Livestock (Mopti) – Annual rainfall is 300-500mm in this zone. Rural households are able to grow rainfed millet, sorghum, cowpea, and short-cycle peanuts. Many villages have community gardens where women produce vegetables in the dry season. Transhumant livestock production is also a major contributor to rural livelihoods, although the conflict has constrained livestock mobility and production. Rural households in this zone are typically able to produce enough food for only half the year, making MLI3 a food deficit zone. Households struggle to overcome this food deficit via transhumant livestock production, migration and remittances, and small-scale entrepreneurial activities. Poor households also collect forest products (tamarinds, jujube, baobab fruits and leaves, wild dates, and gum arabic) for consumption and sale.

ML05 Dogon Plateau Millet and Shallots (Mopti) – Annual rainfall is 400-600mm in this zone. The rocky terrain on the plateau creates a land constraint; as a result, farmers are able to grow fewer cereals, and the zone is a net importer of grains. Some households intercrop cowpea and groundnuts in their millet fields. The rocky terrain also creates a high water table, enabling households to produce more irrigated vegetables (particularly onions and shallots) in the off-season. Market gardening is a major source of livelihoods in this zone. Livestock production is less common in this zone with poorer households often not having any livestock. The collection and sale of forest products help households in this zone overcome food deficits.

ML04 Central Livestock, Millet, and Remittances (Mopti) – With annual precipitation of 300-500mm, agricultural production in this zone is limited to drought resistant crops like millet, sorghum, cowpea, groundnut, and small amounts of maize. In addition to crop production, livestock production (cattle and small ruminants) is also a major source of income for smallholders in this zone. Villages often have market gardens where women tend to grow onions, shallots, and garlic. Rural populations also collect forest products (baobab, gum arabic, Ziziphus Jujuba products) to buttress household incomes and diets.

MLI4 Lakes Recessional Millet and Sorghum (Mopti) – Agropastoralists in this zone are able to farm millet, sorghum, maize, and rice in the dry season because of the irrigation capacity of recessional lakes. They predominantly farm rice in the rainy season. Droughts and floods in this zone limit predictably strong yields. Household yields typically produce enough food for 6-9 months of their annual consumption needs (FEWSNET, 2015). These households participate in transhumant livestock production to compensate for food deficits. However, the conflict has threatened livestock production by constraining herd movements in northern Mali (SAP, 2023).

ML06 Niger Delta Rice Cattle Fishing (Mopti) – The inland Niger delta floods 20,000 square kilometers, enabling agropastoralists in this zone to produce a surplus of rice and livestock. They irrigate their rice fields via dykes that control the level of floodwaters in their fields. Thus, their production is highly vulnerable to rainfall variability. Households produce sorghum, shallots, tomatoes, lettuce, and bourgou (a highly nutritious feed that is crucial to livestock production throughout the region) in the recessional floodwaters. This zone is also home to semi-nomadic fishing communities, the Bozo, who migrate along the river in search of fish in March and April. Access to markets and healthcare is more difficult in this zone because of seasonal flooding. Malaria is also more problematic because of the standing waters.

ML07 Office du Niger, Rice, and Market Gardening (Segou) – This zone is fully irrigated by the “Office du Niger” enabling residents to grow rice and market vegetables – mainly shallots and tomatoes, with cabbages and okra – in the offseason. Wealthier farmers grow more rice because they can afford inputs, while poorer farmers (predominantly women) grow more vegetables. The production in this zone is augmented by fertile soils (mostly sandy loams and clay). However, the high agricultural productivity leads to greater conflict over land among farmers and between farmers and herders.

MLI0 Southeastern Sorghum, Millet, and Cotton (Sikasso) – This zone has a high average annual rainfall, ranging from 700 to 1100mm, enabling rural households to farm sorghum, millet, maize, groundnuts, cowpea, and cotton. This zone benefits from more fertile (less sandy) soils, produces a surplus of food, and has excellent access to markets. However, the poorest households are unable to produce enough food for their annual consumption needs and malnutrition rates are high. Households in this zone raise livestock (mostly goats) as a secondary activity and only herd them short distances from their homebase. Livestock is an indicator of wealth, with poorer households owning significantly fewer animals.

MLI1 Southeastern Maize, Cotton, and Fruits (Sikasso) – Annual precipitation of between 1000-1300mm allows for two rainfed production cycles in the rainy season. The soils in MLI1 are also more fertile (less sandy) than other zones. Due to higher rainfall and better soils, ML enjoys the highest agricultural production in Mali. Agropastoralists in MLI1 grow a wide diversity of crops, including maize, rice, groundnuts, cowpea, cotton, sweet potatoes, sesame, sweet peas, potatoes, lettuce, tomatoes, okra and cabbage. The surplus of maize produced in this zone is marketed throughout Mali. However, malnutrition rates remain persistently high in this zone (FEWSNET, 2015).

Alignment with other USAID priority zones

The targeted ZOI for this GFSS overlaps with USAID’s Resilience Food Security Activities (RFSA) and USAID’s Resilience Focus Zone (RFZ) (USAID, 2016). The GFSS overlaps with the RFSA in the Communes of Koro, Douentza, and Tombouctou (USAID, 2022). The RFZ in Mali focuses on the northern Mopti region, where the convergence of political instability, conflict, and climate variability have generated a steady stream of crises for rural households and communities. GFSS investment in the RFZ will aim to reduce the negative impact of shocks and stresses in the RFZ. Furthermore, northern Mopti includes the Niger Delta zone (ML06) and the Recessional Lake zone (MLI4), two agro-ecological

zones with the potential for high agricultural production.) Overlapping the GFSS ZOI with the RFZ is especially useful where development potential exists alongside high levels of persistent humanitarian need, thus facilitating the layering of development and humanitarian assistance. This ZOI is a continuation of the previous ZOI, articulated in the 2018-2023 GFSS. The GFSS will continue to focus on these zones precisely because the highest levels of poverty and the greatest potential for agricultural production both occur in these zones. Targeted USAID programming can address rural poverty in these zones by dilating the bottlenecks in smallholder production.

Justification for maintaining the current ZOI

As noted above, this Country Strategy will maintain the current ZOI. All seven regions have high poverty and malnutrition rates and are affected by or vulnerable to conflict. Yet potential for agricultural productivity and far-reaching impact is also high. In addition, owing to the highly volatile security situation in Mali, USAID programs contend with a strained capacity to access, implement, and monitor food security interventions. In the ZOI regions, USAID program staff and implementing partners have over time cultivated solid and long-standing relationships with local governments, communities, and civil society. This has not only bolstered results; it has also helped reduce security risks and enabled more stable operations. These relationships are crucial for successful implementation and achievement and constitute another compelling reason to maintain focus on the present ZOI.

On the other hand, the situation throughout Mali remains fluid and unpredictable. Continued conflict has been heaviest in the northern, central, and Niger Delta zones; however, the southern zones (Bougouni, Koutiala, Sikasso) have also recently experienced a rise in banditry and other violence. Accordingly, USAID/Mali must be prepared for scenarios where we must adjust the specific geographic areas in which we work. For this reason, Feed the Future programming must maintain a flexible approach to the ZOI.

Section C: Results Framework

Mali Global Food Security Strategy Results Framework

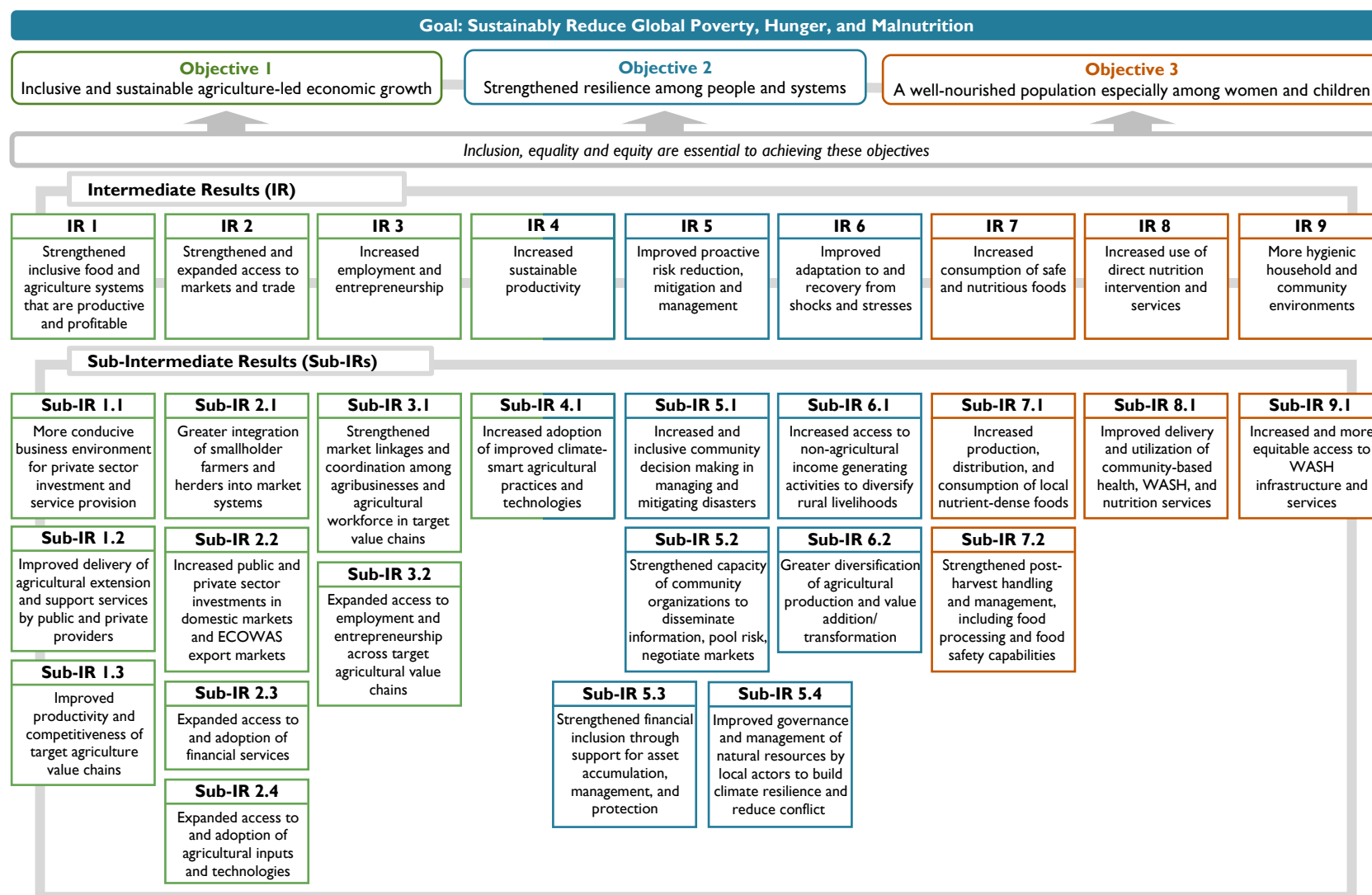


Figure 3. GFSS Mali Results Framework

Theory of Change

The GFSS Mali Results Framework represents the development hypothesis for *advancing* the overall GFSS Goal to “Sustainably reduce global hunger, nutrition, and poverty” by *pursuing* the three GFSS Objectives, *achieving* the nine GFSS Intermediate Results (IRs), and *incorporating* relevant Cross-Cutting Intermediate Results (CCIRs). The Results Framework proposes 20 Sub-Intermediate Results (Sub-IRs) across the 9 IRs. These Sub-IRs reflect the “impact pathways” under which USAID/Mali and interagency partners will achieve results under Feed the Future. The achievement and progression of results (from Sub-IRs to IRs to Objectives to the Goal) will require addressing the uncertain and complex risks associated with climate change, socio-political instability, and conflict that constrain service provision by the state, asset accumulation for households, and development gains in Mali. The Results Framework will convene development partners from across the public sector, private sector, and civil society and leverage complementary food system investments from the GOM, USG, bilateral and multilateral donors, and the private sector. These partnerships will build upon local capacities and actors to support community-driven development and the inclusion of women, youth, and other marginalized groups in Mali. Engaging these marginalized groups in the design and delivery of key services, including extension, meteorological, financial, nutrition, and health services, will be essential in tackling persistent malnutrition in the population. Vulnerable households must be able to produce, earn, purchase, and safely consume food to meet their nutritional needs. Safeguarding these dimensions of food security will require a multi-sectoral approach that supports the delivery of goods and services. Under the current political and security context, this approach must strengthen the capacity of markets and community-based groups to deliver interventions.

Flexible Approaches in a Fluid Context

The Mali GFSS can best adapt and respond to emerging threats by emphasizing flexibility in planning and implementation. Previous approaches to reducing hunger, malnutrition, and hunger in Mali under Feed the Future included: building peace; reestablishing the state authority (Rule of Law) and strengthening security; good governance for inclusive and improved service delivery; catalyzing investments in agribusiness and farming; access to markets and availability of financing; coherent and harmonized policies; effective management of natural resources, ecosystems, and disaster prevention (FTF, 2017). This next phase of Feed the Future represents a continuation of many of these approaches, but under the context of an unpredictable and deteriorating security situation. Feed the Future programming must incorporate contingency plans for how to achieve results if peace, state authority, and good governance are *not* reestablished in the next five years.

Mali’s immediate food security and political landscape is too unpredictable to advance overly prescriptive strategies. USAID/Mali has developed tools to maintain flexibility and achieve results in the face of political and security risks. Since 2020, USAID/Mali has included crisis modifiers into all new awards to enable greater agility to respond to crises and shocks. USAID/Mali programs optimize proactive adjustments by ‘flexing’ development activities. This approach, called Shock Responsive Programming, enables rapid reprogramming of development resources to complement humanitarian assistance in response to an emerging crisis. Feed the Future programming in Mali also flexibly responds to development opportunities and the shifting operating environment. This calls for a robust and adaptive MEL approach that aligns with the Results Framework to ensure that programming still achieves CDCS objectives within this fluid context.

The Results Framework emphasizes flexibility in response to the unpredictable social context. However, flexibility has the additional advantage of creating more space for the USAID Mission to respond adaptively to grassroots pushes for development as part of USAID’s localization strategy (USAID, 2023).

Rationale for impact pathways

GFSS Objective I: Inclusive and sustainable agricultural-led economic growth – The GFSS Mali Results Framework proposes to pursue GFSS Objective I by working across all three of its associated IRs to strengthen the role of agriculture as a vehicle for economic growth, poverty reduction, and food security in Mali.

- **IR 1: Strengthened inclusive agriculture systems that are productive and profitable** – The Results Framework seeks to address system-level constraints and opportunities in the agricultural sector to ensure the enabling environment supports investment, entrepreneurship, and the participation of smallholders, women, and youth. We propose to address this IR through the following four Sub-IRs:
 - Sub-IR 1.1: More conducive business environment for private sector investment and service provision (CC IR 1) – Establishing a business enabling environment via market-based reforms is a crucial prerequisite for a dynamic private sector. The private sector plays a crucial role in expanding income-generating opportunities, bringing more workers into the formal sector, and delivering critical inputs and services. USAID programs will foster a level playing field where businesses can innovate and compete, value chain linkages are strengthened, and domestic industries can exercise their comparative advantage in key export markets (e.g., livestock, cotton, shea, sesame, etc.).
 - Sub-IR 1.2: Improved delivery of agricultural extension and support services by public and private providers (CC IR 4, 7, 8) – Extension services are currently concentrated around large farms and cotton producers. In the public sector, reforms to the fertilizer subsidy program for cotton hold the potential for allocating resources to other important commercial and food security crops. In the private sector, decentralized investments are needed to ensure that input suppliers serve both commercial and subsistence producers. These public and private sector reforms must be accompanied by community mobilization to ensure that inputs and climate information services can be scaled through Producer Organizations (POs) to reach underserved populations.
 - Sub-IR 1.3: Improved productivity and competitiveness of target agricultural and livestock value chains (CC IR 8) – Increasing farmers' access to financial and extension services while simultaneously investing in agricultural and processing equipment and strengthening market linkages will pave the way for more productive and profitable value chains. USAID/Mali has expanded its focus of target value chains to include high-value crops, nutrient-dense crops, and livestock that are characteristic of the diverse, mixed production systems encountered in rural Mali. Focusing on these value chains also seeks to elevate the roles of women in agriculture. Feed the Future programming will address bottlenecks and leverage points in value chains, opportunistically responding to a fluid market and security context.
- **IR 2: Strengthened and expanded access to markets** – USAID/Mali will expand access to markets through investments in information systems and rural infrastructure that decentralize goods and services. Further investments will strengthen the participation of smallholders and herders in markets. More broadly, expanded access to markets also has direct benefits for the HDP nexus, as smallholders who have access to inputs are able to become more self-sufficient, no longer need to receive humanitarian assistance, thereby reducing the overall humanitarian need in Mali. Feed the Future programs will address this IR through the following four Sub-IRs:

- **Sub-IR 2.1: Greater integration of smallholder farmers and herders into market systems (CC IR 2, 3, 8)** – Smallholder farmers can meet market demands for large-quantity purchases of high-quality produce when they can access financial and extension services and work together through their village PO to aggregate production and link to market actors, like they currently do with cotton. Pastoralists’ market integration can be improved by strengthening the capacity of decentralized market actors who leverage longstanding networks of trust to buy, sell, and transport livestock on the hoof through zones of political insecurity.
- **Sub-IR 2.2: Increased public and private sector investments in domestic markets and export markets in the “ECOWAS” free trade zone (CC IR 1, 7, 8, 9)** – Promoting public-private partnerships to develop market infrastructure and increase access to financial services, coupled with business-friendly regulatory policies can strengthen domestic and export markets. When domestic industries successfully leverage natural comparative advantages in key sectors alongside the benefits of the ECOWAS free trade zone, then Mali can increase national export revenue and strengthen economic ties/interdependencies among ECOWAS member countries.
- **Sub-IR 2.3: Expanded access to and adoption of financial services, including savings, credit, and insurance (CC IR 2, 3, 8, 10)** – By strengthening POs capacity to act as intermediaries with microfinance institutions (MFIs) and commercial banks, developing credit guarantee programs, and exploring collateral alternatives, Feed the Future can reduce financial risks for all actors and thereby increase farmers’ access to financial services. Feed the Future programming will also promote decentralized financial services that can reach isolated farmers in conflict zones, such as improved digital financial services, gender-inclusive financial products.
- **Sub-IR 2.4: Expanded access to and adoption of agricultural inputs and technologies, including improved seeds, fertilizer (for non-cotton crops), mechanization, and irrigation by women, youth, and other marginalized groups (CC IR 2, 3, 4, 5, 6, 8)** – Farmers are eager to adopt labor-saving mechanization, irrigation technologies that enable off-season production, fertilizers, and short-cycle crop varieties developed by ICRISAT. However, adoption is constrained by access, affordability, and knowledge barriers. Investments in domestic industries and market infrastructure can address supply chain bottlenecks; while local partnerships can support “last-mile delivery,” for example, by promoting bulk purchases among POs and supporting farmer associations to multiply certified seed. Financial services and targeted subsidies make improved inputs and technologies more affordable for farmers. Regarding seeds, USAID will likewise engage public and private stakeholders to advocate for increased resources for research, development, certification, and quality assurance; expand subsidies and incentives for improved seed varieties such as drought-tolerant seeds; scale up capacity-building and extension services for farmers; establish community seed banks; and integrate use of improved seeds with crop insurance programs.
- **IR 3: Increased employment and entrepreneurship** – USAID/Mali will deploy a holistic approach that includes skills training, financial inclusion, and investments in value chain infrastructure. We propose to address this IR through the following two Sub-IRs:
 - **Sub-IR 3.1: Strengthened market linkages and coordination among agribusinesses and agricultural workforce in target value chains (CC IR 8)** –

Training farmers to meet quality standards, supporting input supply chains to reach remote farmers, and facilitating collective actions via POs to support subsistence farmers to integrate production into profitable agricultural value chains. Promoting contract farming?

- **Sub-IR 3.2: Expanded access to employment and entrepreneurship for youth women, and other marginalized groups across target agricultural value chains (CC IR 3, 8, 10)** – Vocational skills training programs for youth coupled with increased access to financial services and new production and processing technologies can boost youth's participation in agricultural value chains.

GFSS Objective 2: Strengthened resilience among people and systems – The GFSS Mali Results Framework will pursue Objective 2 by working across all three of its associated IRs to increase resilience to a range of shocks and stresses that threaten development gains and stability.

- **IR 4: Increased sustainable productivity, particularly through climate-smart approaches** – Farmers can enhance their resilience, productivity, and sustainability by adopting CSA practices and technologies. Feed the Future programs will address this IR through the following Sub-IR:
 - **Sub-IR 4.1: Increased adoption of improved climate-smart agricultural practices and technologies (CC IR 4, 5, 6)** – Improving access to climate information services and training farmers on the benefits of CSA using on-farm demonstrations to increase adoption of CSA approaches. New practices and technologies will be prioritized that (1) enhance existing production systems, (2) are not prohibitively laborious, and (3) do not displace the roles of women or smallholders. Training and demonstrations will be accompanied by interventions to increase access to inputs, equipment, and financial services under other Sub-IRs to facilitate widespread adoption of CSA.
- **IR 5: Improved proactive risk reduction, mitigation and management** – Enhancing community services, women's organizations, financial inclusion, and natural resource management are central to the GFSS strategy for addressing risk. Feed the Future programming will work across all four Sub IRs to implement these mutually reinforcing components.
 - **Sub-IR 5.1: Increased inclusive and community decision making in management and mitigating disasters (CC IR 2, 5, 7, 8, 9)** – Community-based planning in disaster risk reduction and responses, localized early warning systems, community-based health workers, and shared asset reserves will contribute to robust community systems that can absorb and recover from shocks and stresses. In order to serve communities, systems must include marginalized groups in decision-making and be accountable to local populations.
 - **Sub-IR 5.2: Strengthened local capacity of women's, youth's and marginalized groups' producer organizations (WPOs) to disseminate information, pool risk, and negotiate markets (CC IR 2, 4, 8, 9)** – WPOs play key roles in managing risk for members and communities. These roles can be strengthened by expanding access to agricultural extension services, providing financial support for Village Savings and Loans (VSL) cooperatives, facilitating market access via linkages with value chain actors, and encouraging the formation of Commune-level

networks of WPOs to share knowledge, build economies of scale, and advocate for shared priorities for rural women.

- **Sub-IR 5.3: Strengthened financial inclusion for smallholders and women, youth, and marginalized groups through support for asset accumulation, management, and protection (CC IR 2, 4, 8, 9)** – Participation in networks of mutual aid is the most reliable safety net for rural Malians. Building up community-based assets provides a reliable buffer against shocks and stresses for the most vulnerable households. VSL cooperatives already exist in Malian villages independent of development interventions, but they lack the capital to scale up member loans to support greater investment and asset accumulation. Capitalizing these groups builds on durable village-level financial mechanisms, greatly expanding access to financial services for cooperative members. For example, USAID's LICEM project (2009-2013) created and capitalized village-level fertilizer credit unions in Mopti that continue to function today.
- **Sub-IR 5.4: Improved governance and management of natural resources by local authorities and actors to build climate resilience and reduce conflict** – Feed the Future programming will strengthen: community-based natural resource management, coordination among overlapping land-use authorities (traditional leaders, *Eaux et Forêts*, regional authorities, national government ministries), early warning systems, and local conflict resolution mechanisms. "Bottom-up" community-based natural resource management that engages local civil society enhances resilience, especially in conflict zones that government actors and NGOs cannot easily access.
- **IR 6: Improved adaptation to and recovery from shocks and stresses** – Diverse systems are more resilient. Farmers and pastoralists that diversify their agricultural production and livelihoods can more readily adapt to and recover from threats to specific sources of income or nutrition.
 - **Sub-IR 6.1: Increased access to non-agricultural income generating activities to diversify rural livelihoods (CC IR 3, 4)** – Feed the Future programming will expand non-agricultural livelihood opportunities by facilitating access to credit, providing workforce development (including information on new opportunities and market trends), providing business incubation services, fostering market linkages, supporting collectivized community-based enterprises, and integrating income-generating activities into community development projects.
 - **Sub-IR 6.2: Greater diversification of production and value addition/transformation for agricultural products (CC IR 4, 5)** – Mixed production systems buffer producers from market disruptions and abiotic and biotic threats. Integrated systems are also central to resilient CSA approaches. Examples of diverse agricultural activities that are relevant to farmers and entrepreneurs in the ZOI include: aquaculture, rice-fish polyculture, agroforestry, apiculture, and more diversified crop production. Interventions will enable farmers to safely adopt more diverse agricultural livelihoods by providing start-up kits and facilitating access to credit and training.

GFSS Objective 3: A well-nourished population, especially among women and children – Multi-sectoral programming with interagency partners will address the underlying drivers of malnutrition via an integrated, comprehensive approach of agricultural diversification, post-harvest

management, nutrition education, supplementary feeding programs, micronutrient fortification, promotion of exclusive breastfeeding, improved water and sanitation, school feeding programs, and women's empowerment. The GFSS Mali Results Framework will pursue Objective 3 by working across all three of its associated IRs.

- **IR 7: Increased consumption of nutritious and safe diets** – Promoting the production and consumption of fortified foods, dietary diversification, postharvest conservation, and food safety will increase nutrition among target populations. The GFSS will promote behavior change activities to encourage households to consume more nutritious meals, including innovative programming such as local competitions for the best recipe using local nutritious foods.
 - **Sub-IR 7.1: Increased production, distribution, and consumption of local nutrient-dense foods, including fruits, vegetables, and animal-source foods (CC IR 5, 6, 8)**– Diversifying agricultural production, supporting women and youth community gardens, increasing poultry and small ruminant production, strengthening value chains (Emphasizing food processing), and promoting socio behavioral changes (SBC), nutrition awareness via program activities and local media outlets will increase production, distribution, availability and consumption of local nutrient-dense foods. This builds on ongoing USAID-funded community and household gardening aimed at increasing consumption of diversified and quality nutrient rich foods (USAID, 2021b).
 - **Sub-IR 7.2: Strengthened post-harvest handling and management, including food processing and food safety capabilities (CC IR 7, 8)** – Supporting resource-intensive postharvest conservation (e.g., cold chains) and appropriate postharvest conservation practices (e.g., decreasing exposure to field heat for freshly harvested produce) can reduce deterioration and loss of nutrient-rich high-value crops. Investments are needed both at the village-level in value-addition and food processing technologies as well as at the national-level in food processing industries. Food safety messaging and training will be incorporated into nutrition and healthcare services (Sub-IRs 8.1 and 9.2)
- **IR 8: Increased use of direct nutrition interventions and services** – Nutrition awareness campaigns, school nutrition programs, and integrating nutrition into local healthcare services will increase vulnerable Malian's knowledge and adoption of nutritious diets.
 - **Sub-IR 8.1: Improved delivery and utilization of community-based health, WASH, and nutrition services (CC IR 2, 7, 8)**– Engaging community health workers in malnutrition prevention, integrating nutrition into maternal and child health services, leveraging mobile health technologies for nutrition messaging, and equipping healthcare facilities to address malnutrition will integrate nutrition into village-level health services and increase uptake. Evidence-based hygiene behaviors will be promoted via community-based education programs, and proper food handling training, especially among food vendors in markets. FtF programming will focus on community-based service delivery models, marketing and social messaging to encourage broad utilization of health and nutrition services.
- **IR 9: More hygienic household and community environments** – Feed the Future programming will improve household hygiene and reduce environmental enteric dysfunction via market-based approaches to sanitation and service delivery (which have proven to sustainably increase sanitation facilities), community-led total sanitation (CLTS), behavior change campaigns (including hygiene awareness programs in schools).

- **Sub-IR 9.1: Increased and more equitable access to WASH infrastructure and services (CC IR 2, 6, 7, 8)**– Feed the Future programming will deploy market-based approaches and encourage community participation through CLTS, creating more safe water sources, piped water systems, and sanitation facilities in rural areas. The participatory design of WASH infrastructure and services will promote inclusive interventions that support the roles of women in family nutrition, sanitation, and health.

Alignment with Country Development Cooperation Strategy (CDCS) and other USG and country strategies

The GFSS Mali Results Framework presents an integrated, multi-sectoral strategy for sustainability reducing hunger, malnutrition, and poverty in Mali. The Results Framework aligns with and compliments USAID and the GOM's broader development strategies. USAID/Mali's CDCS and the Results Framework target resilience as a core objective. Both also share the same ZOI (Mopti, Tombouctou, and Sikasso). The nutrition-related impact pathways of the Results Framework reflect the Mission's holistic approach to nutrition described in its Multisectoral Nutrition Strategy (USAID, 2021a) and the GOM's nutrition strategy (PAMN). The WASH-related impact pathways are informed by USAID/Mali's Water for the World Country Plan (USAID, 2020) – emphasizing a market-based approach to scaling up water and sanitation service delivery and promoting hygiene behaviors through community-based education programs. The Results Framework also aligns with the GOM's development strategies (NAIP and CREDD), which advance agriculture as the engine for economic growth in Mali. These strategies and the Results Framework share a commitment to inclusive and profitable agricultural systems, increased agricultural employment and entrepreneurship, and increased access to markets.

The Mali GFSS Results Framework directly aligns with the CDCS and supports achievement of the CDCS goal of “A more stable, peaceful, and resilient Mali leading its own development” (USAID, 2022: 7). USAID/Mali seeks to build upon previous development gains in basic education, health and agriculture while addressing deficits in governance, peacebuilding, and basic needs. Undergirding this strategy are efforts to build resilience against shocks and stresses associated with conflict, climate change, food insecurity, and natural resource management. This necessitates a multi-sectoral approach that integrates development and humanitarian assistance to secure short and longer-term progress. The impact pathways presented in the GFSS Results Framework will advance the two Development Objectives (DO) and Special Objective (SpO) of the CDCS in key areas, including:

- *DO1: Improved governance for stronger democratic institutions* by fostering a more conducive enabling environment for investment and service provision (Sub-IR 1.1), strengthening the capacity of public and private providers to deliver extension (Sub-IR 1.2), financial services (Sub-IR 2.3), and inputs and technologies (Sub-IR 2.4) and improving governance of natural resources by local actors (Sub-IR 5.4);
- *DO2: Solidified and deepened development gains* by promoting inclusive and sustainable agricultural-led economic development (CDCS IR 2.2 and GFSS O2) through targeted investments in value chains (Sub-IRs 2.1, 2.2, 3.1), service providers (Sub-IRs 1.2, 2.3, 8.1), production and post-harvest capabilities (Sub-IR 4.1, 7.1, 7.2), and the overall agri-food systems (Sub-IRs 5.1, 7.1).
- *SpO: Improved outcomes across the humanitarian, development, and peace nexus* by convening interagency partners and multi-sectoral programming to strengthen the resilience of populations against climate-related risks (Sub-IRs 1.3, 4.1, 5.1, 6.1), market disruptions (Sub-IRs 3.1, 5.2, 5.3,

6.1), conflict over natural resources (Sub-IR 5.4), and health- (Sub-IRs 8.1, 9.1) and nutrition-related (Sub-IRs 7.1, 9.2) shocks and stresses.

These impact pathways align with the strategic approaches of the CDCS for community-led development, localization, and inclusion; reducing gender gaps and promoting meaningful women's participation in development; and pursuing the priorities outlined in USAID's Climate Strategy 2022-2030.

The Results Framework also aligns with other USG strategies, such as USDA's Climate Change Strategy.

Key assumptions and risks

Risks	Assumptions
Deterioration of diplomatic relations between the transitional government in Mali and USG and other donors jeopardizes coordination and joint investments in food security, nutrition, WASH, poverty reduction, and other shared priorities.	Longstanding partnerships with the GOM ensure continued coordination and investment. Increased trade and diplomacy within ECOWAS fosters regional unity and cooperation.
Increased scrutiny of NGOs and civil society by GOM constrains implementing partners from achieving activity objectives	Current FTF implementing partners are allowed to continue to operate in Mali. The impact of restrictions on certain NGOs are mitigated by engaging a broader set of civil society and local partners.
Deterioration of domestic and regional security situations restricts FTF programming and disrupts the food system. Factors include rise in extremist attacks, departure of UN peacekeeping mission, broader political instability in the Sahel, and disagreement among ECOWAS members on security issues.	Localization strategy of partnering with local authorities, private sector entities, and civil society groups supports continued programming in ZOI (even if there are temporary disruptions to access). Investments to strengthen community organizations and market systems ensure continued delivery of inputs, services, and agricultural products. The delivery of these goods and services increases social cohesion, generates social capital, and mitigates conflict.
Security situation restricts access to ZOI and jeopardizes development gains made by communities, particularly for women and youth	
Government failure to meet basic needs and demands for accountability of citizens drives social unrest and political instability.	Advocacy from the donor community, private sector, and civil society spurs reform in key policy and regulatory areas. Continued private sector investment, decentralization of services, and regional trade drives greater prosperity, which in turn fosters stability.
Political and security situation constrains reforms to the business enabling environment and depresses private sector investment, especially the expansion of financial services to underserved communities	
Climate change, compounded by current El Niño episode, produces more frequent and severe extreme weather events, which negatively impact the	Widespread adoption of CSA technologies and production risk management instruments, greater financial inclusion, and early warning systems improve mitigation, adaptation, and recovery from climate-related shocks and

Risks	Assumptions
agricultural sector and exacerbate conflict over natural resources	stresses. Households are able to build up assets and diversify livelihoods to buffer communities against negative impacts of climate change in the agricultural sector.
Mali's intention to withdraw from ECOWAS (along with Burkina Faso and Niger, the two other Sahelian State Alliance countries) and possibly to replace the CFA with a new currency could potentially disrupt trade and finance, thereby impacting economic growth.	Existing market forces, trade potential, and business relationships in the region could preserve trade and finance flows and possibly discourage adoption of a new currency.

Contribution to GFSS priorities

Mali's GFSS Results Framework addresses all five priorities outlined in the 2022-2026 GFSS:

- Equity and Inclusion** is central to the Mali GFSS Results Framework and integrated across all IRs. Given the substantial size of the youth population and the important roles Malian women play in agriculture and household nutrition, inclusive approaches will be taken to ensure women and youth have agency and access in Feed the Future interventions. This includes engaging women, youth, and community-based organizations in the design and delivery of tailored activities that address barriers to participation in agricultural value chains, financial inclusion, and access to health and nutrition services.
- An Ambitious Approach to Climate Change** will be pursued through investments to strengthen the resilience of the agri-food system, value chains, firms, and farms. Interventions to promote adoption of CSA technologies, better manage natural resources, expand weather and advisory services, access financial services, and diversify agricultural production and livelihoods will equip communities to navigate climate-related risks and sustainably intensify production systems.
- Proactively Counter the COVID-19 Pandemic's Long-Term Effects.** Efforts to improve domestic production and processing capabilities, create new market linkages, and strengthen social safety nets will support continued economic and health system recovery from the pandemic, as well as other shocks, such as disruptions to food, fertilizer, and fuel prices caused by the war in Ukraine.
- Work Across Relevant Areas of Food Systems** will ensure that multi-sectoral nutrition programming supports greater availability, accessibility, and consumption of nutritious foods in Mali. Strategic investments will strengthen targeted value chains, address high levels of malnutrition and low dietary diversity, improve the enabling environment for agricultural trade, investment, and food safety, and foster a more inclusive and resilient food system.
- Integration of Conflict Mitigation, Peacebuilding, and Social Cohesion** is crucial to the stability of Mali and success of the next phase of Feed the Future. This GFSS priority aligns closely with the CDCS Special Objective and is woven throughout the Results Framework. The proposed Sub-IRS reflect pathways for alleviating sources of conflict, improving governance and service provision, and building social capital and cohesion.

Section D: Program Components

Mali is a landlocked country mainly relying on the international market to meet its need in terms of food, fertilizers and Chemicals to ensure a good Agricultural production. The recurrent political instability and insecurity put the majority of the population having difficulties in securing a normal daily meal for their households.

D.1: Programmatic Approach

The programmatic approach proposed in this Country Strategy is multidisciplinary and integrated. It particularly emphasizes close linkages and coordination between interventions focused on production, and those focused on market access. This enables programming to create synergies and maximize results for incomes, resilience, nutrition, and natural resource management.

The four main components are:

1. Support farmer associations to aggregate production and access markets with bulk sales
2. Strengthen the capacity of community organizations and markets to deliver inclusive goods and services
3. Diversify agricultural and non-agricultural livelihoods in rural Mali
4. Improved governance and management of natural resources and water infrastructure

Several other key elements are integrated into most or all of these components, including increasing access to finance, strengthening the private sector, and community management of natural resources.

These components are mutually reinforcing. For example, when the capacity of the local private sector to provide agricultural inputs or extension services is strengthened, the ability of smallholder farmers to successfully grow their operations and connect to markets is likewise increased. When a larger number of producers can access services, the market for these services (which are provided by the private sector) correspondingly increases. Similarly, increasing production allows farmers and livestock producers to sell more surplus, raising incomes, providing opportunities to start other businesses, which then increases the diversity of employment and sources of livelihoods.

D.2: Program Component I - Support Farmer Associations to Aggregate Production and Access Markets with Bulk Sales

One of the key insights obtained from years of FTF activities in Mali is that when producers and other agricultural entrepreneurs can organize and combine their efforts, significant synergies will result. USAID/Mali therefore proposes this component to support farmers to aggregate production, thereby accessing markets with bulk sales.

Accordingly, USAID/Mali will build transformative capacity and give the opportunity to the communities to aggregate their production, in order to be able to satisfy the competitive market. The aggregation model is in line with changing supply and demand in the market. With the aggregation model, producers will jointly manage resources or access credit, inputs, information, and product markets and reduce transaction costs. The aggregation model, while strengthening the bargaining power of producer organizations, will improve access to markets, credit, technology, information and extension services.

The aggregation will rectify small farm disadvantages in market access and this model will address the market and production challenges that resulted from changing consumer requirements.

Activities will also develop warehouse receipts which are certificates of ownership that can be used as collateral for farm credit, thereby increasing access to finance. They are also tradable instruments that play a fundamental role in futures commodity markets.

Programming will also focus on interventions to ensure quality of products to increase opportunities for exporting and wider domestic sales. Accordingly, GFSS programming will explore ways to develop and strengthen Sanitary and Phytosanitary (SPS) animal and plant health plans as they directly impact the expansion of market access.

Expected outcomes include:

- Increased productivity and competitiveness of selected value chains
- Improved quality of products
- Increased market demand for selected commodities
- Improved governance of the producers organizations
- Increased quantity and quality of agricultural inputs and services.

Program Component I will contribute to the following Sub-IRs:

- Sub-IR 1.1: Aggregation will increase access to finance and reduce transaction costs.
- Sub-IR 1.2: Since most service providers concentrate on larger actors, aggregation allows smallholders better access to these services.
- Sub IR 1.3: Aggregation will increase productivity and competitiveness.
- Sub-IR 2.1: Aggregation by its nature increases the integration of smallholders into the market system.
- Sub-IR 3.1: Aggregation increases coordination within the value chains.
- Sub-IR 5.2: Aggregation will increase the collective capacity of participating farmers and communities to pool risk, share information, and negotiate markets.

This component will be implemented throughout the ZOI, and will work with smallholder farmers, livestock producers, as well as producer organizations. As with all of GFSS efforts in Mali, there will be a focus on women and youth.

Key actors and partners that will be engaged include: providers of agricultural inputs, market actors, private and public extension services, private service providers (equipment dealers, processors, animal health services, postharvest handling, etc.), Ministry of Agriculture, Ministry of Livestock and Fisheries, National Unit of Statistics, research institutions, and local and international NGOs.

D.3: Program Component 2 - Strengthen the capacity of community organizations and markets to deliver inclusive goods and services

In addition to supporting and strengthening the capacity of agricultural producers, USAID/Mali also aims to strengthen the set of companies and institutions that provide services to these smallholder growers and herders. These “services” encompass a wide range, including extension services, financial services, weather information, and business development services, but also measures like nutrition interventions, or sale of agricultural inputs such as fertilizers and seeds. Accordingly, USAID/Mali proposes this component to strengthen the capacity of community organizations to deliver inclusive goods and services, thereby increasing the numbers of farmers and producers who can participate in value chains and benefit from entrepreneurship.

To this end, interventions will provide technical assistance, research, and capacity building for a wide range of actors to enhance market systems across the Mali FTF value chains. Capacity strengthening of communities will focus on increasing access to finance to better procure inputs in agricultural production, complemented by capacity building on loan management.

To increase the quality of goods and services, programming will focus on strengthening agro-processing units’ capabilities on product nutritional composition and good hygiene practices, packaging and labeling. By enhancing markets, USAID/Mali can build the capacity and strength of the entrepreneurial skills of market actors and multi-stakeholder platforms⁴ on business plan development.

Overall, the delivery of inclusive goods and services will help the community organizations to be sustainable, USAID/Mali will use the Organizational Capacity Assessment (OCA) tool to pinpoint the registered progress and determine further capacity building needs.

Regarding fertilizers, USAID plans to continue its robust collaboration with fertilizer companies to strengthen Mali’s fertilizer sector and increase last mile access to smallholder farmers and producers organizations. USAID will continue to conduct educational campaigns on proper fertilizer use, promote organic farming practices, and integrate fertilizer use with crop planning. Where opportunities permit, USAID will also engage the GoM to advocate for reforms to the fertilizer subsidy program; increase subsidies and incentives for organic fertilizer; and expand resources for research, development, and quality control.

Expected outcome include:

- Improved practices that enhance inclusive and sustainable agriculture-led growth through market-based solutions
- Improved the delivery of quality products and services to producers and MSMEs
- Increased access to appropriate financial services, and increasing the integration of farmers into local market systems

⁴ The multi-actor platform is a corporation of different market players, such as producers (farmers and pastoralists), grain traders, agro-dealers, processors, transporters, local government representatives, regional ag chambers, financial institutions, insurance providers etc. This platform will be one of the preferred forums for discussion between market players to come up with solutions to the issues facing them. This platform will keep on organizing market players meeting long after the activity to ensure sustainability.

- Improved commercial events to be inclusive and profitable for producers and suppliers and open new opportunities to network and scale—especially for small-scale producers and for women.

Program Component 2 will contribute to the following Sub-IRs:

- Sub-IR 1.1: Strengthening service providers will directly strengthen the business environment for agricultural producers and entrepreneurs.
- Sub-IR 1.2: Extension services are one of the key types of services that this component will focus on.
- Sub-IR 1.3: Increasing access to services will increase productivity and ability of producers to compete in markets.
- Sub-IR 2.1: Expansion of services will increase the ability of smallholder farmers and herders to participate in market systems.
- Sub-IR 2.3: Financial services are another key type of service that this component will support.
- Sub-IR 7.2: The food-processing interventions will improve post-harvest handling and increase food safety.
- It will also contribute to Cross-Cutting IRs 2, 3, 4, 7, 8, and 10.

This component will be implemented throughout the ZOI, and will benefit smallholder farmers, livestock producers, as well as producer organizations, who need access to agricultural inputs, financing, extension services, and other services. As with all of GFSS efforts in Mali, there will be a focus on women and youth.

Key actors and partners that will be engaged include: technical service providers such as the Regional Directorates of Agriculture and Units of Planification and Statistics, banks, microfinance institutions, local NGOs, farmers association umbrellas such as APCAM and AOPP, providers of agricultural inputs such as Toguna and Elephant Vert, and research centers such as IER, ICRISAT, and ILRI.

D.4: Program Component 3 - Diversify Agricultural and Non-Agricultural Livelihoods in Rural Mali

Shocks and stresses of all types—droughts, floods, conflicts, price increases—are occurring in Mali with increasing frequency. Although many communities have traditional methods of adapting, such as population migration during droughts, additional measures are now needed. At both the household and community levels, income diversification plays a crucial role in overcoming these shocks and stresses. More broadly, increasing the range of income sources—both on and off-farm—will reduce overall poverty. Accordingly, USAID/Mali proposes this component to diversify both agricultural and non-agricultural livelihoods in rural Mali, thereby reducing vulnerability to shocks and stresses, as well as decreasing poverty. As with the previous two components, increasing access to finance will be a central concern.

In addition, one aspect of this component will be focused on diversification of agricultural production, i.e., increasing the variety of crops grown, as well as promoting raising of poultry and small ruminants. This component will also aim to create both agricultural and non-agricultural income-generating activities, such as non-timber forest production, or businesses to repair agricultural equipment, and other on- and off-farm initiatives that can sustainably respond to market constraints and challenges. Linking producers and farmers to microfinance institutions and other sources of finance will enable them

to upgrade the production activities, obtain needed technologies and inputs, or embark on value-adding enterprises.

Further, programming under this component will include interventions to cushion poor and vulnerable households from economic, climatic, and other shocks, thereby increasing their resilience. Specific measures could include: using climate data to make planting and harvesting decisions and plan responses, risk reduction measures such as agriculture insurance, and other adaptive measures.

Integrating cross-sectoral approaches and resources is another key aspect of this program component. Particular focus will be given to expanding to e-commerce platforms and fintech solutions such as the “GNA Soro” digital platform that was developed during FY23 to facilitate the access of market actors, including women and youth, to reliable financial services. As noted above, this will also include linking farmers and producers with microfinance institutions.

Expected outcomes include:

- Increased resilience of households and communities to economic, health, and climate shocks
- Improved practices that enhance inclusive and sustainable agriculture-led growth through market-based solutions
- Increased delivery of quality products and services (including access to finance) to producers and MSMEs
- Improved commercial events to be inclusive and profitable for producers and suppliers and open new opportunities to network and scale-especially for small-scale producers and for women.

Program Component 3 will contribute to the following Sub-IRs:

- Sub-IR 1.1: Strengthening the overall business environment will help increase the types of and number of income opportunities.
- Sub-IR 2.1: The above-described interventions will facilitate the entry of new producers and entrepreneurs into market systems.
- Sub-IR 5.2: This component will promote a range of measures to increase household and community access to information and increase their capacity to use that information to minimize risk and negotiate markets.
- Sub-IR 6.1: This component directly supports increasing access to non-agricultural income sources.
- Sub-IR 6.2: This component directly supports diversification of agricultural production.
- It also contributes to cross-cutting IRs 7 and 8.

This component will be implemented throughout the ZOI, and will aim to benefit farmers, livestock producers, women, youth, and vulnerable households.

Key actors and partners that will be engaged include: technical service providers such as the Regional Directorates of Agriculture and Units of Planification and Statistics, banks, microfinance institutions, local NGOs, farmers association umbrellas such as APCAM and AOPP, providers of agricultural inputs such

as Toguna and Elephant Vert, research centers such as IER, ICRISAT, and ILRI, and specific government Ministries such as Agriculture, Livestock and Fisheries, and Employment and Vocational Training.

D.5: Program Component 4 - Improved governance and management of natural resources and water infrastructure

Every aspect of the Global Food Security Strategy ultimately depends on water. Rain-dependent agriculture is constantly vulnerable to climate shocks, and competition over water resources, such as between farmers and pastoralists, is a key source of conflict. Increasing access to irrigated land, expansion of water and sanitation infrastructure, and increasing community capacity to manage water resources—whether a stream, an irrigation canal, a drinking water network, or a sewer line—are all vital foundations for this Country Strategy. Accordingly, USAID/Mali proposes this component to improve governance and management of natural resources and water infrastructure.

USAID Mali will improve the management of water resources to improve the resilience and long-term sustainability of irrigation infrastructures. This will be achieved by increasing water available for drinking and productive purposes; increasing the capacity of the private sector to deliver WASH and irrigation services; expanding watershed protection and restoration to improve water quality and quantity; allowing water-related institutions and the private sector to understand the availability of water resources in target zones; enhancing the roles of women and youth in water governance and management; and reducing vulnerability to water-related risks and stresses. USAID Mali will also enhance the coverage of drinking water and sanitation services by improving access to basic drinking water services in households, pastoral corridors, and institutions such as schools and health centers; increasing access to basic sanitation services; improving the management of fecal waste; promoting the adoption of key hygiene behaviors; and increasing water related partnerships with the private sector.

USAID/Mali will promote more sustainable and holistic use of water resources and more equitable, robust water resource planning and allocation of water across users and ecosystems within river basins. A broad range of stakeholders will be engaged to identify water-related risks and trade-offs, develop solutions to improve the quantity and quality of available resources, and advance more equitable and efficient water allocation. Activities will support improved collection and routine use of hydro-meteorological data, including surface and groundwater, to understand water availability and use at multiple spatial and temporal scales. USAID/Mali will also facilitate the development of catchment and basin water management plans and support capacity development for government, the private sector, and civil society professionals responsible for creating and implementing inclusive water resources management policies and procedures. USAID/Mali will promote low-cost solutions to help retain water in the soil to increase vegetation in pastoral areas and crop productivity in agricultural fields, including rainwater harvesting to conserve groundwater and provide options in arid regions. USAID/Mali will facilitate joint efforts and partnerships among key actors, development agencies, and humanitarian partners and participate effectively in the technical and financial partners' operating group regarding water resources management. Finally, USAID/Mali will support the construction of small-scale irrigation structures and provide technical assistance for improved on-farm water management, maintenance, and operation of the infrastructure and equipment.

In addition, USAID/Mali efforts will collaborate with local organizations to improve the governance of natural resources and to establish and monitor local conventions in target areas, particularly in the bourgou grazing region. Programming will continue interventions to form community-based natural resource management (NRM) committees, establish local conventions (LCs), and conduct a diagnostic analysis of drivers of conflicts, thereby ensuring better management of natural resources, reduction of conflicts, and strengthening of social cohesion and peace.

Further, USAID/Mali will seek opportunities to increase the complementarity and integration between humanitarian response and development programming. GFSS programs in this area will focus on supporting service providers to prioritize post-disaster infrastructure repair and rehabilitation through analysis of needs; helping authorities establish cost-recovery tariffs or user fees; increasing access to water resources for vulnerable populations in shock-affected areas. These will complement humanitarian assistance interventions that directly support displaced persons. Programming will also strengthen local community and institutional capacity in the areas of water infrastructure operations and maintenance, water resource conservation, conflict management between water users, and micro-watershed management

Expected outcomes include:

- Increased access to a basic drinking water service;
- Increased access to a safely managed drinking water service;
- Increased access to safely managed sanitation; and
- Additional public funding mobilized for water and sanitation infrastructure.
- Improved management of water resources.

Program Component 3 will contribute to the following Sub-IRs:

- Sub-IR 5.4: Both the WASH and the resilience-related activities will help strengthen community capacity to govern and manage natural resources.
- Sub-IR 9.1: This component directly contributes to increased and inclusive access to WASH infrastructure.
- It will also contribute to Cross-Cutting IRs 2, 6, 7, and 8.

This component will be implemented in both parts of the ZOI, although not in every cercle. WASH programming will be mainly in the Southern part, and interventions for community natural resource conventions will be mainly in the Delta regions. Capacity strengthening of communities in various forms will, however, be implemented throughout the ZOI. This component will benefit farmers, pastoralists, vulnerable households, women, and youth.

Key actors and partners that will be engaged include: local private sector companies, farmers association umbrellas such as APCAM and AOPP, research centers such as IER, ICRISAT, and ILRI, and specific government Ministries such as Livestock and Fisheries, Health, and Environment and Water.

D.6: Programmatic Approach - Cross Cutting Issues

The above four components are not the only elements of this Country Strategy's approach. They are closely intertwined with other fundamentally important cross-cutting issues on which all of USAID/Mali's efforts are based. These are highlighted in Mali's 2022-2027 CDCS, and include core aspects of our approach, including: community-led development, localization, and inclusion; collaboration and coordination; gender; and climate.

Community-Led Development, Localization, and Inclusion

Community-led development, localization, and inclusion are central to our strategic approach across the two DOs and the SpO of the CDCS. In recent years there has been increasing awareness that programs with significant community buy-in and ownership are often able to achieve success where others have not in addressing intractable development issues. During this strategic period, USAID/Mali will build on these successes by placing even greater emphasis on exploring and developing partnership with non-traditional partners. These partnerships will be an integral component of building upon local capacities and actors who are often best placed to deal with issues of increased resilience and oversight of basic service provision such as water, agricultural extension, and inputs. Elevating and supporting local efforts will also be key to implementing interventions that target the most vulnerable and marginalized groups within Malian society, not least, women and girls. By promoting greater inclusion throughout USAID programming, activities will be better positioned to address economic issues Malians face across gender and youth divides.

This Country Plan's emphasis on community-led development, localization, and inclusion will allow the Agency to build on existing, longstanding partnerships with Malian organizations, directly engage with new local partners, better leverage local knowledge, and enhance sustainability. USAID will focus greater attention on stakeholders at the local level by increasing partnerships and support for community associations, local civil society groups, and the Malian private sector. Moreover, USAID/Mali will seek out and promote opportunities to work together with local partner institutions to promote marginalized communities' access to services, as well as, to expand the inclusivity of USAID/Mali's activities for diverse populations. USAID/Mali will build on best practices and lessons learned to actively engage the broadest possible range of local stakeholders in co-creation and activity design and will systematically convene local partners to participate directly in activity monitoring and learning. USAID/Mali will also build the capacity of local organizations to work directly with other partners and employ market-based partnerships with private sector and community actors when appropriate to advance innovation and private sector-driven solutions that address climate change, and resilience.

Collaboration With Other USAID Activities

The Feed the Future Mali team will increase coordination and collaboration between internal and external offices and stakeholders which are involved in the selected value chain. This will enable Mali's GFSS to respond to production and market needs more effectively, better maintain and improve resilience and nutrition in targeted communities. The team will work in collaboration with state actors to promote activities that contribute to proper implementation and management of the agricultural best practices.

GFSS programming will build on its dynamic and active collaboration with farmers organizations, input providers, food processing units, private and public extension services, market actors and government to ensure that the GFSS aligns with national priorities and that our collaboration reinforces each other.

Internally GFSS's activities will work in close collaboration with health, education, BHA, PDG activities to further strengthen production and market actor's institutional and organizational capacities in administrative and financial management and governance. These efforts will enable the relevant production and market actors to properly manage, and exercise control over their income-generating activities while respecting the interests of their stakeholders. They will also contribute to the performance, sustainability, and reputation of their businesses, as well as their compliance with laws and ethical standards while relying on rules, processes and structures that define the rights and obligations of stakeholders (shareholders, managers, employees, and other players). Through these activities, GFSS

strives to contribute to ensuring accountability, fairness, and transparency in strategic, financial, and operational decision-making among production and market structures – while providing them with the means to adapt to the specificities and challenges of the context in which they operate.

The USAID/Mali GFSS team collaborates with colleagues from the Health and Education offices to ensure that those offices use WASH best practices in their activities. It also collaborates with colleagues from the Office of Humanitarian Assistance (OHA) on humanitarian and crisis-focused activities. Coordination with the Health Office on Nutrition has contributed to the development and approval of the country's nutrition strategy as well as the development of a strategy for better feeding communities during the lean season. USAID/Mali will also leverage the ongoing nutrition and hygiene activities in Sene Yiriwa South, Keneya Nieta, and Keneya Sinsi Wale activities in the south. These activities focus on safe household water management (protecting water from contamination during transport, storage, and handling) and handwashing with soap at critical times that would contribute to the desired health outcomes. USAID/Mali will also coordinate, where applicable, with the new Peace, Democracy, and Governance (PDG)-funded Salam Stabilization activity once it is awarded. The PDG team is finalizing the impact evaluation baseline survey, and one of the grievances to conflict is the lack of access to water. There is an opportunity for USAID to build internal synergies among different technical sectors.

Externally, collaboration will also be carried out:

- Between GFSS IPs and other Offices' (Health, BHA, PDG, EDU) IPs
- Among WASH IPs
- Between GFSS IPs and the corresponding public-sector service providers in the field

USAID/Mali fosters multi-stakeholder collaboration meetings to be held at the regional and local levels among the different Chiefs of Party. Fostering and accelerating this engagement is necessary to build collaborative relationships which will be needed for the successful development and execution of management plans.

Collaboration with InterAgency

Similarly, USAID/Mali will coordinate implementation of its programming with other USG activities operating in Mali including:

- USDA's \$25 million McGovern-Dole Food for Education and Child Nutrition program
- USDA's International Climate Hub
- Department of State's Vision for Adapted Crops and Soils program

Donor Coordination

The US government is the largest bilateral donor to Mali and USAID plays a critical leadership role in donor coordination. USAID/Mali will coordinate closely with other donors to ensure ever greater coherence across all programs and activities with particular emphasis on food security and nutrition, irrigation, drinking water and sanitation. There are also active thematic groups that coordinate regularly on technical issues, such as environment and climate, irrigation, food security and drinking water sector strategies.

Through donors Environment and climate changes Dialogue Group, USAID/Mali will support Mali Government's effort to strengthen the capacity of local government, public technical services, and community-based organization to achieve systemic change.

WASH Donor Group

Outside USAID/Mali, the WASH team is the co-lead of the donor working group with the German Cooperation. This group includes donors like Sweden, the Netherlands, Belgium, Norway, Canada, and others. The group's priority is the political validation of the National Policy of Drinking Water (PNAEP) and Sanitation (PNA). This validation is crucial, especially for future investments in the subsector. Another priority of the group is for the government to increase the part of the national budget dedicated to water and sanitation to reach at least 5 percent by 2030.

Irrigation Donor Group

The Agriculture and Economic growth team of Mali will catalyze the development of network system in which all the stakeholders will work together in the complementarity view to increase and to magnify the results.

Gender

A critical assumption underpinning this Country Strategy's approach is that a deeper, more nuanced understanding of gender dynamics and the ways in which USAID/Mali programming can drive positive social change for women and girls is central to optimizing impact and achieving sustainable results. We will focus on reducing gender gaps and promoting meaningful women's participation in development activities, especially in terms of decision making and resource allocation, as a means of enhancing socio economic empowerment. USAID/Mali's interventions will reduce gender gaps by targeting value chains with significant roles for women such as horticulture and poultry, modifying activities to better enable women's participation such as holding trainings at times when women and girls are available, and addressing systemic barriers to women's participation and leadership in agricultural production, marketing, and agri-businesses. Also, our new WASH interventions will address gaps and mitigate barriers to women's equality in local government WASH policies and the gender financial inclusion gap to enable women entrepreneurs to grow WASH businesses. Interventions will enable female water and sanitation entrepreneurs to secure the financing they need and will support civil society and other stakeholders to address the root causes of the gender gap in financial inclusion, such as by removing barriers on women's ability to open bank accounts and access credit. New WASH activities will provide financial literacy and business development services to female entrepreneurs and will identify and address supply chain issues in the production and distribution of menstrual hygiene supplies and other WASH related products of female-led social enterprises and SMEs.

USAID/Mali recognizes the importance of women's roles in fomenting stability, resilience, and early recovery in the face of shocks and crises.

Climate Change

Recurring shocks and stresses combined with inadequate capacity to predict and respond to recurring crises render the country extremely vulnerable to climate change. Climate variability and impacts such as droughts, flooding, and competition between herders and farmers over access to resources pose significant threats to the health and wellbeing of all Malians, and our strategic approach fully reflects priorities outlined in USAID's Climate Strategy 2022-2030⁵. USAID/Mali will expand access to climate

⁵ <https://www.usaid.gov/policy/climate-strategy> Last accessed December 19, 2024.

smart agriculture technologies and practices in the Mission's RFZ to increase diversified livelihood opportunities and to improve food security and nutrition. USAID/Mali will strengthen institutional and human capacity to use long term climate projections to inform policy development and transitional pathways for people whose livelihoods are becoming increasingly unviable. USAID/Mali will assist the Malian government and local partners to access public and private finance for adaptation and resilience through capacity development and technical assistance. Addressing land and water governance and management is also essential to reducing conflict and restoring long term stability; mitigating the impact of climate shocks; diversifying agricultural production, diets, and livelihoods; and expanding economic opportunities. USAID/Mali intervention will enhance and address Humanitarian Development Peace coherence and reduce the need for long term Humanitarian Assistance.

Section E: Stakeholder Engagement

Stakeholder Engagement

Stakeholder engagement to develop this Country Strategy involved the following:

USAID/Mali coordinator conducted 16 in-person meetings and XX virtual meetings with stakeholders engaged in Malian food security activities. See Annex F for the list of stakeholders consulted in this process. These stakeholders represented INGOs and local Malian NGOs, national and international research institutions, multilateral and bilateral development partners, private sector service providers, state extension offices, financial institutions, civil society organizations, and farmer associations. The stakeholder engagement process focused on inclusivity, ensuring that actors at the local level were actively involved. This process emphasized the voices of marginalized groups, encouraging a broad spectrum of viewpoints. This diversity of perspectives contributed to the development of more effective strategies for addressing economic growth, resilience, and nutrition. As the new country plan takes shape, USAID/Mali remains committed to engaging stakeholders through in-person interactions and quarterly Feed the Future stakeholder conferences. This ongoing engagement strategy ensures continued collaboration and alignment with key partners in the pursuit of shared goals.

Stakeholder engagement throughout the life of this Country Strategy will be conducted through the following platforms, channels and venues:

First, there are several key donor coordination venues that either AEG or the USAID/Mali Mission currently participates in, some of which (e.g., WASH) were discussed in Section D. In addition, USAID/Mali actively participates in (and intermittently leads) the Steering Committee of the Executive Cooperation Group (GEC). USAID/Mali's AEG office also regularly participates in donor meetings and working groups related to inclusive and sustainable economic growth, women's empowerment, sustainable agricultural production, and private sector development. In these recurrent meetings, USAID/Mali helps develop key messages that are promoted by the GEC and the Government of Mali.

Further, in collaboration with the German Development Cooperation, the AEG office co-leads the Water-Donor Working Group. This bilateral donor group also includes Sweden, the Netherlands, Belgium, Norway, and Canada. The group's priority is the political validation of the National Policy of Drinking Water (PNAEP) and Sanitation (PNA), which would increase the Malian national budget dedicated to water and sanitation by 5 percent.

Beyond donor coordination, there are several other platforms through which the GFSS country team engages stakeholders. These include a variety of implementing partner meetings, at which IPs of multiple sectors share news such as security incidents, coordinate their operations, and plan for the next quarter. Perhaps the most significant of these are the quarterly "Lean Season Strategy" meetings that carry out the Mission's multi-sector nutrition effort. Another type of meeting is the increasingly frequent "Pause and Reflect" gatherings, where IPs of all sectors come together to share experiences, identify lessons learned, and decide how to refine their activities based on these new insights. The GFSS country team will continue to actively participate in these spaces of learning and collective action to ensure that all relevant stakeholders are involved to the maximum extent possible, in the implementation of this Country Strategy.

InterAgency Team at Post

Collaboration within the InterAgency in Mali is dynamic and oriented around priority issues. USAID/Mali's most frequent partner is the Embassy's Political and Economic (PolEcon) section, with whom the Mission plans both joint and complementary efforts for priorities such as private sector engagement, support to women and youth entrepreneurs, linkages with U.S. businesses, and access to fertilizer. USAID and PolEcon recently collaborated to send cables on the investment landscape in Mali as well as constraints to fertilizer access. USAID also actively participates in the Embassy's recently launched InterAgency "Deals Team", a main goal of which is to increase private sector investment in Mali.

AEG also coordinates monthly with USDA, whose Food For Progress and Food for Education programs in Mali are managed out of Senegal and Washington, respectively. Engagement with other Agencies physically in Mali (CDC, NIH) or outside Mali (Commerce), as well as Interagency thematic groups (e.g., Climate), has until present been less frequent. With the adoption of this Country Strategy, the Feed the Future Coordinator will systematically engage the InterAgency through regular meetings, communications, and sharing of activity progress.

Section F: Annexes

Annex I: Stakeholders Consulted

Annex Table I. Engaged Stakeholders

U.S. Government Agencies	
United State Department of Agriculture (USDA)	U.S African Development Foundation (USADF)
State Department (Economic office)	U.S. International Development Finance Corporation (DFC)
Donor Groups	
Islamic Development Bank (IsDB)	
Financial Institutions	
International Institutions	
Food and Agriculture Organization (FAO)	United Nations High Commissioner for Refugees (UNHCR)
International Non-Governmental Organization	
Practical Action	Nitidae
Cultivating New Frontiers in Agriculture (CNFA)	Research Triangle Institute (RTI)
Tetra tech International	
Local Non-Governmental Organization	
Sahel Eco	
Private Sector	
Elephant Vert	
Ministries, Department, and Agencies	
Government Extension Agents in the ZOI	
Research Institutions	
L'Institut d'Economie Rurale (IER)	International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
Farmers Associations/Producer Organizations	
Other Partners	

Annex 2: Key Points from Stakeholder Consultations

In a typical GFSS process, the USAID mission conducts a stakeholder workshop to incorporate the perspectives and feedback of multilateral and bilateral development partners, national and international NGOs, private sector actors in the agricultural sector, civil society groups, national and international research institutes, and government actors. Unfortunately, due to the fluid political and security context in Mali, USAID could not conduct a stakeholder workshop to inform the development of this GFSS. Instead, a USAID contractor interviewed 26 stakeholders at their institutions. The participants in these interviews represented all the above-mentioned stakeholders. This report is a summary of the perspectives of those 26 stakeholders.

Methods

The USAID contractor contacted 30 stakeholders to request an interview; 22 of the stakeholders responded. The contractor conducted 16 interviews with a total of 26 stakeholders.

The stakeholders were asked the following questions:

- What does your organization do?
- What are the main challenges facing Malian farmers in your zones of operation?
- What are the solutions to these challenges?
- What challenges does your organization face?
- What are the solutions to these challenges?
- How can USAID programs contribute to an agricultural system that is more inclusive to women and youth?
- Given all the challenges facing Mali, how can the USAID mission feasibly make progress on the three main objectives of the GFSS?

The interviews lasted 45-90 minutes, depending on the stakeholder's availability. The USAID contractor recorded the meetings and transcribed them. The transcriptions of those interviews have also been submitted to USAID. The ideas expressed below are a summation of the stakeholders' perspectives.

The Main Challenges Facing Malian Farmers

Smallholder Malian farmers face numerous challenges, including climate change and rainfall variability, financial constraints, and a lack of access to agricultural inputs and markets. Climate change has increased rainfall variability, droughts, and floods. Climate change poses a severe threat to smallholder production because smallholders do not have sufficient resources to adapt. Rural Malian farmers are poor, they do not have sufficient access to credit, and they do not have enough money to invest in their production. They lack agricultural equipment that could make their production more efficient. The smallholders do not have capital that could be used as a guarantee for a loan, many don't even have a government-issued ID, while others are not literate. They generally do not have enough money to buy fertilizers, which (according to some stakeholders) are essential to increasing yields. The government's fertilizer subsidies are very important to smallholders. Nevertheless, many farmers have difficulty accessing the subsidy, and even with the subsidy, many farmers still cannot afford fertilizer. However, according to other stakeholders, fertilizers are a bad investment for rural Malians. Applying fertilizer

produces higher yields only when applied correctly and when there is good rainfall. The high variability of rainfall in Mali and the farmers tendency to spread their fertilizer too thin causes many farmers to lose money when they buy fertilizers.

The representatives of the National Association of Farmers (APCAM) provided a succinct articulation of the challenges facing Malian farmers:

The main challenge is that farmers have 3 months of rain to grow enough food to feed their families for the entire year. The second challenge is that we have a very young population that leaves productive rural areas to move to cities, so we don't have enough agricultural labor. This is a loss for agriculture in Mali. The third problem is that farmers are not able to sell their production in the market. And when they sell their production, they sell it for a low price and then they buy food during the lean season when the price is higher. The fourth challenge is the lack of knowledge/technical training among the farmers. These are the 4 challenges facing farmers in Mali.

Several other key challenges were mentioned:

- Malian soils are no longer sustainably managed, the soils have been mined of nutrients to meet family needs and serve commercial production. Farmers are more concerned about feeding themselves this year than trying to build up long-term soil fertility. Thus, they are trapped in poverty.
- The escalating conflict poses a direct threat to farmers. The conflict limits farmers' access to markets, inputs, and technical support. Insecurity affects mobility and prevents farmers from reaching their full potential.
- The Malian food system is not adapted to the realities of climate change.
- Farmers can best respond to climate change by adopting improved varieties, but national and international breeding programs do not have the resources to produce high volumes of the improved seed that farmers need.
- Women and youth lack access to land, resources, and agricultural opportunities.
- Land management systems are inadequate and lead to farmer-herder conflict.
- The government debt and high allocation to defense spending prevents the government from adequately supporting agriculture. The government only supports the farmers who are growing commercial crops. Government left the support of subsistence farmers to the village associations, and these associations cannot do much to support their members. Support from the private sector is limited by their capacity and orientation. The private sector does not support subsistence farmers because the farmers must be selling their harvest to make it worthwhile to give Malian farmers advice.
- Farmers struggle to meet quality standards. They have difficulties producing good quality food, safely storing their harvest, adding value to their harvest, and finding a market for their harvest. Aflatoxins is another major challenge with meeting market standards.
- The Malian education system comes from our French colonizers. Rather than fostering critical thinking, innovation, and practical life skills, it focuses on memorization. Our education system does not provide the Malian youth with the skills they need.

Potential Solutions

Addressing the challenges faced by smallholder farmers in Mali requires a comprehensive and integrated approach that includes financial support, climate-smart agriculture, promotion of agro-ecological practices, empowerment of farmer organizations, conflict resolution, and market access improvements. Coordination among government, donors, and development agencies is essential for sustainable agricultural development in Mali.

A stakeholder from a local NGO summed it nicely:

We need to make available new varieties that enable farmers to face the challenges associated with climate change. We need to look at other complimenting practices that help maintain soil moisture that make crops more resilient to drought. We also need to work on postharvest and transformation, enabling farmers to add value to their crops. And we need to connect farmers to markets so they can sell their value-added produce.

Key solutions included:

- Invest in rural agro-processing and other value addition activities. Do not give that investment to farmer associations because 50+ people cannot effectively operate a business. USAID should invest in small groups of people who work well together.
- Development programs cannot turn people into entrepreneurs. Entrepreneurs have higher tolerance for risk, they have dogged determination, and they are innovative. USAID should find existing rural entrepreneurs and support them.
- Irrigated agriculture is a key to climate change resilience. With the Niger and Senegal rivers and a large inland delta, Mali has potential for irrigated agriculture that is currently underutilized.
- Compared to modern agricultural practices (monoculture with chemical inputs), agro-ecology is a better solution to the challenges associated with climate change because it is not input/resource intensive. Farmers can lose money when they buy fertilizers because of high rainfall variability. Agro-ecology is better suited to Mali's non-steady state ecology, but it is knowledge intensive and requires extensive training. USAID should finance agro-ecological research centers, model farms, and projects that promote agro-ecological practices. Long-term initiatives should educate farmers about the benefits and provide ongoing support.
- Promote agro-forestry. Citrus trees can generate high revenues for Malian farmers, even on a small plot of land. Agro-forestry enables farmers to diversify agricultural revenues, generate natural fertilizers, stabilize yields, and improve diets. However, agro-forestry can create land rights issues because planting a tree is akin to claiming ownership of the land. USAID would need to work the government to update land rights regulations. Promote
- Peri-urban farms have high production capacity because they are close to markets, and they are often owned by wealthier farmers who can afford to invest in their production. However, their main challenges include poor farm management and low yields. Peri-urban production practices could be greatly improved, and this could increase the country's food security.
- Support the production and operationalization of land management plans and initiatives that increase access to land for marginalized groups.

- Literacy training should be incorporated as a foundational element, and the Malian education system needs to be reformed. Rural schools should focus on critical thinking, innovation, and practical life skills, not memorization.
- Improve infrastructure, promote fair trade practices, and enhance value chains. Farmers need support in meeting quality standards and adapting to changing consumer preferences.
- The institutions that provide the most support to farmers are the village farmer associations. USAID should support these farmer associations and build the capacity of the state extension services so they can travel to all the villages.

Engaging Women and Youth in Agriculture

The stakeholders advocated for a comprehensive and nuanced approach to address the challenges faced by women and youth in agriculture. They want to see USAID work with technology suppliers, micro-finance institutions, and farmers to create a market-based system that increases women and youth's engagement in agriculture. Their recommendations included ideas about education, project management, technology adoption, policy changes, and community engagement:

- Invest in village infrastructure (e.g., irrigated gardens, processing equipment, storage facilities) on the condition that women and youth groups own, control, and operate the resulting infrastructure. USAID has done this in the past with their agro-forestry project SmAT-Scaling. Village leaders generally consent to these programs because they want the investment in their villages.
- The current approach to creating a development proposal often excludes rural women and youth. Local women and youth are invited to participate in development programs only after project ideas are developed. USAID should emphasize the importance of including women and youth from the very beginning. When women and youth are part of the proposal creation process, they become more engaged, and the programs are better suited to address their specific needs and constraints.
- A major challenge facing Malian farmers is the lack of value addition at the village level. USAID already invests in local agro-processing infrastructure. These initiatives should focus on women and youth. Given women's crucial role in ensuring family nutrition, it is logical they would exert greater control over improved storage/processing infrastructure.
- Agriculture is often seen as a profession of last resort for youth who do not escape the village. Find ways to increase the technical skills and prestige of farming. This could include rigorous professional agricultural training, accrediting online training programs, and the promotion of advanced technologies in Malian agricultural production.
- Develop a more nuanced understanding of women's and youth's activities, conducting analyses to tailor support to their specific needs and interests.
- Search for cases of positive deviance among entrepreneurial/innovative women and youth and spread these advances to women and youth in other villages.
- Work with women's and youth's groups to ensure that increased profits translate into meaningful social and economic change for them.

How to Achieve the 3 Objectives of the GFSS

USAID should consider adaptive management practices for their ongoing development projects, drawing inspiration from the UK's DFID BRACED programs. One of the stakeholders summed it up well:

[When the inevitable crisis strikes,] such as a drought, a flood, or security issues, USAID should provide a “bump-up.” It is a fund that USAID makes available to projects so the projects can provide emergency resources to enable their beneficiaries to survive the crisis. We can no longer implement rigid development projects in Mopti or Tombouctou. Either a flood will come and destroy everything you’ve done, or a the jihadis will come create chaos that reverses everything. Sometimes, we conduct our income-generating projects and the jihadis come in and take everything. We need to be able to adapt our projects to these events. From the beginning of the project, we need to factor in alternate plans. We need to conduct regular assessments to make sure everything is going according to plan and consider how we can adapt our projects when they are not going to plan. Maybe we need to implement a cash-for-work program right in the middle of a project timeline because the target villages are in a crisis. Projects need to have this agility. A development project should integrate social cohesion and emergency components. The projects are on the ground working with the people. They can be good jumping off points for emergency actions.

USAID can best achieve its three objectives by adopting more flexible funding mechanisms. The fluidity and unpredictability of the rural Malian context prevents USAID from planning how to best achieve their 3 objectives. USAID should create a management structure that gives a large grant to one of INGO clients who then creates a grant structure for civil society organizations who are not yet identified. Civil society/farmer organizations who win these small grants can adapt to the context as it unfolds. The INGO can meet USAID's reporting requirements and maintain flexibility in their grant programs in this fluid environment. A small amount of money (up to USD 200,000) is often what is needed to do good work.

Section G: Notes and References

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Notes