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Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 02-Nov-2023 | Report No: PIDA36096

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
South Sudan	P180940	South Sudan Resilient Agricultural Livelihoods Project Additional Financing	P169120
Parent Project Name	**Region**	**Estimated Appraisal Date**	**Estimated Board Date**
South Sudan Resilient Agricultural Livelihoods Project	EASTERN AND SOUTHERN AFRICA	31-Oct-2023	30-Nov-2023
Practice Area (Lead)	**Financing Instrument**	**Borrower(s)**	**Implementing Agency**
Agriculture and Food	Investment Project Financing	Ministry of Finance and Planning	Ministry of Agriculture and Food Security

Proposed Development Objective(s) Parent

The project development objective is to strengthen capacity of farmers and their organizations and improve agricultural production.

Components

Capacity Building in Good Agricultural Practices
Investment Support for Improved Agricultural Production
Project Management and Technical Assistance
Contingent Emergency Response

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	30.50
Total Financing	30.50
of which IBRD/IDA	30.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	30.00

IDA Grant	30.00
Non-World Bank Group Financing	
Trust Funds	0.50
FoodSystems2030 Umbrella Program	0.50

Environmental and Social Risk Classification

High

1. **This project paper seeks the approval of the Executive Directors to provide an Additional Financing (AF) in the amount of US$30.5 million equivalent to the well performing South Sudan Resilient Agricultural Livelihood Project (RALP- P169120).** The proposed AF is a scale up in the amount of US$30 million from the Crisis Response Window (CRW) and US$0.5 million from the Food Systems 2030 (FS2030) Umbrella Program Trust Fund.

2. The **proposed AF will strengthen the country's capacity to enhance its food security through increased food production and manage future food security crisis.** It has been prepared under Paragraph 12 of Section III of the Investment Project Financing (IPF) Policy "Projects in Situations of Urgent Need of Assistance or Capacity Constraints".

3. **The Project Development Objective (PDO) is to strengthen capacity of farmers and their organizations and improve agricultural production.** The parent project was approved on June 8, 2021, and became effective on September 22, 2021. It is funded with US$62.5 million (US$50 million from the country's IDA Performance-Based Allocation and US$12.5 million from CRW Early Response Financing). The Project has disbursed US$31.88 million (54 percent of the total funding) as of October 30, 2023. The remaining balance has already been committed.

4. **For the last four years, South Sudan has suffered from climate change shocks with excessive flooding for four consecutive years that destroyed livelihoods and increased food insecurity.** Recent influx of refugees and returnees to the project areas[1] has put more strain on limited resources to achieve the PDO. The proposed interventions of the AF will scale up the existing activities of the parent project to increase food production and add new activities to address the food insecurity due to flooding and the influx of the returnees and refugees that settle in the project geographical areas

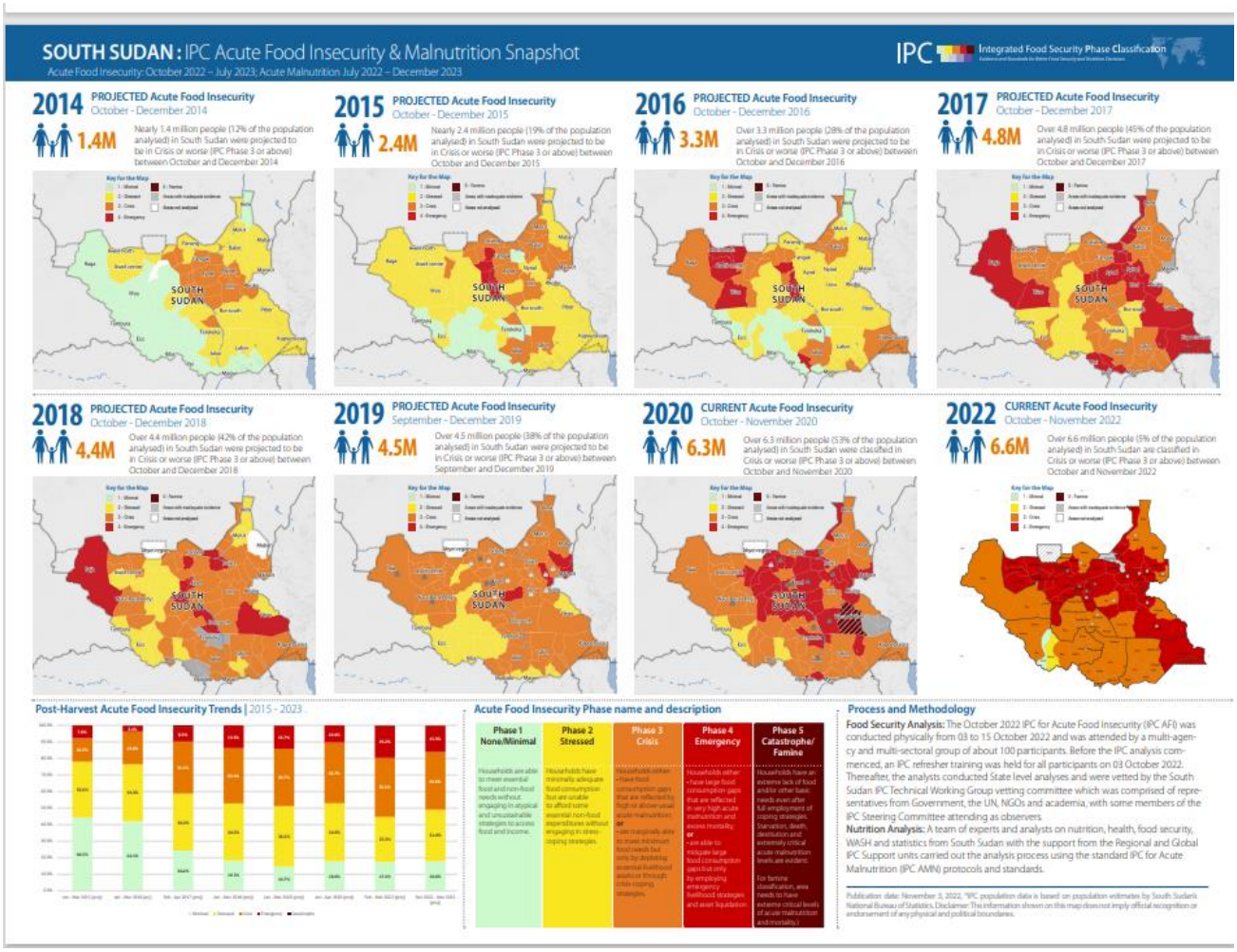
B. Introduction and Context

5. South Sudan faces chronic food insecurity with rising population experiencing persistent acute food insecurity rising from 1.6 million in 2014 to 7.76 million in 2023 (63% of the population). This is caused by factors such as consecutive years of flooding, low agriculture productivity, inadequate infrastructure, macroeconomic crises characterized by rising food and non-food prices, and protracted conflicts that impeded access to nutritious food. The attached mapping in Figure 1 below shows the progress of Integrated Food Security Phase Classification (IPC) year in year out since 2014-

[1] Twic East and Bor South in Jonglei State, Renk and Melut in Upper Nile State, Aweil East and Aweil South in Northern Bahr el Ghazal State, Jur River in Western Bahr el Ghazal State, Torit and Magwi in Eastern Equatoria State and Yei in Central Equatoria State

2022. Acute food insecurity have increased during that period moving from 1.4 million (12% of the population) in 2014 to 6.3 million (60% of the population). According to the latest Integrated Food Security Phase Classification (IPC) report in 2023, about two-thirds of the South Sudanese population (7.76 million people) were likely to face acute food insecurity during the April-July 2023 lean season. This is a substantial increase from the 6.3 million people who faced food insecurity in 2022. South Sudan may experience greater widespread hunger and starvation than during its civil wars.

Figure 1: IPC Acute Food Insecurity and Malnutrition Snapshot



6. The main drivers of food insecurity during that period had varied from conflict, climate shocks, economic crisis, and the COVID-19 pandemic or a combination of all. In all these crises, the government had benefited from the assistance of the development partners without a proper government-led planning and coordinated responses. Additionally, South Sudan has recently suffered from two major crisis that have aggravated already precarious livelihood and food insecurity in the country. Four straight years of flooding have disrupted livelihood, causing massive displacement of people and loss of crop and livestock. Flooding disrupted trade flows, markets, and humanitarian food and nutrition assistance delivery to vulnerable people in need. The recent civil war in Sudan that broke

out in 2023, aggravated an already weak capacity of the government to cope with already existing climate and human-made challenges.

7. Since 2019, South Sudan has suffered consecutive years of severe floods that have submerged farmlands, livestock, ancestral homes and infrastructure such as roads and riverbanks. The latest seasonal floods (May-November 2022) are considered one of the worst in the last 30 years. As of December 2022, 1.09 million people (8.6 percent of the population) have been verified as affected across 9 states and 39 counties.[2] Several states in South Sudan have been affected by severe floods in 2022, including Northern Bahr-Ghazal, Unity, Upper Nile, Jonglei, Western Bahr-el-Ghazal. The flood waters seeped into communities and farmlands. During the budding and flowering stages, main-season crops (sorghum, groundnuts, legumes) were destroyed, preventing harvest.

8. Many areas affected in 2022, were also affected in the previous three years, in particular in Unity, Warrap, Jonglei and Upper Nile State.[3] With on average 750,000 to 1 million people affected annually between 2019 and 2022, it is estimated that in some of the most flood-prone areas more than half of the population have suffered recurrent flood impacts over the past four years. While these areas are historically prone to flooding, the extent and duration of the latest sequence of flooding is unprecedented and many communities are finding themselves in a state of protracted climate-related crisis which is compounding their lives and livelihoods. Several states in South Sudan have been affected by severe floods in 2022, including Northern Bahr-Ghazal, Unity, Upper Nile, Jonglei, Western Bahr-el-Ghazal. The flood waters seeped into communities and farmlands. During the budding and flowering stages, main-season crops (sorghum, groundnuts, legumes) were destroyed, preventing harvest.
9. In addition to the food insecurity due to excessive flooding, the civil war in Sudan aggravated an already dire situation for the rural population. The four-month conflict in Sudan has triggered a huge wave of displacement in challenging circumstances. According to UNHCR, more than 300,000 South Sudanese refugees previously hosted by Sudan who are coming as returnees, as well as new refugees from Sudan, have crossed into South Sudan since April 2023. Urgent aid is needed for new arrivals, as well as reintegration into already fragile communities. Investment in basic livelihood, infrastructure, and services in areas where returnees settle is crucial to prevent further displacement, conflict and degradation of the environment.

Country Context

Sectoral and Institutional Context

10. **The conflict in Sudan has worsened already overstretched food security and malnutrition conditions.** Several states in South Sudan have been affected by severe floods in 2022 in the project areas with flood waters seeping into communities and farmlands. During the budding and flowering stages, main-season crops (sorghum, groundnuts, legumes) were destroyed, preventing harvest, and exasperating the food insecurity challenge in the country. The influx of refugees into towns bordering

[2] UNOCHA, 2022. Flood Dashboard. The total number of affected people is estimated at 1.84 million, of which 1.09 million have been verified. Affected people is defined as those that have suffered negative consequences of flooding, including, direct damage to physical assets such as houses, losses due to inundation of cropland or pastures, displacement, health impacts due to waterborne diseases or snake bites, restricted access to education, health, or nutrition sites etc.
[3] World Bank, 2022. GRADE Note on July-November 2022 South Sudan Floods

Sudan, particularly those that are heavily reliant on Sudan for their market supplies, have experienced skyrocketing food prices impacting the purchasing power of market-dependent households. Markets were disrupted due to increased transaction and transportation costs. Adaptable seeds previously imported from Sudan that are normally appropriate for the agro-ecological zones in the northern states must now be procured from elsewhere as the associated transportation costs have increased significantly. The cost of agricultural inputs is also expected to rise because of reduced access to fuel from Sudan, thus putting pressure on fuel supplies that come through the southern border from Uganda and via Juba to the rest of the country. Inflation and the cost of doing business have impacted transportation, food and energy prices, disproportionally affecting disadvantaged communities. Food availability and affordability is further weakened by the rising intercommunal violence, and the global economic challenges brought by the Russia's invasion of Ukraine.

11. **Flooding also affected livestock sector causing animal displacement, proliferation of zoonotic diseases, high livestock mortality and bringing One Health challenges to the affected areas.** Women who are involved preparing food for the household, milk collection and selling have been affected the most. Animal health issues need to be addressed immediately to reduce health hazards for people..

12. **Excessive water brings opportunity to reduce food insecurity.**.. High floodwaters have also brought expanded fishing grounds and high yield potential. However, the current processing methods are not environmentally and food safe, generating lots of fish waste, creating unsanitary conditions, and presenting food safety risks. According to the FAO study, although there is no indication that the fishery resource is over exploited in South Sudan, fish post-harvest losses are estimated to be as high as 62 percent of the total landings. These losses are in quantity and quality, meaning losses in nutritional and market value. They are caused by poor handling, transportation challenges, and inappropriate storage and processing practices. Taking advantage of these potential new opportunities require organizing fishermen/women into fish processing groups, training them on improved post-harvest practices and supporting them with improved post-harvest equipment such as solar driers, fish handling/storage equipment.

13. **The combined effects of the flooding and the influx of returnees and refugees from Sudan have increased the demand for charcoal and firewood for cooking, putting significant pressure on the environment.** Concentrating large numbers of people in one area can also have negative impacts on local ecosystems, which often contribute to people's livelihoods (UNHCR, 2014)[4]. Smoke produced by inefficient cooking methods, such as the traditional three stone fire, exposes household members to a range of deadly chronic and acute health effects such as child pneumonia, lung cancer, chronic obstructive pulmonary disease, and heart disease, as well as low birthweight in children born to mothers whose pregnancies are spent breathing smoke from open fires and traditional cook stoves (GACC, 2014)[5]. The use of fuel-efficient technologies can both reduce the amount of wood extracted from the surrounding environment as well as reduce the exposure to abuse for firewood collectors, predominantly women and children.

[4] UNHCR. 2014. Global strategy for safe access to fuel and energy (SAFE): a UNHCR strategy 2014-2018. UNHCR. Geneva

[5] *Global Alliance for Clean Cookstoves (cleancooking.org)*

C. Proposed Development Objective(s)

Original PDO

The project development objective is to strengthen capacity of farmers and their organizations and improve agricultural production.

Current PDO

There is no change in the PDO with the proposed additional financing (AF)

Key Results

Farmers reached with assets and services financed by the CRW ERF funds
Number of women taking advantage of excess fish as result of the technology support
Number of HH provided with Fuel-Efficient Stoves (FES)(number)

D. Project Description

Component 1 - Capacity Building in Good Agricultural Practices (US$2,000,000)

1. **The proposed AF will support good agricultural practices, agroforestry and good natural resource management skills to farmers and herders**. In addition to scaling up the capacity building activities such as the formation and strengthening of farmer organizations (FOs), and improving farming knowledge supported under the parent project, the proposed AF will finance the following capacity building activities: (i) build knowledge to adapt to climate change with newly introduced rice production methods and technologies; (ii) improve Community Animal Health Workers (CAHWs) skills on fodder production and preservation for better service delivery on animal health services and One Health challenges; (iii) improve knowledge and practices on fish post-harvest processing and handling using proper preservation techniques; and (iv) improve knowledge on environmental protection and alternative environmentally friendly cooking methods.

   i) Build knowledge to adapt to climate change: Flooding has invaded farmland and pasture for livestock and displaced humans and animals. However, it has also availed increased cultivation area due to the abundant moisture. The AF will therefore support capacity building for paddy rice cultivation in addition to sorghum production that was promoted in the parent project. Participants will receive training on Good Agricultural Practices (GAP) on the adaptation of rice cultivation in flood affected areas in rice production, including improved agronomic practices in soil and water management in flood prone areas.

   ii) Improve herder's skills on fodder production and preservation, CAHWs in the delivery of animal health services, improve surveillance of animal diseases and address One Health challenges: The proposed AF will support the training of trainers for 200 livestock keepers on local fodder production, harvesting, processing and preservation technologies such as silage and hay making. Fodder production and the newly introduced technologies will be expected to cascade to other agro-pastoralists based on demand. In addition, 450 CAHWs will be trained to provide required services at the community level when and where flooded locations are cut-off from other service providers. Based on an initial capacity assessment, the proposed AF will provide training/refresher to new and

existing CAHWs and equip them with veterinary kits to deliver community-based animal health services and vaccination programs to agro-pastoralists on a cost recovery basis through privatization of the services led by private lead animal health workers and private agrovets. Preference for the CAHWs training will be given to female candidates who depend on livestock for their livelihood. They will be equipped with knowledge of animal diseases, including ethnoveterinary medicine. They will work with FAO to receive animal vaccination and/or treatment kits under organized cooperatives or unions.

The flooding and the ensuing high number of displaced herds have introduced various animal diseases. The displacements created unsanitary environments that cause infectious diseases, and these diseases require surveillance and reporting. The proposed AF will support the capacity building of herders to increase outbreak surveillance and animal health, monitoring and reporting, as well as disease outbreak investigation in partnership with participating states, counties and CAHWs. The training will target 30 technical staff from the Ministry of Livestock and Fisheries (MLF) at both the central and state levels. They will be trained in disease reporting and laboratory diagnostic sample collection. Flooding resulted also in a high number of animal deaths, some with unsafe disposals, and in some cases consumption of dead animal carcasses posing a public health risk. The CAHWs will therefore be trained in safe methodology of carcass disposal to impart knowledge to the livestock owners in line with the One Health approach. Training of CAHWs will be conducted in line with guidelines and standards set out by the MLF.

iii) Improve knowledge on post-harvest fish handling and processing: One of the positive externalities of the flooding has been the exceptional excess fish along the Nile River and its tributaries. However, the excess fish is poorly processed and managed. The proposed AF will train those involved in the fish post-harvest on the following: (i) organizing fish processing and supporting them through training on post-harvest fish processing, handling and preservation techniques; (ii) providing improved post-harvest fish processing and handling equipment including (drying racks, tarpaulins, knives, basins, crates, fiberglass canoes); (iii) providing improved fish smoking oven; (iv) promoting fish powder and silage production; and (v) promoting market linkage of target groups.

iv) Improve knowledge on environmental protection and alternative environmentally friendly cooking methods: The proposed AF will train both farmers and pastoralists on mechanisms of Farmer-Managed Natural Regeneration, a tree management method that relies on natural vegetation and regenerative capacity. The AF will target the host, returnees, and refugees to create awareness on agro-forestry systems as an alternative to charcoal production. To mitigate and address environmental challenges associated with over extraction of forest resources, youth will be trained to develop upscale environmentally friendly, locally available, and sustainable means of generating household energy. They will particularly be trained to make locally constructed FES.

Component 2 – Investment Support for Improved Agricultural Production (US$27,300,000)

2. **The proposed AF will capitalize on the capacity building in Component 1 to scale up activities under the parent project,** by focusing on improved food production and livelihoods to increase access to food for food insecure households. It will support the following new investment activities: (i) adapt

climate smart technology to enhance rice cultivation; (ii) reduce deforestation through the introduction of new and affordable cooking technology. (iii) support livestock livelihood and animal health; and (iii) provide post-harvest support to fish processing and handling.

i) **Adapt climate smart technology to enhance rice cultivation:** This component will expand support to improve food security and provide alternative source of calory intake in the flooded area. The proposed AF will target 540 households on the adaptation of rice cultivation in flood affected areas. The AF will specifically (i) promote the introduction and cultivation of rice varieties in flood-affected farmland; (ii) enhance capacities in rice production, including improved agronomic practices in soil and water management in flood prone areas; and (iii) support small-scale rice producer groups with post-harvesting equipment such as rice threshers and hullers.

ii) **Promotion of locally constructed FES:** The combined effects of the flooding and the influx of returnees and refugees from Sudan have increased the demand for charcoal and firewood for cooking, putting significant pressure on the environment. In addition to the already stressed situation due to increasing demand for firewood by the host community, the demands for cooking fuel are particularly high in areas hosting large number of displaced people. Flood-displaced people have higher need for cooking fuel and place significant pressure on natural resources. Fishing communities dry their fish using firewood and deforestation is quite high around the fishing camps and communities.

The proposed AF will finance the distribution and promotion the use of fuel-efficient technologies which can both reduce the amount of wood extracted from the surrounding environment and the exposure to abuse for firewood collectors, predominantly women and children and improve the health of households through less inhalation of firewood smoke**.** A total of 5,000 households (3,550 returnees and refugee households and 1,450 flood affected and host communities) will receive FES in the eligible counties. Women and children who spend hours collecting firewood are at risk of Sexual and Gender Based Violence and will be the biggest beneficiary of this investment.

iii) **ii) Support Livestock Livelihood and Animal Health:** The component will provide animal health services in the flooded communities of the project areas, safe disposal of carcasses of dead animals, support the production of animal feed and support woman milk collectors displaced by the flooding:

To promote the One Health approach to avoid transmission and spread of diseases from animals to humans, the proposed AF will support the treatment and deworming of about 200,000 animals against priority livestock parasites in the areas that were affected by the flooding. Some of the diseases that will be treated will include foot rot due to infection with a combination of the bacteria *Fusobacterium necrophorum* and *Dichelobacter nodosus* (mostly in sheep) and *Bacteroides melaninogenicus* (mostly in cattle), and myiasis (infestation with fly larvae (maggots). . The livestock vaccination campaign will target about two million animals against priority livestock diseases such as anthrax, lumpy skin disease, contagious bovine pleuropneumonia, haemorrhagic septicaemia, black leg, sheep and goat pox, contagious caprine pleuropneumonia, *Pest des petits ruminants* (PPR) and rabies. The AF will

support the Central Veterinary Laboratory with diagnostic kits and reagents to facilitate evidence-based vaccination campaign that effectively respond to disease outbreaks.

To help reduce livestock mortality and increase animal production in hard-to-reach areas during the flooding, the proposed AF will support the provision of equipment of two mini laboratories to decentralise the services and early responses. Using early warning information, MLF will pre-position vaccines in the hub in Aweil and other cold chain facilities to support and work with other development partners and use the 450 CAHWs trained under component 1 for the implementation of the livestock campaign. The proposed AF will procure five solar vaccine refrigerators. Additional solar powered cold chain facilities will be installed, and the existing facilities will be strengthened to support the vaccine cold chain network in the target counties.

The proposed AF will also finance the safe disposal of animal carcasses. The excessive flooding caused the death of more than a million of livestock including small ruminants without proper disposal of the carcasses. Carcasses can contaminate water sources and be a precursor of further livestock disease outbreaks, which have the potential to spread and affect humans. In the context of food insecurity, people may reach to carcasses as a source of food, posing the risk of foodborne diseases. To prevent the spread of zoonotic diseases in line with the One Health approach, the proposed AF will support safe carcass disposal. Communities will be sensitized on the importance of carcass disposal and be trained on how to properly dispose of them. Animal carcasses are normally buried underground but when there is widespread flooding, there is potential for underground contamination. Burning is the preferred method of carcass disposal for animals dying from anthrax as outbreaks can reoccur following disturbance of old burial sites especially after flooding.

The proposed AF will support improved livestock feeding. Flooding has dislodged livestock from their natural grazing land. The lack of livestock feed has caused loss of income and is a source of conflict as herders have to trek long distance with their animals in search of grazing land, sometimes encroaching on crops, and generating conflict with farming communities. To mitigate this potential conflict, the AF will support improved livestock feeding through the procurement and introduction of 700 kg of improved fodder seeds. Forage species which are adaptable to the soil and climate will be selected. These include Alfalfa (*Medicago sativa*) and Sudan grass (*Sorghum Sudanese*), which is neutral to alkaline and fertile soils. Other species for consideration include the perennial Blue Panic grass (*Panicum antidotale*), the drought tolerant buffel grass (*Cenchrus ciliaris*) which has high nutritional value for sheep and cattle, high tolerance to drought, and an ability to withstand heavy grazing.

The proposed AF will also procure 10 fodder choppers (for cutting dry and green fodder into small pieces to feed livestock and make it more palatable and nutritional. Agro pastoralists trained on fodder production, and harvesting, processing and preservation technologies such as silage and hay making will be provided with fodder choppers (for cutting dry and green fodder into small pieces to feed livestock). Ability to store feeds is key to survival of livestock during flooding. The proposed AF will introduce and construct feed banks for storage. Site

selection and type of feed banks will be appropriate and commensurate with the flood risk. This is another adaptation that will be introduced to help herders tend to their animals at the face of the changing climatic conditions.

iii) Supporting sustainable fishing, improved fish handling and processing: Abundance of fish from the excess water has not contributed to improved food security and nutrition given the high level of hunger and malnutrition especially in Jonglei State that has huge fish production potential. In the targeted flood affected areas, the existence of under-exploited, but abundant fishery resources provide an opportunity. However, poor processing and preservation practices are common, resulting in the loss of about 50 percent of the total fish harvest in South Sudan. The share that is not lost is kept in unsanitary conditions for human consumption and poses a hazard to the environment. The traditional methods of smoking and drying of the fish is using firewood that is contributing to deforestation and biodiversity loss. The proposed intervention under this proposed AF is to adapt to the challenges brought by the flooding and turn them into opportunities where fisher folk can increase their fish harvest, reduce post-harvest fish losses.

Lack of ice and cold storage facilities coupled with a lack of transportation means and infrastructure, and rudimentary post-harvest processing technologies have contributed to these high post-harvest losses. The problems are further exacerbated by the lack of post-harvest processing skills and lack of awareness on hygiene and sanitation throughout the fish supply chain.

The proposed AF will support fishing communities with equipment for fish handling, processing, and preservation. Twenty Fish Processing Groups (FPGs) will be supported through the provision of fiberglass canoes, solar fish driers and drying racks and post-harvest fish handling equipment such as plastic crates. The FPGs will be able to conserve fresh and processed fish for local markets. A total of 3,000 households (including 1,000 returnees/refugees and 2,000 host community households) will be targeted and organized into 100 fish processing groups. They will also serve as main fresh fish suppliers to fish-processing women groups that will be formed through a related intervention. In the flood affected counties, the existence of under-exploited, but abundant fishery resources provide an opportunity for returnee and host households. In the short-term, the rains and high floodwaters bring expanded fishing grounds and high yield potential, while in the long-term, fisher folk can become beacons for high-protein foods provision in dire situations. The proposed AF aims to support sustainable and healthy fish handling and processing to add value and to reduce waste and reliance on wood cutting for smoking and drying fish. This will be achieved through producing value-added fish products that have longer shelf life (up to 6 months) and enhance their income by linking them with markets for fish products.

The proposed AF will provide improved post-harvest fish processing and handling equipment to women and youth. Women are important actors in the fishery value chain and are traditionally responsible for fish processing (gutting, smoking and drying of fish etc.) as well as the sale of fish. Taking this critical role of women into account, 100 fish processing women groups will be supported through training and provision of improved post-harvest

equipment that enables them to produce fish products that have longer shelf/storage life (up to six months) including fish powder, sun dried fish and smoked fish. The women groups will serve as aggregation hubs where value added fish products are produced. The women groups will be provided with necessary food processing equipment to enable them produce value added fish products. Support provided to women groups will include solar generators (off grid box) and ice making machines, cool boxes, meat mincers/grinders, solar refrigerators, solar dries etc. The women fish processors will receive fresh fish harvested by FPGs. This activity will be linked with the nutrition voucher scheme- whereby value-added fish products produced by the women groups (fish powder, dried fish) will be distributed to food insecure households through the nutrition voucher scheme. Each of the 20 youth groups will be supported through the provision of one motorboat to enhance their ability to collect and transport fish from FPGs and fishing camps to woman fish processing groups.

To improve the sanitary conditions of fish processing, handling and reduce post-harvest losses, the proposed AF will support the construction of fish shades. Lack of hygienic conditions in fish markets, which also serve as sites for fish handling, processing, storing and trading areas contributes significantly to fish post-harvest loss and waste. Sanitary conditions at fish processing sites are very poor. In the existing practice, fish is typically processed and stored on the ground exposing it to contaminants and spoilage especially during rainy season. The existing fish markets lack the required minimum facilities such as shades to protect from direct sunlight and rainfall, concrete floors to facilitate cleaning and waste disposal process, raised slabs to process fish, water tanks, toilets and waste disposal areas to maintain hygiene and environmental sanitation. Considering the above, two open shades that meet basic safety and sanitary requirements will be constructed in Bor and Renk. The fish shades will be managed by local cooperatives or fisher groups.

Component 3 – Project Management and Technical Assistance: US$1.2 million (including US$0.5 million from FS2030 Trust Fund).

3. **Under Component 3, project management activities under the parent project will continue in the proposed AF.** The new activities are related to (i) the provision of additional resources under the Trust Fund to bolster the country's national Food Security Crisis Preparedness Plan, (ii) the provision of disaster risk management equipment for early warning, (iii) dissemination of public early warning messages.

i) **Capacity Building Support for Ministry of Agriculture and Food Security to build Food Security Crisis Response Preparedness Plan.** This activity will be supported by US$0.5million from the Food Systems 2030 (FS2030) Umbrella Program Trust Fund to strengthen the country's capacity to manage future food security crisis. It will provide technical assistance to support the government ins its efforts to revitalize Food Security Council which is a high-level decision-making body for matters relating to food and nutrition security. It will also support the coordination for the implementation FSCPP.

ii) **Downscaling and supporting of climate information through radio programs*:*** MAFS will continue to invest in the development of a robust early warning system in South Sudan through installation of climate

monitoring stations mainly rain gauges. Seven automatic weather stations will be installed in the severely flood affected areas (Aweil East and Twic East) to support the monitoring of climatic-related indicators such as rainfall, river levels, temperature, and production of seasonal meteorological forecast (rainfall and temperature. They will be linked to hydrological forecast and risk planning processes to support early warning systems. To enable tracking of the water levels, 10 river gauges will be installed along the major rivers contributing to the seasonal flooding. The targeted locations of the gauge installations will be done in coordination with the Ministry of Water and Irrigation (MWRI)[6] and will complement the currently limited installed capacity. The data collected from these monitoring stations will complement the data from regional partners like ICPAC and global platforms like MAFS GIEWS in the production of seasonal climatic forecasts and messages as well as other that are being produced by other World Bank funded projects such as the Regional Climate Resilience Program in Eastern and Southern Africa (RCRP, P180171) which is supporting the development of a hydro-informatics program housed at MWRI. The data collected will be shared, analyzed and centralized in the Crop and Livestock Market Information System platform. MAFS will produce monthly weather forecasts, which will be disseminated through radio and other media.

iii) **Public Information for Early Warning:** Effective communication during disaster is crucial to build flood preparedness and response capacities. Proper communication infrastructure and flow will enable critical messages and alerts to reach the most vulnerable and exposed populations in time for decision-making. Radio has proven to be a cost-effective means of communication to reach a large number of exposed populations in flood-affected areas. MAFS will build on its existing functional communication mechanism through radio outreach and purchase 800 units of solar powered radios for distribution to 10 community-based disaster risk reduction committees.

Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Assessment of Environmental and Social Risks and Impacts

E. Implementation

[6] Water project will install 27 gauge stations nationwide and the 10 gauges under this AF will be in different locations except Bor.

Institutional and Implementation Arrangements

The **AF builds on RALP existing institutional structures to oversee and coordinate the project's scaled-up flood response.** The parent project is implemented through the GoSS by the Ministry of Agriculture and Food Security. United Nations Food Agriculture Organization (FAO) is the implementing partner through an output agreement that was signed in 2022 to undertake activities under Component 1 and Component 2. The Single Project Coordination Unit (SPCU) established under MAFS will continue to coordinate the overall project implementation including supervision of FAO's activities, fiduciary management, environment and social (E&S) due diligence and monitoring and evaluation (M&E). The inter-ministerial National Steering Committee (NSC) will continue to be responsible for providing strategic guidance to the project, while the inter-ministerial National Technical Working Group (NTWG) provides key decisions for project implementation such as geographic targeting or reallocation of funds. The two ministries have agreed also to use the same implementation agency.

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APPROVAL

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