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Report No: PAD5488

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF US\$20 MILLION  
FROM THE GLOBAL AGRICULTURE AND FOOD SECURITY PROGRAM

TO THE

REPUBLIC OF RWANDA

FOR A

SECOND SUSTAINABLE AGRICULTURAL INTENSIFICATION AND FOOD SECURITY PROJECT

November 19, 2023

Agriculture and Food Global Practice  
Eastern and Southern Africa Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective October 31, 2023)

Currency Unit = Rwandan Franc (RWF)

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US\$1 = RWF 1,242

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## FISCAL YEAR

July 1 - June 30

Regional Vice President: Victoria Kwakwa

Regional Director: Iain Shuker

Country Director: Keith E. Hansen

Practice Manager: Shobha Shetty

Task Team Leader: Åsa Giertz

## ABBREVIATIONS AND ACRONYMS

AFIRR	Access to Finance for Recovery and Resilience Project
AM	Accountability Mechanisms
AIF	Africa Improved Foods
BAU	Business as Usual
BCC	Behavior Change Communication
BCR	Benefit-Cost Ratio
BNR	National Bank of Rwanda ( <i>Banque Nationale du Rwanda</i> )
CCDR	Country Climate and Development Report
CDAT	Commercialization and De-risking for Agricultural Transformation Project
CDD	Community Driven Development
CDRS	Climate and Disaster Risk Screening
CE	Citizen Engagement
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CGIAR	Consultative Group on International Agricultural Research
CIP	Crop Intensification Program
CPF	Country Partnership Framework
CRI	Core Results Indicator
CSA	Climate-Smart Agriculture
DA	Designated Account
DAP	Di-ammonium Phosphate
DG	Director General
DP	Development Partner
EFA	Economic and Financial Analysis
EICV	Integrated Household Living Conditions Survey
EIRR	Economic Internal Rate of Return
ESCP	Environmental and Social Commitment Plan
E&S	Environmental and Social
ESF	Environmental and Social Framework
ESHS	Environmental, Social, Health and Safety
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
EX-ACT	Ex Ante Carbon-Balance Tool
FAO	Food and Agriculture Organization of the United Nations
FAB	Farming as Business
FBDGs	Food-Based Dietary Guidelines
FCS	Food Consumption Score
FIES	Food Insecurity Experience Score
FM	Financial Management
FMS	Financial Management Specialist
FQM	Food Quality Management
GAFSP	Global Agriculture and Food Security Program

GAP	Good Agriculture Practices
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GoR	Government of Rwanda
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
GRS	Grievance Redress System
ICB	International Competitive Bidding
ICR	Implementation Completion and Results Report
ICT	Information and Communication Technology
ICT4RAg	ICT for Rwanda Agriculture
IFMIS	Integrated Financial Management System
IFR	Interim Financial Report
IMSAR	Improving Market System for Agriculture in Rwanda
INM	Integrated Nutrient Management
IPF	Investment Project Financing
IPMP	Integrated Pest Management Plan
IPSAS	International Public Sector Accounting Standards
KCB	Kenya Commercial Bank
KOICA	Korea International Cooperation Agency
KPI	Key Performance Indicator
LCS	Least Cost-based Selection
LMP	Labor Management Procedures
LRP	Livelihoods Restoration Program
LWH	Land Husbandry, Water Harvesting, and Hillside Irrigation Project
M&E	Monitoring and Evaluation
MFI	Microfinance Institution
MINAGRI	Ministry of Agriculture and Animal Resources
MINECOFIN	Ministry of Finance and Economic Planning
MIS	Management Information System
NCB	National Competitive Bidding
NDC	National Determined Contributions
NISR	National Institute of Statistics of Rwanda
NPK	Nitrogen, Phosphorus and Potassium
NPV	Net Present Value
NSA	Nutrition-Sensitive Agriculture
NST	National Strategy for Transformation
O&M	Operations and Maintenance
OAG	Office of the Auditor General
OHS	Occupational Health and Safety
OP	Operational Policy
PA	Paris Agreement
PDO	Project Development Objective
PEFA	Public Expenditure and Financial Accountability

PFM	Public Financial Management
PforR	Program-for-Result
PIM	Project Implementation Manual
PMP	Pest Management Plan
PPP	Public-Private Partnership
PPSD	Project Procurement Strategy for Development
PRAMS	Procurement Risk Assessment and Management System
PSC	Project Steering Committee
PSTA	Strategic Plan for Agriculture Transformation ( <i>Plan Stratégique pour la Transformation Agricole</i> )
QCBS	Quality and Cost-based Selection
RAB	Rwanda Agriculture and Animal Resources Development Board
RAP	Resettlement Action Plan
REMA	Rwanda Environment Management Authority
ERP	Rwanda Economic Recovery Program
RF	Results Framework
RFQ	Request for Quotations
RPF	Resettlement Policy Framework
RPPA	Rwanda Public Procurement Authority
RSB	Rwanda Standards Board
RSSP	Rural Sector Support Project
RWF	Rwandan Franc
SAIP	Sustainable Agricultural Intensification and Food Security Project
SBD	Standard Bidding Document
SC	Steering Committee
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan
SHG	Self-Help Group
SME	Small and Medium Enterprises
SORT	Systematic Operation Risk Rating Tool
SPD	Standard Procurement Documents
SPIU	Single Project Implementing Unit
SSIT	Small Scale Irrigation Technology Development Program
STEP	Systematic Tracking of Exchanges in Procurement
TA	Technical Assistance
TFP	Total Factor Productivity
ToC	Theory of Change
ToT	Training of Trainers
UN	United Nations
VfM	Value for Money
WFP	World Food Program
WUA	Water Users Association



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DATASHEET

BASIC INFORMATION

Project Beneficiary(ies) Rwanda	Operation Name SECOND SUSTAINABLE AGRICULTURAL INTENSIFICATION AND FOOD SECURITY PROJECT		
Operation ID P181077	Financing Instrument Investment Project Financing (IPF)	Environmental and Social Risk Classification Substantial	

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternative Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)

Expected Approval Date 17-Nov-2023	Expected Closing Date 31-Dec-2026
Bank/IFC Collaboration No	

Proposed Development Objective(s)

To increase agricultural productivity, market access, and food security of the targeted beneficiaries in the project areas.

Components

Component Name	Cost (US\$)
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Component 1: Institutional Strengthening, Agriculture Productivity Enhancement, and Nutrition Improvement	6,810,000.00
Component 2: Irrigation and Water Use Efficiency	6,190,000.00
Component 3: Market Linkages and Value Addition Investments Support	4,000,000.00
Component 4: Project Management and Technical Assistance	3,000,000.00

**Organizations**

Borrower: Republic of Rwanda  
 Implementing Agency: Rwanda Agriculture and Animal Resources Development Board (RAB)

**PROJECT FINANCING DATA (US\$, Millions)**

**Maximizing Finance for Development**

Is this an MFD-Enabling Project (MFD-EP)? Yes

Is this project Private Capital Enabling (PCE)? Yes

**SUMMARY**

<b>Total Operation Cost</b>	<b>23.00</b>
<b>Total Financing</b>	<b>23.00</b>
<b>Financing Gap</b>	<b>0.00</b>

**DETAILS**

**World Bank Group Financing**

**Non-World Bank Group Financing**

Commercial Financing	3.00
Unguaranteed Commercial Financing	3.00
Trust Funds	20.00
Global Agriculture and Food Security Program	20.00





**Expected Disbursements (US\$, Millions)**

WB Fiscal Year	2024	2025	2026	2027
Annual	2.10	6.27	6.87	4.76
Cumulative	2.10	8.37	15.24	20.00

**PRACTICE AREA(S)**

**Practice Area (Lead)**

Agriculture and Food

**Contributing Practice Areas**

Health, Nutrition & Population

**SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)**

**Risk Category**

**Rating**

1. Political and Governance	● Moderate
2. Macroeconomic	● Substantial
3. Sector Strategies and Policies	● Low
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Moderate
6. Fiduciary	● Moderate
7. Environment and Social	● Substantial
8. Stakeholders	● Low
9. Other	
10. Overall	● Moderate

**POLICY COMPLIANCE**

**Policy**

Does the project depart from the CPF in content or in other significant respects?

Yes  No



Does the project require any waivers of Bank policies?

Yes    No

Have these been approved by Bank management?

Yes    No

Is approval for any policy waiver sought from the Board?

Yes    No

**ENVIRONMENTAL AND SOCIAL**

**Environmental and Social Standards Relevance Given its Context at the Time of Appraisal**

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4: Community Health and Safety	Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8: Cultural Heritage	Relevant
ESS 9: Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

**LEGAL**

**Legal Covenants**

**Sections and Description**

**Conditions**



Type	Citation	Description	Financing Source
Effectiveness	Article V 5.01.	(a) The execution and delivery of this Agreement on behalf of the Recipient and the Project Agreement on behalf of the Project Implementing Entity have been duly authorized or ratified by all necessary governmental and corporate action; (b) The Subsidiary Agreement has been executed on behalf of the Recipient and the Project Implementing Entity; (c) The Recipient has prepared and adopted the Project Implementation Manual (except the Matching Grant’s Manual Annex) in form and substance acceptable to the Association; (d) The Recipient has adopted the disclosed Environmental and Social Management Framework, including EHS and SEA/SH, the Labour Management Procedures , the Resettlement Policy Framework and the Stakeholder Engagement Plan in form and substance acceptable to the Association; (e) The Recipient through the Project Implementing Entity has recruited or appointed to the RAB-SPIU an environmental safeguards specialist and a social safeguards specialist , with experience,	Trust Funds



		qualifications, and under terms of reference acceptable to the Association, and in accordance with the Procurement Regulations.	
Disbursement	SCHEDULE 2, Section III. B. 1.	Notwithstanding the provisions of Part A of this Section no withdrawal shall be made: (a) for payments made prior to the Signature Date;	Trust Funds
Disbursement	SCHEDULE 2, Section III. B. 1.	(b) Under Category 2, no withdrawal shall be made, unless and until the Recipient has prepared and adopted the Matching Grant’s Manual (annexed to the PIM) in form and substance acceptable to the Bank.	Trust Funds
Disbursement	SCHEDULE 2, Section III. B. 1.	(c) Under Category 3, no withdrawal shall be made unless and until the Service Agreement has been executed and delivered to the Bank in a manner satisfactory to the Bank.	Trust Funds



## I. STRATEGIC CONTEXT

### A. Country Context

1. **Rwanda is one of Africa's fastest growing economies and has set high goals for continued economic development.** For the past 26 years, Rwanda has seen an average annual Gross Domestic Product (GDP) growth of 7.78 percent<sup>1</sup>. The largest sector is the service sector, contributing 47 percent of GDP, followed by agriculture (25 percent)<sup>2</sup> and manufacturing (21 percent)<sup>3</sup>. Rwanda's vision is to become an upper-middle income Country by 2035 and a high-income Country by 2050, which requires an annual growth rate that exceeds 12 percent. The World Bank also estimates that for Rwanda to reach middle-income status, private sector investments need to almost triple, from 13 percent of GDP in 2023 to 32 percent of GDP in 2035. Demographically, Rwanda is a young country with about half the population being under 20 years<sup>4</sup>, therefore job creation, especially for young people, is also key for continued growth.

2. **The outbreak of the COVID-19 pandemic pushed Rwanda's economy into its first contraction since 1994 and the country is since on a slower growth trajectory, faced by multiple challenges.** The GDP in real terms dropped to -3.4 percent in 2020, compared to an expansion of 8 percent anticipated before the COVID-19 outbreak<sup>5</sup>. In comparison with 2018, the food security situation in Rwanda deteriorated by 2 percent<sup>6</sup>. The current global food, fuel, and fertilizer prices levels have negatively impacted Rwanda's recovery and led to dramatic price increases. Driven by increasing fuel and fertilizer prices in combination with a poor growing season, Rwanda is currently experiencing the 7th highest food inflation in the world<sup>7</sup>. Overall inflation increased, mostly driven by the drastic rise in food crop prices. The Consumer Price Index since April 2022 increased by 28.4 percent (35.9 percent in rural areas) on an annual basis<sup>8</sup> affecting the purchasing power of most Rwandans more, especially poor households.

### B. Sectoral and Institutional Context

3. **The agriculture sector is at the center of the Rwandan economy and the country's growth strategy is in part based on the expected transformation of the agriculture sector; nevertheless, productivity needs to increase significantly for the sector to continue to be one of the main drivers of growth and real income opportunities.** 82 percent of Rwanda's population live in rural areas, 69 percent of all households are engaged in crop or livestock production, and the sector engages 55 percent of the labor force and almost 80 percent of the female labor force<sup>9</sup>. Ranking second in size in the economy, behind the service sector, the agriculture sector dominates Rwanda's exports, accounting for about 50 percent of total exports. Farming accounts for 33 percent of all new jobs created in the Rwandan economy and there are high expectations for agriculture to not just provide employment for a growing rural population but also generate higher-quality jobs that will reduce poverty. Further, the country very much relies on domestic food production for consumption.

4. **The transformation in agriculture needs to build on competition and innovation and achieving higher productivity rates through private sector-led investment and development.** Productivity remains moderate in Rwanda

<sup>1</sup> World Bank national accounts data

<sup>2</sup> Rwanda Vision 2050, page 9

<sup>3</sup> GDP National Accounts, NISR, 2022, page 5

<sup>4</sup> Gender and Youth Mainstreaming Strategy, 2019, page 26

<sup>5</sup> GDP National Accounts, 2020, page 6

<sup>6</sup> Comprehensive Food Security & Vulnerability Analysis, CFSVA, 2021, page vi

<sup>7</sup> Consumer Price Index, NISR, May 2023, page 1

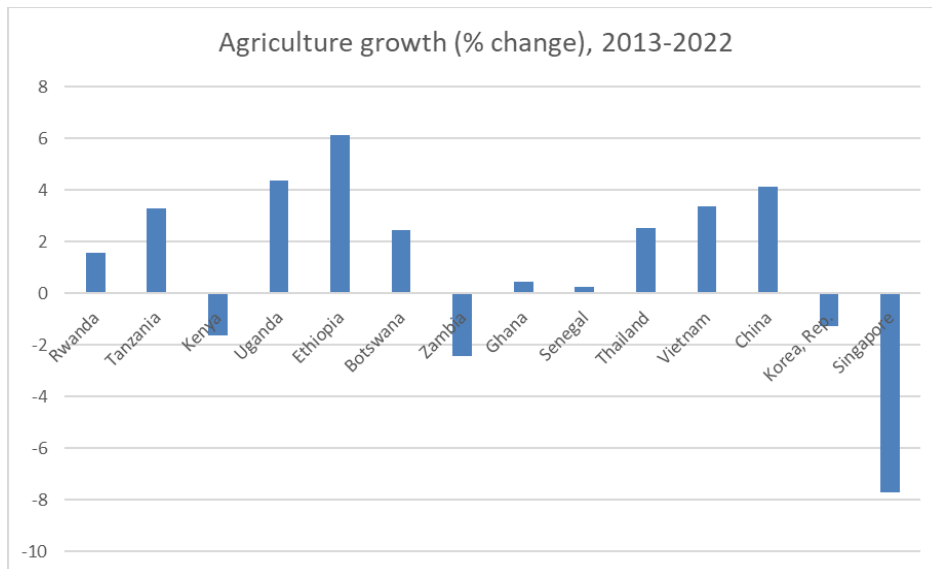
<sup>8</sup> World Bank Food Security Updates of October 27, 2022, page 13

<sup>9</sup> WFP Rwanda Country Brief, April 2023



compared with East African averages. In recent years (2022-23), average productivity of major crops in the main agriculture seasons were 1.7 tons/ha for maize, 0.98 tons/ha for beans, 8.2 tons/ha for Irish potatoes, 0.63 tons/ha for beans, 6.3 tons/ha for Irish potatoes, 8.1 tons/ha for vegetables, and 6.3 tons/ha for fruits products<sup>10</sup>. However, these numbers remain below regional averages, and range between three to six times less compared to regional countries with the best productivity levels. Prices for fertilizers have increased significantly, which has led to less fertilizer use and less food production. Between 2017 and 2021, fertilizer prices increased by about 26 percent for Urea, and about 16 percent for the Di-ammonium Phosphate (DAP)<sup>11</sup> and Nitrogen, Phosphorus and Potassium (NPK) 17-17-17<sup>12</sup>. DAP and Urea prices almost doubled in just one year, between 2021 and 2022, and more than doubled for NPK, with an increase of about 115 percent. As a result, the use of inorganic fertilizers was reduced by more than 2 percent in one year<sup>13</sup> after an increase of over 10 percent in the previous 5 years. The price of fuel has also increased drastically and has led to high transport costs that impact food imports and distribution within the country. Together with market driven research and seed systems, an increased private sector engagement will be important to drive the necessary transformation of the agricultural sector. More private sector investments are needed both on and off-farm in the agri-food sector. Experience from the Sustainable Agriculture Intensification and Food Security Project (SAIP) (P164520), hereafter referred to as SAIP I, has shown that where smallholder farmers organizations had strong market arrangements with agribusinesses; off-takers and processors, it facilitated better access to inputs and extension services, increased use of irrigation and greenhouse farming; which had a positive effect on productivity levels, increased value addition opportunities, and farmers generated revenues.

Figure 1: Agriculture Growth 2013-2022 (percent)



5. **Continued agricultural growth will also depend on the expansion of irrigation, water use efficiency and sustainable intensification of good agriculture practices.** Rwanda is one of the most densely populated African countries, and access to farmland has deteriorated markedly due to demographic pressure and slow transition from farm to off-farm livelihoods. The share of households with less than 0.3 hectares of land has increased by about 10

<sup>10</sup> NISR, Seasonal Agricultural Survey, Season A 2023

<sup>11</sup> Diammonium Phosphate is a phosphorus and nitrogen-based fertilizer for plant nutrition.

<sup>12</sup> an all-purpose fertilizer containing a balanced blend of nitrogen, phosphorous and potassium.

<sup>13</sup> Seasonal Agriculture Surveys, NISR, 2021, 2022



percentage points from 2011 to 2017<sup>14</sup>. Area growth has been a major driver of agriculture growth in the past, and productivity increases are necessary for sustained growth. Irrigation is a key component for this, with climate variability being increasingly visible. Rainfall patterns are highly variable and with climate change, long-lasting dry spells are projected to increase by the end of the century. Nevertheless, annual rainfall is expected to increase, especially in the main rainy season in December to April, but with drier periods from July to September. Overall, Rwanda's water balance is expected to increase<sup>15</sup>. Only about 68,000 ha of land are irrigated against a potential 500,000 ha<sup>16</sup> out of 1.37 million hectares of land used for agriculture production<sup>17</sup>. Only 10 percent of households used any irrigation in 2017, and two thirds of them relied on traditional methods. There are also large gender discrepancies with regards to access to irrigation, with only 6.4 percent of women having access compared with 11.5 percent for men, which contribute to the 12 percent gender productivity gap in agriculture<sup>18</sup>. A general perception seems to be that women do not grow irrigated crops, but representation in Water User Associations (WUAs) has been identified as a key impediment to women's access to irrigation. Promoting the uptake of Small-Scale Irrigation Technology (SSIT) is an integral part of the Government of Rwanda's (GoR) strategy and program. The main constraining factors for smallholder farmers to develop irrigation is access to finance, followed by access to knowledge and technology<sup>19</sup>. For women, this is particularly relevant as the gender gap to access finance is notable (18 percent compared with 23 percent for men)<sup>20</sup>. However, funding has been limited. Similarly, ensuring water use efficiency and adequate management capacity of existing WUAs is key for the future sustainability of existing irrigation systems, including those invested in under the Land Husbandry, Water Harvesting, and Hillside Irrigation Project (LWH) (P114931).

**6. The decrease in food insecurity has stagnated, malnutrition remains high, and building human capital for future competition faces challenges.** After a period of declining food insecurity, the lower-than-normal harvests and food price increases resulted in a 2 percent increase in food insecurity since 2018. In 2021, 20.6 percent of the Rwandan population was food insecure (of which 1.8 percent was severely food insecure)<sup>21</sup>. Wasting rates among children under 5 years increased slightly, from 2 percent to 2.4 percent in this same period. About two-thirds of the food consumed by households is bought at markets, and the rest from own farm produce or other sources. For the poorest segments of the population, food expenditures constitute a significant share of their incomes, with a quarter of Rwandans spending almost two thirds of their incomes on food and a stunning 88 percent of Rwandans cannot afford a healthy diet<sup>22</sup>. Cereal, roots, and tubers account for more than 50 percent of the diet, fruits and vegetable consumption is below the recommended intake and domestic supply of livestock sourced food is low. As a result, malnutrition is still prevalent even though Rwanda has taken big strides in fighting malnutrition. Childhood stunting decreased from 48 percent in 2000 to 32.4<sup>23,24</sup>. Rwanda's work force is young and 77 percent of that is under 34 years old and live in rural areas. Less than 20 percent of the population have attended high school or above, and less than 1 percent have attended a vocational school.

<sup>14</sup> Systematic Country Diagnostic, World Bank, 2019

<sup>15</sup> Rwanda Climate Risk Profile, World Bank ([https://climateknowledgeportal.worldbank.org/sites/default/files/2021-09/15970-WB\\_Rwanda%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-09/15970-WB_Rwanda%20Country%20Profile-WEB.pdf))

<sup>16</sup> Irrigation Master Plan, 2019

<sup>17</sup> 2023A Seasonal Agriculture Survey, National Institute of Statistics of Rwanda (<https://www.statistics.gov.rw/publication/1930>), 2023

<sup>18</sup> Rwanda Agriculture Gender and Youth Mainstreaming Strategy, 2019, and Assessing the Implementation, Accountability of "Gender and Youth mainstreaming strategy in agriculture 2019-2026", 2021

<sup>19</sup> World Bank Farmer Led Irrigation Development FLID Report, 2021

<sup>20</sup> Rwanda Agriculture Gender and Youth Mainstreaming Strategy, 2019, and Assessing the Implementation, Accountability of "Gender and Youth mainstreaming strategy in agriculture 2019-2026", 2021

<sup>21</sup> WFP Comprehensive Food security and Vulnerability Analysis (CFSVA, 2021)

<sup>22</sup> Food Prices for Nutrition Database

<sup>23</sup> Rwanda 2019-20 Demographic and Health Survey, Summary report

<sup>24</sup> The Food Systems Dashboard Rwanda Country Profile (<https://www.foodsystemsdashboard.org/countries/rwa>, accessed July 11, 2023)



7. **The impacts of COVID-19 and the past years' global spikes in fertilizer prices, in combination with the effects of climate change are seen as the most imminent challenges currently in Rwanda. In 2021, the country developed the Rwanda Economic Recovery Plan (RERP) to address some of the impacts of these challenges.** Specifically in the Agriculture sector, a priority of the plan is to: "Ensure food self-sufficiency by increasing agricultural production." The RERP provides among other things for concerted effort in seasonal crop intensification, partial subsidies for agricultural inputs and Irrigation equipment, maintenance and rehabilitation of marshlands, support to mechanization, and increasing resources for the National Strategic Food Reserves to guarantee food security for the Rwandan population targeting youth and women. The plan also calls for increased national aggregation and supply capacity, subsidizing airfreight for exporters as well as supporting farmers to guarantee Rwanda horticultural exports. Domestic production has a significant impact on food prices. An analysis of monthly inflation in Rwanda shows that since 2009, peak inflation correlated with adverse weather events in 8 out of 11 cases and in all but one case was the inflation higher than at the three times under favorable weather conditions. Further, in response to recent years' global increases in food, seeds and fertilizer prices at a level never experienced before, the government has invested heavily in irrigation equipment, seeds and fertilizer subsidy interventions aimed at maintaining food production. Additionally, Rwanda has invested in a fuel subsidy to reduce the high transport costs impacting food importation and distribution within the country. To mitigate the impact of climate change such as short rainy seasons and prolonged dry seasons, as well as persistent delayed rains that negatively impact agriculture, the Government has invested in marshland irrigation development and rehabilitation, hillside irrigation development as well as subsidizing Small-Scale Irrigation equipment to reduce dependency on rainfall while increasing productivity.

8. Following its approval in December 2018, the US\$32.29 million SAIP I successfully addressed many of the obstacles to the GoR's priorities and generated substantial results which, through SAIP II, the GoR intends to scale-up in current sites in the 9 Districts of interventions and scale out to new project areas in additional 11 Districts to impact more beneficiaries. SAIP II will keep the design and components of SAIP I and retain its development objective of *increasing agricultural productivity, market access, and food security of the targeted beneficiaries in the project areas*. SAIP II will also complement the US\$300 million Commercialization and De-risking of Agricultural Transformation (CDAT) Project, which was approved by the World Bank Board in April 2021. Most of the CDAT resources are allocated to investments in irrigation, value chain development, and access to finance. While CDAT draws from SAIP's approaches of strengthening producer organizations and water user associations, and linking farmers to markets, the two projects are targeting different sites. Moreover, as opposed to CDAT, which focuses on investments in public infrastructure and value addition activities, SAIP has a key role in providing TA and strengthening food and nutrition security in rural areas. To ensure complementarity and that SAIP II will not crowd out CDAT's credit line, the proposed Matching Grants Program under SAIP II will finance smaller investments.

### C. Relevance to Higher Level Objectives

9. **The project is aligned with the fourth objective of increased agricultural productivity and commercialization of the World Bank Country Partnership Framework (CPF) for Rwanda (FY21–26, Report No. 148876-RW).** Modernizing the agri-food sector and increasing its responsiveness to market signals are key avenues to promote high growth and achieve this CPF objective. Critical elements to achieve these goals include moving up agribusiness value chains, leveraging more private sector investment, enabling the delivery of improved services and commercialization, promoting nutrition-sensitive and climate-resilient technologies and infrastructures, which are all reflected in SAIP II design and interventions. These same interventions will also contribute to both (i) the new vision and mission of the World Bank "to create a world free of poverty on a livable planet", and (ii) the World Bank Africa Strategy. Activities of the Project will aim at improved food security and increased income generation opportunities, which will be inclusive to ensure outcomes also reach the poorest households in intervention areas, and address constraints faced by youth and women to reach these objectives,





in an environmentally sustainable manner. SAIP II will also integrate interventions to respond to Rwanda's priorities as detailed in the Country Climate and Development Report (CCDR) Report number 176403, on People and Resource-oriented Nature-Smart Development, actions for soil-conscious conservation agriculture, and water infrastructure development and management. The World Bank Group agri-food sector interventions under the CPF and CCDR have fully embedded these priorities to support the sector development objectives and the delivery of the GoR's Fourth Strategic Plan for Agricultural Transformation (PSTA-4) results.

10. **SAIP II will continue to support the national strategies for the agricultural sector as reflected in the National Strategy for Transformation (NST) 2017–2024, the PSTA4 2018–2024, and the RERP.** The project will contribute to the four NTS pillars, which focus on a productive, green, and market-led agricultural sector: (a) productivity and commercialization for food security, nutrition, and incomes; (b) resilience and sustainable intensification; (c) inclusive employment and improved farmers' skills; and (d) an effective enabling environment and responsive institutions. Further, the project will contribute mostly to two PSTA4 priorities: (i) productivity and commercialization for food security, nutrition, and incomes; and (ii) resilience and sustainable intensification. Additionally, the project will contribute to the RERP objectives of crop intensification, support to strategic food security crops such as maize and beans, financial support to small-scale irrigation equipment, increased aggregation and supply capacity, and investments in the horticulture supply chain.

11. **The project is consistent with Rwanda's climate strategies and the Paris Agreement (PA) commitments.** The project design is well aligned with the 2020 update of Rwanda's Nationally Determined Contribution (NDC). The agriculture sector commitments towards mitigation measures and adaptation interventions are fully aligned with the objectives of the National Agriculture Policy, and delivery strategies outlined in the PSTA4. In the latest NDC submitted to the United Nations Framework Convention on Climate Change (UNFCCC), Rwanda commits to a reduction of 16 percent relative to the Business-as-usual (BAU) baseline in 2030 in the unconditional pathway, and an additional 22 percent decrease with international support. In total, this is a combined unconditional and conditional contribution of 38 percent reduction in Greenhouse Gas (GHG) emissions compared to BAU in 2030, equivalent to an estimated mitigation level of up to 4.6 million tons of carbon dioxide equivalent (tCO<sub>2</sub>e) in that year. Among the planned mitigation measures, SAIP II will contribute to soil conservation measures and livestock management measures, which in the NDC account for at least half of the agriculture sector's potential. These include conservation tillage, multi-cropping and crop rotation practices, and improved fertilizer efficiency (including compost production and use). Findings from the climate and disaster risk screening (CDRS) conducted for SAIP II reveal that rainy seasons are becoming shorter and more intense, which has resulted in increased erosion and floods risk in the mountainous areas of the country's northern and western provinces. The screening also showed that frequent rainfall deficits and prolonged seasonal droughts are expected, which will cause problems especially in the east and southeast of the country. Rwanda's adaptation contribution prioritizes 24 adaptation interventions in different sectors, and among these, 6 are in agriculture. The project will directly integrate four of them in its interventions for crop related interventions: (i) develop climate resilient crops and promote resilient livestock (by promoting drought tolerant and disease resistant seed varieties in targeted value chains); (ii) develop climate resilient post-harvest and value addition facilities and technologies; (iii) strengthen crop management practices; and (iv) expand irrigation and improve water management. SAIP II will also indirectly contribute to the remaining two interventions of: (v) expansion of crop and livestock insurance (by mobilizing its beneficiaries to leverage crop insurance products supported by the CDAT project - P171462); and (vi) developing sustainable land use management practices (by promoting and supporting sustainable operation and maintenance practices in irrigated and terraced watershed areas used by beneficiaries). All these interventions fully align with Rwanda's Green Growth and Climate Resilience Strategy<sup>25</sup>, which aims to transform the country into a developed, climate-resilient, and low-carbon economy by 2050. The strategy has among its key objectives

<sup>25</sup> The Rwanda's Green Growth and Climate Resilience Strategy was initially developed in 2011, and was updated in June 2023 (Over view here: <https://www.environment.gov.rw/index.php?eID=dumpFile&t=f&f=69695&token=adb3cc9f417d1562b9b20aa2b2ee99b0abaa8a5e>)



to achieve sustainable land use and water resource management that results in food security, preservation of biodiversity and ecosystem services. The above measures and interventions are also aligned with the Rwanda CCDR priorities on increasing agriculture’s resilience to climate change. For successful implementation of related activities, the CCDR calls for agronomic information extension and training of farmers which will be one of the key project interventions to reach its development objectives.

## II. PROJECT DESCRIPTION

### A. Project Development Objective (PDO)

#### PDO Statement

12. To increase agricultural productivity, market access, and food security of the targeted beneficiaries in the project areas.

#### PDO Level Indicators

13. The PDO-level indicators are the following:

- a. Percentage increase in harvested yield of targeted crops.
- b. Percentage increase of produced commodities in targeted value chains marketed by participating producers.
- c. Food Consumption Score.
- d. Number of farmers adopting improved agricultural technology, disaggregated by gender.

### B. Project Components

14. SAIP II will be a continuation of SAIP I, which has been under implementation since December 2018 and is scheduled to close in August 2024. SAIP II will consolidate the results and scale-up the ongoing SAIP I activities under four major nutrition-sensitive value chains: (a) vegetables and fruits for domestic, regional, and international markets; (b) maize for domestic and regional markets; (c) Irish potato for domestic and regional markets; and (d) beans for domestic markets. These value chains were selected based on: (a) market and growth potential (unmet demand, potential for productivity gains, and value addition); (b) relevance and development impact (nutrition improvement, opportunities for on- and off-farm employment, and income-generation potential); and (c) reflection of strategic factors (national priority crops) and potential impact of the project and feasibility for change. SAIP II will maintain the four SAIP I components. It will also integrate lessons learned from SAIP I implementation to ensure efficiency, and achievement of enhanced results.

#### **Component 1: Institutional Strengthening, Agriculture Productivity Enhancement, and Nutrition Improvement (US\$6.81 million)**

15. The component will strengthen selected farmer organizations for improved agricultural productivity and healthier household nutrition. Specifically, the project will work closely with youth groups to serve as service providers for specific activities. Further, it will support farmers to shift from subsistence to commercial oriented agriculture. Replicating the approach under SAIP I, the project will provide TA and support the implementation of the component with Farmer Field Schools and farming as business (FAB) approaches. Based on lessons under SAIP I and responding to food systems, the project will further strengthen existing capacity building programs in Integrated Pest Management (IPM) as well as introduce a new area in Integrated Nutrient Management (INM) and Food Quality Management (FQM). The component has three sub-components.



16. **Sub-component 1.1. Strengthening farmers' organizations (US\$0.65 million)**<sup>26</sup>. This subcomponent will finance ongoing capacity building programs such as FAB, Cooperative Management, Entrepreneurship Development, Good Agricultural Practices (GAP), Post-harvest management, Agro-processing and Value addition and new programs including IPM, INM, FQM and Climate Smart Agriculture (CSA) practices. The project will implement specific and tailored capacity building interventions to empower youth and women's leadership and management skills. These interventions will increase their capacity for addressing identified challenges and constraints they face so that they actively participate in decision making, promote inclusion and improve their access to agricultural finance and productive services.

17. **Sub-component 1.2. Agricultural productivity enhancement (US\$4.5 million)**. This subcomponent will finance: (i) the development of model farms to promote the use of agricultural inputs such as fertilizers; lime; new, hybrid, drought tolerant and disease resistant seed varieties with high market demand for crop commodities produced down the value chain, agroforestry management, and other good agricultural practices; (ii) matching grants and TA to private actors and producer organizations for seeds production; (iii) matching grants for investments in on-farm mechanization across value chains; (iv) awareness and capacity building for farmers and producer organizations to access available agriculture finance and agriculture insurance products; and (v) matching grants to finance protected agriculture. Specific windows of the matching grant facility will be created for women, youth, and vulnerable groups to address their specific challenges that limit agricultural productivity. Interventions will also include the promotion and support of conservation agriculture practices, including the maintenance of areas developed with sustainable land management.

18. **Sub-component 1.3. Improving nutrition outcomes at household level (US\$1.66 million)**. This subcomponent will improve nutrition outcomes at household level among beneficiary households by: (i) raising awareness on utilization benefits of nutritious foods (including fruits and vegetables) to improve dietary diversity through Social Behavior Change Communications, capacity building (information on relevant foods like soy and mushrooms) and cooking demonstrations for communities in partnership with the Government's Community Health Workers; and (ii) promoting post-harvest storage and management, food preservation and utilization. For the poor and vulnerable households in targeted areas, the project will finance interventions to: (iii) increase availability of diverse plant-based food, including biofortified crops, mushrooms, and fruits; and (iv) ensure availability of animal protein for household consumption.

## **Component 2: Irrigation and Water Use Efficiency (US\$6.19 million)**

19. Component 2 will finance small-scale irrigation, water use efficient technologies within existing irrigated schemes, and strengthening of irrigation capacity to promote climate-smart agriculture. The project will target smallholder farmers, extension workers, and irrigation scheme managers, particularly those in vulnerable agroclimatic areas, to help improve their resilience to climate variability, increase their crop productivity and profitability, and promote sustainable agricultural practices. Implementation of the component will integrate the diagnostic findings of "Catalyzing Small-scale Irrigation Development in Rwanda":

20. **Sub-component 2.1. Support Climate Smart and Efficient Irrigation Interventions (US\$5.24 million)**. This subcomponent will finance CSA technologies to help targeted farmers cope with the impact of climate change. This includes access to affordable and sustainable irrigation technologies, and provision of matching grants for small-scale irrigation equipment in line with the GoR's subsidized SSITs Development Program. The SSITs will follow climate-resilient design standards and energy-efficiency considerations such as solar powered water pumps for small-scale irrigation to maximize the project's adaptation and mitigation climate co-benefits, respectively. As per the Government SSIT guidelines, beneficiaries will include individual farmers or groups of farm owners of consolidated areas covering between 0.5 hectares

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<sup>26</sup> Budget allocations at subcomponent level are indicative and may change during implementation.



and 10 hectares. If SSIT beneficiaries are farmer organizations, subcomponent 2.2 will support the establishment and training of WUAs.

21. Based on the SAIP I experience, SAIP II aims to enhance the scalability of successful technologies and practices to improve water use efficiency within existing irrigation schemes, primarily built by previous projects such as the LWH and RSSP, by targeting at least an additional 600 hectares to SAIP I achievements. Moreover, the project will facilitate access to small-scale irrigation equipment for farmers by offering matching grants and comprehensive support packages, including maintenance assistance and the development of business plans. As a result, an additional 1,000 hectares of agricultural land will be able to benefit from the utilization of SSITs and techniques. The project will include interventions to improve the SSIT program efficiency in both its administration and in costs borne by farmers.

22. **Sub-component 2.2. Strengthen irrigation management capacity (US\$ 0.47 million).** The project will follow guidance from the Ministry of Agriculture and Animal Resources (MINAGRI's) new Irrigation Development Strategic Plan to introduce improved irrigated agricultural management. This subcomponent will finance on-farm training in the handling, assembling, and proper use of different irrigation equipment to improve adaptation rates and improve irrigation practices among farmers. It will facilitate the establishment of new WUAs for farmers applying for SSIT technologies in groups for their consolidated land, strengthen the organizational capacity and governance of existing ones, and train WUAs and farmer groups on water management, irrigation system operation and maintenance, and irrigation service fee collection, in existing irrigated schemes. Women and vulnerable groups, such as old and disabled farmers, which are currently under-represented will be specifically targeted through sensitivity and capacity training to promote their participation in WUAs and farmer groups. Through a specific program, local youth will be trained in various skills to facilitate the community to sustainably manage the irrigation schemes.

### **Component 3: Market Linkages and Value Addition Investments Support (US\$4 million)**

23. As a consolidation and scale-up of efforts undertaken by the LWH, third Rural Sector Support Project (RSSP3) (P126440) and SAIP I, component interventions will enhance market linkages and value addition by strengthening the capacity of farmer organizations and other value chain actors and improving their access to finance.

24. **Sub-component 3.1. Capacity building to foster market linkages (US\$0.5 million).** The subcomponent will finance training to improve the capacity of farmers' organizations and value chain actors to reduce postharvest losses and enhance the quality of produce, and facilitate linkages to both domestic, regional and international markets. Key interventions will include training for beneficiaries to improve food quality and safety, and TA to meet required certification standards to ease access to domestic and export markets. Interventions will also aim to improve the organization of local traders in different value chain platforms as well as strengthen linkages between producers and buyers. The TA will complement these to improve food safety, such as the elimination of aflatoxin contamination, and overall quality enhancement in all stages of food products processing, packaging, and preservation. These interventions will directly be linked with activities under component 1, to support business planning skills development for targeted beneficiaries. The project will create awareness and build capacity for beneficiaries to leverage available access to finance opportunities, including those offered under the CDAT project. The project will also assist beneficiaries in the dialogue with Financial Institutions, particularly cooperatives borrowing for being able to aggregate produce from member farmers.

25. **Sub-component 3.2. Investment support to market linkages (US\$3.5 million).** Through matching grants, the project will continue to finance private investments in assets to enhance market linkages and value addition activities. Eligible investments will be demand driven and market oriented, and include among others drying facilities, collection centers, storage and cold chain equipment, and processing facilities. The matching grants program will enable beneficiaries, both individual and organizations, to access finance based on business plans, including joint business plans



between producers and off-takers.

#### Component 4: Project Management and Technical Assistance (US\$3 million)

26. This component will finance project management, knowledge management and dissemination, and TA.

27. **Subcomponent 4.1: Project management (US\$2 million).** This sub-component will ensure smooth project implementation. As such, it will finance all aspects of project management and operating costs including: (i) project staffing, their coordination and training; (ii) monitoring and evaluation (M&E); (iii) communication and knowledge sharing; (iv) TA; and (v) environmental and social risk management, including a grievance redress system (GRS).

28. **Subcomponent 4.2: Knowledge Management and Dissemination (US\$0.5 million).** Developing knowledge products and disseminating know-how is an important part of this component. Activities include: (i) develop and disseminate knowledge products, including technical manuals, guidelines, and training material on the new technologies and practices; (ii) organize knowledge-sharing events, including study tours, workshops and field days, to exchange and disseminate new knowledge products and promote the adoption of the new technologies and practices, and; (iii) facilitate the exchange of knowledge and experiences between project staff, farmers, extension workers, and researchers on the new technologies and practices.

29. **Subcomponent 4.3: Technical Assistance (US\$0.5 million).** This subcomponent will fund additional TA to improve project performance, incorporate best agriculture and household level nutrition improvement practices, and document lessons learned. The TA will focus on integrating FAB practices at all levels of the project's extension services, and across all supported value chains. The project will build on lessons learned from international best practices and focus on three specific technical areas; (a) integrate farming as a business approach in the project extension services and capacity building programs to improve market linkages, (b) the use of digital services to improve access to extension services and markets, and (c) nutrition outcomes improvement.

#### C. Project Beneficiaries

30. The project will be implemented in the current 9 SAIP I districts<sup>27</sup> (Rwamagana, Kayonza, Gatsibo, Ngoma, Nyanza, Rulindo, Karongi, Rutsiro and Nyabihu) and in an additional 11 new districts (Kamonyi, Huye, Ruhango, Muhanga, Gisagara, Nyamagabe, Bugesera, Rusizi, Nyagatare, Kirehe and Ngororero). The new districts were selected based on the following criteria: (i) risks and shocks arising from erratic rainfall and periodic droughts in the Eastern and Southern parts of the country (Bugesera, Nyagatare, Kamonyi, Huye, Ruhango and Muhanga Districts are semi-arid areas); (ii) districts with high levels of stunting and children with malnutrition (Gisagara, Nyamagabe and Ngororero Districts); and specific interventions & value chain preferences (Rusizi for fruit trees intensification).

31. Targeted beneficiaries will remain smallholder farmers (some of whom have been mobilized into farmer organizations, WUAs, Self-Help Groups [SHGs], and cooperatives), and agro SMEs in the selected sites. SAIP II investments, TA, and/or nutrition-sensitive agriculture interventions will directly benefit an additional 20,000 new households or approximately 70,000 new individuals of which at least 42 percent will be women. This is a 44 percent increase from SAIP I to SAIP II (45,688 to 65,688 households). During implementation, continued emphasis will be on identifying and providing

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<sup>27</sup> selection criteria included food security and nutrition potential; market potential and access; cooperative/groups readiness; market access; agronomic suitability; and potential for productivity gains.



opportunities for income-generating activities for women and youth, ensuring women and youth participation and leadership in the SHGs and cooperatives, and targeting vulnerable groups. Beneficiaries will include value chain actors including entrepreneurs and small and micro agri-businesses, working in the selected value chains, and supported through the Project's matching grant program. Communities in the target areas at large will also indirectly benefit from the project through investments in Savings and Credit Cooperatives (SACCOs), post-harvest and agri-processing equipment, market linkages and improved nutrition (through awareness on utilization of nutritious foods). The project will target poor and vulnerable households in target areas for specific interventions to increase their uptake of a diverse diet and consumption of nutritious food. Such activities will include (i) the distribution of planting materials of nutritious plant-based food, and (ii) availing animal protein for their consumption.

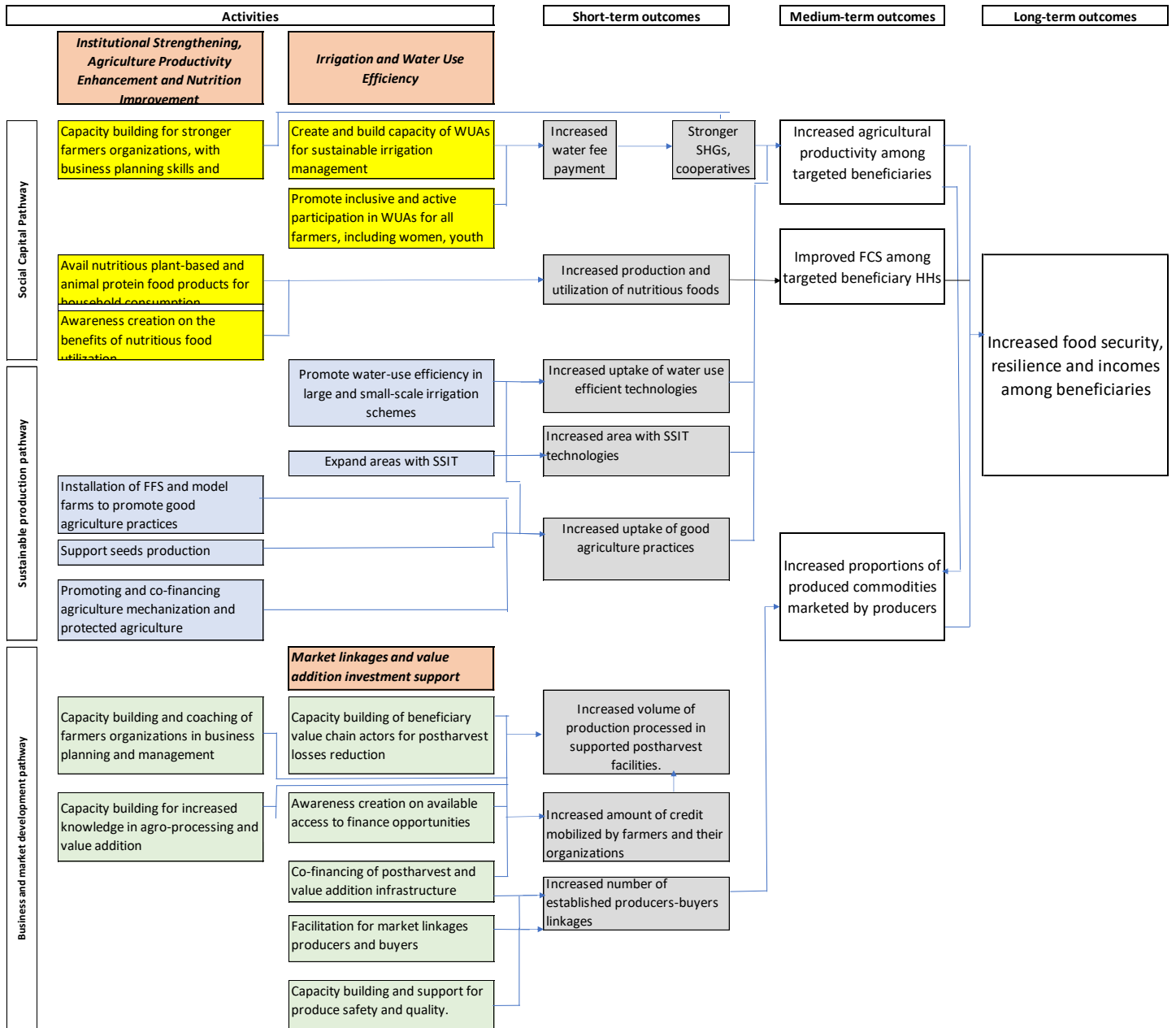
#### D. Results Chain

32. **The SAIP II theory of change (ToC) will adopt the SAIP I ToC.** It maintains the 3 transformative pathways to achieve the expected end-results of improved livelihoods, food and nutrition security of targeted beneficiaries through increased agricultural productivity, value addition, and access to markets in an environmentally sustainable way.

- a. **Under the social capital pathway**, socio-economic institutions such as farmers' organizations, SHGs, Cooperatives, WUAs, unions and commodity associations are considered key to sustainable and inclusive agricultural development. Groups in the targeted project areas will receive support to strengthen their organizational and managerial capacities to help them (i) to become strong, well-organized, well-managed professional and financially independent institutions, able to provide services and added value to their members; and (ii) to reach a level where they as farmers' organizations can be the engines of their own development without dependence on external assistance.
- b. **The sustainable production pathway** focuses on the key transformative changes needed for environmentally sustainable and resilient production and productivity increases. Rwanda's very high population density on mostly hilly agricultural land has resulted in high erosion levels and subsequent soil degradation which has been further exacerbated by climate change challenges. The project will continue to finance the consolidation and upscaling of techniques to enhance the resilience and diversification of production systems among the various groups of farmers organizations.
- c. **The business and market development pathway** concentrates on building inclusive and durable market linkages through which strong and self-reliant cooperatives can sell increased volumes of produce. SAIP II will continue to strengthen the role of cooperatives in business and market development, while simultaneously building their capacity. It will finance investments in improving post-harvest processes and value addition to support the production of consistently good quality products. The project will also create awareness among beneficiaries on access to finance opportunities and build their capacity to be able to leverage them for the purpose of professionalizing and expanding their operations.



Figure 2: Theory of Change diagram





## E. Rationale for World Bank Involvement and Role of Partners

33. The World Bank can leverage its unique cross-sectoral expertise mix and experience in providing technical support to Governments for preparing and implementing programs and projects aimed at poverty reduction, service delivery, policy development, including through agriculture, which are well recognized in Rwanda. Through this partnership, the GoR has implemented its flagship programs for irrigation development, sustainable land management interventions, and agriculture value chains development, and recently, in deploying resources to avail affordable agriculture private financing and de-risking instruments. For over two decades, the World Bank has supported the GoR in agriculture and private sector engagement policy development and dialogue and is the current supervising entity for SAIP I on behalf of GAFSP. The World Bank is therefore well positioned to continue to administer the GAFSP financing, and provide the implementation support for this operation, which is a natural continuation of the SAIP I.

34. The GoR will select a service provider to lead the TA activities which are designed to strengthen the capacities of the targeted project beneficiaries, integrate FAB practices across all agriculture activities by the beneficiaries, and enhance the effectiveness of the project interventions. The TA will continue to emphasize knowledge management and support coordination among stakeholders. To ensure sustainable irrigation interventions, SAIP II will also incorporate recommendations from the recently prepared National Irrigation Strategic Plan prepared with support from the Japan International Cooperation Agency, and guidance from the diagnostic findings of the “Catalysing Small-scale Irrigation Development in Rwanda: An Assessment of Small-Scale Irrigation Technology (SSIT) Program” study, developed with support from the World Bank’s Water Global Practice. The project will also leverage access to finance and de-risking products offered by the World Bank-funded CDAT project to expand and sustain SAIP II beneficiaries’ agribusiness investments. SAIP II will also benefit from CDAT interventions to improve seed systems.

## F. Lessons Learned and Reflected in the Project Design

35. **The project design builds on the approach and focuses on further consolidation of results and sustainability of previous projects.** The project builds on and is consolidating the results of past World Bank projects: RSSP3 (P126440); LWH (P114931), SAIP I (P164520) and other schemes developed by MINAGRI. As a follow-on complementary operation, SAIP I was also designed to address some of the unmet challenges under the RSSP and LWH (water use efficiency, access to finance, connectivity to regional markets) to achieve higher results and greater impact for additional beneficiaries, with targeted involvement of youth and women.

36. The implementation of SAIP I has been satisfactory overall. Throughout implementation, valuable lessons were learned, and these insights were utilized to make necessary adjustments, resulting in further enhancement of the results. SAIP demonstrated that implementing inclusive interventions can help address constraints faced by certain groups, such as youth and women, leading to improved results and expanding economic prospects. Project implementation also confirmed that strong market linkages could facilitate better access to inputs and private sector led extension services, and therefore contributing to increased productivity and revenues. Model farms, which are a comprehensive type of demonstration plots, were one of the factors contributing to increasing market linkages in addition to promoting good agriculture practices. The first 3.5 years of SAIP I showed that extensive and focused mobilization of farmers is crucial to increase the uptake of sustainable irrigation technologies. Other lessons learned indicate that farmers prefer solar-powered pumps for SSIT over diesel fuel systems due to reduced operating costs and other reasons. Additionally, enhanced capacity-building programs for operation and maintenance are critical to ensure the sustainable use of these technologies.





### III. IMPLEMENTATION ARRANGEMENTS

#### A. Institutional and Implementation Arrangements

37. **The SAIP I institutional and implementation arrangements remain in place for SAIP II.** The Rwanda Agriculture and Animal Resources Board (RAB) will continue to oversee coordination of overall project implementation through its existing Single Project Implementation Unit (SPIU). RAB is a non-commercial public institution with administrative and financial autonomy under the supervision of MINAGRI. The SPIU has a strong team (technical, financial, procurement, environment and social, monitoring and evaluation) with extensive experience in implementing and managing World Bank funded projects. The SPIU will continue to receive strategic guidance from a Project Steering Committee (PSC) made up of several stakeholders including various ministries and other relevant agencies, representatives of Farmers' Organizations, etc.

#### B. Results Monitoring and Evaluation Arrangements

38. **The project will use the existing SAIP I Monitoring & Evaluation (M&E) design and framework.** Its key elements are: (a) the project's theory of change; (b) cascading Results Framework (RF) and M&E strategy to operationalize the RF; and (c) compliance with the GAFSP/World Bank Group requirements which include core indicators and specific indicators for food security, nutrition, and gender. The M&E system will assess actual change against stated objectives.

39. **The project outcomes and impacts will be assessed through PDO, and intermediate-level indicators as reflected in the RF.** The SPIU will be responsible for data collection and consolidation, quality control, analysis, and reporting. Annual monitoring reports will be used by the SPIU in the preparation of annual work plans and budget and by implementation support missions to track project progress and ensure the project is on track.

40. **Baseline, midterm, and project evaluation.** Where possible, the SAIP I indicators actuals will serve as the baselines for SAIP II.

#### C. Sustainability

41. **The project will focus on consolidating and expanding the SAIP I results and ensuring their sustainability.** SAIP I built on the results of previous World Bank-funded projects (LWH and RSSP3), was critical in identifying the technical options, organizing farmers, constructing the infrastructure, and linking farmers to markets. The project provides a realistic exit strategy for the GoR by ensuring that farmers' organizations, local government institutions, and the private sector continue performing well and become drivers of development. The project will build on previous efforts to ensure that farmers' organizations will be brought to maturity and have the capacity to take over functions and services previously provided by external partners, notably Government to drive agriculture development. WUAs and cooperatives will be strengthened to have the capacity to take over the operation and maintenance of infrastructure provided by this and other investment projects. In addition, the project will document the pathways of transformation triggered by a holistic approach and document the approaches for project exit strategies. Special consideration will also be given to youth to stimulate profitable engagement in agriculture and agribusinesses, through developing skills and promoting entrepreneurship.



## IV. PROJECT APPRAISAL SUMMARY

### A. Technical, Economic and Financial Analysis

42. The project generates economic benefits from investments in development pathways related to social capital, sustainable production, and business and market development. These investments lead to development outcomes, including sustainable and strengthened farmer organizations and rural institutions, which are necessary for value chain development, sustainable and more resilient production systems, better functioning integrated value chains with cooperatives and unions, and enhanced value chains among farmers with improved access to national and regional markets, and reduced post-harvest losses that facilitate job creation and income generation. Quantification of these economic benefits is based on benefits accruing from investments along the value chain of the agricultural commodities and cross-cutting thematic area that are supported by the project, using farm and enterprise or micro processing models. The supported commodities and cross-cutting thematic areas include maize, potato, climbing beans, tomato, onion, mango, cabbage, eggplant, carrot, tree tomato, passion fruit, chili (bird-eye and hot), French beans, and avocado. The farm and micro-processing models intend to capture: (i) improved household income; (ii) increased asset accumulation; (iii) adoption of climate-resilient agricultural production; and (iv) increased market linkage for value-added produce in national and regional markets. To capture the benefits of transformational change by the project interventions, crop and farm budgets and micro-processor/enterprise models have been used to aggregate data up to the project level, using an input-output model for comparison against a base scenario without project intervention.

43. The economic analysis evaluates the project's benefits and costs to the national economy over a period of 20 years with a social discount rate of 6 percent and 12 percent for the financial analysis. The net incremental benefits are used to calculate the viability of the project using indicators such as the internal rate of return (IRR), benefit-cost ratio (BCR) and net present value (NPV). The resulting economic net present value (NPV) is about US\$42.4 million, the economic internal rate of return (EIRR) is 19.6 percent, and the BCR is 3.03. Sensitivity analyses demonstrate that the project can absorb substantial negative impacts and still generate an EIRR above the social discount rate. Thus, the analysis supports the public investment decision.

44. The financial analysis indicates that the NPVs of the net incremental benefits per hectare range from US\$1.69 million for beans to US\$28.63 million for tomatoes. Benefit-cost ratios range from 1.19 for beans to 2.37 for tomatoes. The financial performance indicators demonstrate the robustness of the crop and farm models, indicating that the proposed activities are commercially viable.

45. **Greenhouse Gas Accounting (GHG).** The project will generate some positive environmental externalities in terms of GHG mitigation (about 24320 tCO<sub>2</sub>eq per year for 20 years or 1216 tCO<sub>2</sub>eq per year, <sup>(O&J)</sup>). Using the World Bank's guidance note on the shadow price of carbon in economic analysis (September 2017), the social value of these environmental benefits has been also included in the overall economic results, using the low and high estimate range for the social price of carbon.

46. **Mobilizing Finance for Development.** The project will promote and support the development of productive alliances between farmers' organizations and other private sector organizations, including off-takers and processors. Certain activities, such as the promotion of greenhouse farming, have moved farmers into more business-oriented activities and enabled downstream investments among off-takers, including in washing, packaging, and certified value chains. A matching grant facility will support for up to 50 percent of the cost of the acquisition of assets for postharvest management and/or value addition through sound business plans prepared individually or jointly by these value chain actors. An important part of this is the matching grant facility for SSIT, which finances 50 percent of regular technology



and up to 75 percent for solar pump technology, meaning private capital contribution of 25-50 percent per investment. The SSIT component of the Matching Grants Program generated a lot of interest under SAIP I and some 600 farmers invested in SSIT under the project. The project will encourage beneficiaries to leverage private finance opportunities, including credit and insurance products offered under the World Bank financed CDAT and Access to Finance for Recovery and Resilience (AFIRR P175273) Projects, which both finance credit lines to the agri-food sector. This will be done primarily through awareness raising about relevant institutions and terms under which farmers and other agri-food sector actors can apply for private credit, but also through the capacity strengthening under the project on “farming as a business.”

47. **The Paris Agreement (PA) assessment** followed the approach for assessing risks and risk reduction measures to demonstrate SAIP II alignment with mitigation and adaptation resilience goals across two main agriculture subsectors, in which the project will be intervening: crop production and agri-food value chains. Irrigation interventions were assessed separately. The assessment concluded that the risks the project has included in its design mitigation are at an acceptable level for adaption, and at a low level for mitigation. The PA assessment further confirmed that the project design incorporated risk reduction strategies in its interventions for both mitigation and adaptation. It can therefore be confirmed that the project is well aligned with the goals of the Paris Agreement on both mitigation and adaptation aspects.

48. **Assessment and reduction of mitigation risks:** A significant number of Project activities are universally aligned in all subsectors financed by the project, and therefore contribute to climate action consistent with the pathways toward the mitigation goals of the Paris Agreement. However, there are a few activities which did not fall on the universally aligned list, including the use of chemical agriculture inputs, GHG emitting energy sources for water pumping in irrigation, transport, waste management and refrigeration in postharvest and value addition activities. The project design incorporated measures to promote conservation agriculture, soil testing and integrated pest management practices to ensure optimal use of inputs. The project will also incentivize solar powered water pumps and associated irrigation equipment, to increase their uptake and preference by farmers relative to the diesel systems. Interventions will also include the promotion of clean cooling in the cold chain development interventions, and sustainable waste management in processing activities supported by the Project.

49. **Assessment and reduction of adaptation risks:** Findings from the climate and disaster risk screening (CDRS) conducted for the Project reveal that rainy seasons are becoming shorter and more intense, which has resulted in increased erosion and floods risk in the mountainous areas of the country’s northern and western provinces. Impacts will most likely be limited in the Project areas because of efficient drainage systems and sustainable land management practices adopted in watersheds. However, to ensure sustainability of these outcomes, Project interventions will include capacity building of farmers in the maintenance of watersheds in developed areas and support related interventions. The CDRS also showed that frequent rainfall deficits and prolonged seasonal droughts will be expected, which will cause problems especially in the east and southeast of the country. Measures taken by the project include expansion of areas with SSITs, promotion of water use efficient technologies and sustainable schemes management in irrigated areas.

## B. Fiduciary

### (i) Financial Management

50. **A Financial Management (FM) assessment of RAB as the main project implementing entity has been carried out in accordance with the World Bank policy and directives on Investment Project Financing (IPF).** The assessment aims to determine whether RAB has acceptable FM arrangements to ensure: (a) project funds will be used for the intended purposes in an effective, efficient, and economical way; (b) financial reports will be prepared in a reliable, accurate and timely manner; and (c) project assets will be appropriately safeguarded. The assessment reviewed the FM performance



of SAIP I which has been satisfactory with a 'moderate' FM risk rating.

51. **The project will benefit from the Public Financial Management (PFM) reforms that Rwanda has undergone, RAB's project oversight and accountability arrangements and experience from implementing SAIP I.** The PFM system is anchored in solid legal frameworks and PFM Strategies. The Public Expenditure and Financial Accountability (PEFA) 2022 confirmed progress has been made in budget planning, expenditure efficiency, enhancement of the internal audit function, external audit coverage, and financial reporting. An acceptable project oversight and accountability structure is in place. It includes a Project Steering Committee, RAB management oversight, internal oversight bodies (internal audit and audit committee), external oversight bodies (the Office of the Auditor General) and Parliament that approves the government's budget. The SPIU has experience in implementing World Bank financed projects, one of which is SAIP I. The SPIU maintains adequate staffing and accounting systems. Financial reports and audit reports of acceptable quality are consistently submitted on time.

52. **Based on the assessment, the project FM risk is rated "Moderate".** The key risks identified are: (a) double dipping of expenditures due to the overlapping period between SAIP I and II as similar activities are implemented in both projects; and (ii) inadequate and delayed implementation of external and internal audit recommendations. Mitigation measures include the following: (a) the RAB SPIU will update the current FM guidelines to incorporate the new project districts and activities; (b) the project will use the SAIP I existing matching grants manual, Project Implementation Manual (PIM) and FM Manual with the requisite updates for this project; (c) SAIP II will finance new interventions and activities in the 9 districts of SAIP I interventions only after SAIP I is closed to avoid double counting of expenditures; and (d) the World Bank will provide support and training on World Bank FM and disbursement procedures to project FM staff before effectiveness and as needed during project implementation.

53. **It is the conclusion of the assessment that the current FM arrangements meet the World Bank's minimum requirement for implementing IPF operations.** The FM risk rating will be monitored regularly and updated as needed. An action plan has been prepared to mitigate the risks identified.

#### **(ii) Procurement**

54. The non-financial intermediary part of the project procurement will be conducted in accordance with the 'World Bank Procurement Regulations for Borrowers under Investment Project Financing,' dated November 2020, hereafter referred to as 'Procurement Regulations'. The project will be subject to the World Bank's Anticorruption Guidelines, dated July 1, 2016, and beneficiary disclosure requirements. The project will use the Systematic Tracking of Exchanges in Procurement (STEP), a planning and tracking system that will provide data on procurement activities, establish benchmarks, monitor delays, and measure procurement performance. Procurement will be conducted by the RAB-SPIU procurement team.

55. As per the requirement of the Procurement Regulations, a Project Procurement Strategy for Development (PPSD) has been prepared. It sets out the selection methods to be followed by the client during project implementation in the procurement of goods, works, and non-consulting and consulting services financed by the World Bank. The associated Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

56. In the event RAB delegates some procurement responsibilities to the community, Procurement Regulations paragraph 6.52 and Annex XII - Selection Methods paragraph 6.9 and 6.10 on Community Driven Development (CDD) will apply. The communities will be hired to conduct small and scattered works. The Community procurement is coordinated,



and reports consolidated by RAB. The fiduciary assurance of community procurement shall come from citizen engagement, disclosure at community level and social audit.

57. **Project procurement risks** have been assessed and the following risks identified: (i) Gap in domestic production of construction materials and irrigation equipment relative to the demand generated by Rwanda’s construction sector can delay the completion of works and award high cost contracts; (ii) Environmental risk: the risk associated with the external forces from the surroundings or environment, these are uncontrollable events (Example: Floods); (iii) Financial risk: bankruptcy and currency exposure. **Recommended mitigation measures** are: (a) Quantify and indicate the total estimated quantities of materials that will be needed so that the successful bidders order materials/equipment early on at once rather than making frequent purchases. Starting the procurement process early to allow contractors ample time to know where to get the required construction materials and equipment, using an international market approach and encouraging contractors to employ local labor with necessary skills will ultimately reduce reliance on expensive foreign experts; (b) Promotion of high technology in land protection and intensive/extensive work during the dry season rather than rainy season; (c) Deep analysis of bidders’ financial capability and introducing a risk transfer (insuring against risk) mechanism. The project will continue to finance investments and agricultural inputs to support improved productivity. The procurement activities in general are considered relatively low risk.

58. Currently RAB is implementing the SAIP I and CDAT Projects. The SPIU has three full-time qualified procurement specialists, and they have technical capacities to manage SAIP-II project procurement, in addition to their current workload.

59. Based on risks and gaps identified, the project procurement risk is rated "**Moderate**". With implementation of the above recommended mitigation measures the risk can be revised to "**Low**" during project implementation. The Procurement Risk Assessment and Management System (PRAMS) for the Appraisal stage was done on July 02, 2023, and the procurement performance risk is rated "**Moderate**".

**C. Legal Operational Policies**

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Area OP 7.60	No

60. Operational Policy (OP) 7.50 is applicable to this Project because the Project will finance activities that may use or risk polluting waters of the Akagera and Rusizi rivers and/or their tributaries, which are considered international waterways. However, the exception to the riparian notification requirement according to paragraph 7(a) of the Policy applies as project activities will be limited to upgrading and modernization of existing, small-scale schemes, and as such will not adversely change the quantity and quality of water flows to other riparians. The exception to the notification requirement was approved by the Regional Vice President (RVP) for Eastern and Southern Africa on August 8, 2023.



## D. Environmental and Social

### Environment

61. The SAIP II environmental risk rating is “**Substantial**”. The rating is based on the nature of planned activities under components 1, 2 and 3 that will impose both positive and manageable negative impacts to the environment. The expected positive impacts from the three components related to building the capacity of farmers to improve agricultural production and enhance adaptive capacity to climate risks include adoption of sustainable land use and farming practices that will address climate-related events such as floods and droughts, consequently managing soil erosion and degradation. SSITs with climate-resilient design standards and energy-efficiency considerations will include solar powered irrigation to maximize the project’s adaptation and mitigation climate co-benefits, as well as enhancing farmers’ skills on environmental and social subjects such as how to better understand climate risks and coping power on both adaptation and mitigation perspective as a co-benefit to many of the adaptation options.

62. However, components 1, 2 and 3 which will include delivery of agricultural inputs including quality seeds, agrochemicals, fertilizers (inorganic mainly), efficient farms tools and equipment with minimal civil works activities are associated with negative impacts. There is a possibility that these activities will generate construction solid and liquid waste, electronic waste from decommissioned batteries and solar panels from small scale solar irrigation activities, dust, noise pollution and other construction/rehabilitation related Occupational health and safety (OHS) hazards and impact related to handling of treated seeds, increased use of biopesticides and fertilizers, and general waste management from seed companies and agricultural enterprises.

63. These risks and impacts would be site-specific and manageable through proper enforcement of the ESF instruments prepared for the project and using national and international best practice methods. Under the Environmental and Social Commitment Plan (ESCP), the client has committed to prepare Environmental and Social (E&S) instruments in accordance with triggered Environmental and Social Standards (ESSs) applicable to the project activities. These include the Environmental and Social Management Framework (ESMF), the Stakeholder Engagement Plan (SEP), and the Labor Management Procedures (LMP). The ESMF, the SEP and the LMP were prepared and disclosed in-country on October 30, 2023, and in the Bank’s external website on November 6, 2023. The Pest Management Plan (PMP), the Environmental and Social Impact Assessment (ESIA)/Environmental and Social Management Plan (ESMP) and other site-specific instruments will be prepared before commencement of the related activities.

### Social

64. The social risk rating of SAIP II is “**Substantial.**” The rating is based on the nature of the activities to be implemented under components 1, 2 and 3 of the project, which may impose both positive and manageable negative impacts to the environment. The positive social impacts relate to improving nutrition for the most vulnerable households, improved livelihoods for farmers through increased productivity and food security. Potential social risks are in relation to ESS2 on Labor and Working Conditions, though anticipated to be of small scale, will include safety and the working conditions of workers on the planned small-scale civil works for renovation, rehabilitation, or establishment of household on-farm agricultural infrastructure (e.g., water harvesting, storage and irrigation systems, food storage facilities), and market infrastructure. The risks are manageable and can be mitigated using Rwanda’s labor laws and ESS2 standards. It is also anticipated that risks and impacts related to ESS5 on Land Acquisition, Restrictions on Land Use and Involuntary Resettlement might emerge under component 2, subcomponent 2.1, where new irrigation technologies will be assessed and piloted in some project areas. The associated scale, risks and impacts will be assessed, and mitigation measures will be put in place and reflected in site specific ESMPs, and proportionate Resettlement Action Plans (RAPs).



65. **Stakeholder Engagement.** Based on lessons learnt from SAIP I, the GoR has prepared a SEP for SAIP II to ensure effective stakeholder engagement during project implementation. The SEP includes strengthening stakeholders' engagements through robust information sharing and awareness raising and improving the existing SAIP I Grievance Redress Mechanism (GRM) to ensure that all beneficiaries have access to a GRM including matching grants beneficiaries. Social risks and impacts will be assessed through ESAs, and mitigation measures integrated in to the ESMPs, LMPs, RAPS and Livelihoods Restoration Program (LRP).

66. **Gender Assessment.** The project will continue to work on closing specific gender gaps identified to ensure women will fully benefit from the project interventions. The project will ensure that at least 40 percent of women in the farmers organizations participate in the management of these organizations. To ensure their participation in capacity-building events, the project plans capacity building/trainings sessions that at least 40 percent of women and youth can attend, prepare and deliver gender-sensitive training contents and avoid time-consuming sessions.

67. **Citizen Engagement (CE).** Identifying project beneficiaries has been a participatory and transparent process. The project will directly target 75,688 farmer households and 300,000 family members of the targeted households as indirect beneficiaries. CE activities will include: (a) community sensitization and awareness campaigns; (b) community outreach activities; and (c) community dialogues to support formation and strengthening of SHGs especially in the irrigation and post-harvest infrastructure that are newly developed. The project will continue to place strong emphasis on ensuring women and youth participation and leadership in the WUAs, SHGs and cooperatives. The detailed SEP will be used to ensure continuous engagement of all stakeholders throughout implementation. Beneficiary feedback on service delivery will be received annually through an independent survey on community and beneficiary scorecards. The project Results Framework has included specific CE indicators to be monitored, including an indicator to measure beneficiaries' satisfaction in project activities and GRM mechanism. Two indicators were also added to measure women inclusiveness in key project outcomes areas of participation in decision making in farmers organizations, and in accessing the Project grant facility. These indicators will ensure the Project is deliberate in engaging women beneficiaries to ensure their participation and that they are adequately benefitting from project activities.

## V. GRIEVANCE REDRESS SERVICES

68. Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank's Accountability Mechanism, visit <https://accountability.worldbank.org>.



## VI. KEY RISKS

69. The overall risk rating of the project is **Moderate**.

70. **Macroeconomic risk is substantial.** Rwanda's macroeconomic framework has been stable in the past decade. However, the global COVID-19 pandemic, general increase in global prices of fertilizers, and climate change related shocks have posed and continue to pose a threat to fiscal sustainability (public debt increased from 20.4 percent in 2010 to 73.6 percent of GDP in 2021). For this reason, the macroeconomic risk is deemed "Substantial." Strong government actions at national level, some of which in conjunction with World Bank support will help mitigate these risks. The GoR has an excellent track of pursuing long-term goals and staying on course, and the World Bank operations (including ongoing and under development policy operations) allow pro-active engagement in the overall macro-fiscal policy dialogue with the authorities and provides opportunities to flag issues as they emerge. The technical design and the institutional capacity risks are "moderate," given the associated sound sector strategy with which the Project is well aligned, and the experienced implementing agency - the RAB SPIU, which is implementing the CDAT and SAIP I projects, for which the proposed project is a natural continuation for the scale-up of interventions and results in new districts.

71. **Environment and social risk is substantial.** This is because of the nature of activities under the technical components of the Project. These risks and impacts will be site-specific and manageable through proper enforcement of the ESF instruments, which will be prepared and implemented by the Government as it committed through the ESCP. The Government will also maintain through the Project Implementing Entity, environmental and social specialists dedicated to the Project to ensure safeguards compliance throughout the Project implementation. The World Bank will continuously monitor compliance with the standards and procedures and propose measures to address any shortcomings. Grievance redress measures will be established and supported by the project to ensure that project-affected people are able to bring complaints to the project teams.





VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

Baseline	Period 1	Period 2	Closing Period
<b>Increase in harvested yield of targeted crops (Percentage)</b>			
			Sep/2026
			12.50
➤ Increase in harvested yield of targeted crops (from SAIP I intervention areas) (Percentage)			
➤ Increase in harvested yield of targeted crops (from the scaled-up areas) (Percentage)			
	Sep/2024		
	5.00		
<b>Increase of produced commodities in targeted value chains marketed by participating producers (Percentage)</b>			
	Sep/2025		
	8.00		
➤ Increase of produced commodities in targeted value chains marketed by participating producers (from SAIP I intervention areas) (Percentage)			
Sep/2023			
0.00			
➤ Increase of produced commodities in targeted value chains marketed by participating producers (from the scaled-up areas) (Percentage)			
Sep/2023			
0.00			
<b>Food Consumption Score (Number)</b>			
	Sep/2024	Sep/2025	
	30.00	32.00	
➤ Food Consumption Score (from SAIP I intervention areas) (Number)			
	Sep/2025		Sep/2026
	38.00		39.00
➤ Food Consumption Score (from the scaled-up areas) (Number)			



Sep/2023	Sep/2024	Sep/2025	
20.00	23.00	26.00	
<b>Farmers adopting improved agricultural technology (Number) <sup>CRI</sup></b>			
	Sep/2023	Sep/2025	Sep/2026
	55000	62000	65688
<b>➤ Farmers adopting improved agricultural technology - Female (Number) <sup>CRI</sup></b>			
	23100	26040	27589
<b>➤ Farmers adopting improved agricultural technology - male (Number) <sup>CRI</sup></b>			
26499.00	31900	35960	38099
<b>Increase in harvested yield of targeted crops.</b>			
<b>Increase of produced commodities in targeted value chains marketed by participating producers.</b>			
<b>Food Consumption Score</b>			

**Intermediate Indicators by Components**

Baseline	Period 1	Period 2	Closing Period
<b>Producer-based organizations supported by GAFSP (GAFSP core 4) GAFSP Tier 2, indicator no. 4 (Number)</b>			
<b>People receiving improved nutrition services and products (GAFSP core 11) _ GAFSP Tier 2, indicator no. 12 (Number)</b>			
	Sep/2024		Sep/2026
	255,000.00		300,000.00
<b>➤ People receiving improved nutrition services and products - Female (Number)</b>			
	Sep/2024		
	107,100		
<b>Direct employment generated through project supported investments (Number)</b>			
	Sep/2024	Sep/2024	
	75	150	
<b>Number of postharvest facilities constructed with Project support (Number)</b>			
Sep/2023	Sep/2024	Sep/2025	Dec/2026
0	10	20	25
<b>Farmers reached with agricultural assets or services (CRI)_ GAFSP Tier 2, indicator no. 13 (Number)</b>			
Sep/2023			Sep/2026



45,688.00			65688
<b>➤ Farmers reached with agricultural assets or services - Female (CRI) (Number)</b>			
Sep/2023			Sep/2026
19,189			27,589
<b>Number of improved institutions supported by the Project (Number)</b>			
Sep/2023	Sep/2024	Sep/2025	Dec/2026
0	500	1,000	1,500
<b>Land area with climate smart agriculture practices implemented (Hectare(Ha))</b>			
Sep/2023			Dec/2026
2,500			7,000
<b>Increase in annual net revenues made by beneficiary cooperatives. (Percentage)</b>			
Sep/2023	Sep/2024	Sep/2025	Sep/2026
0	8.00	13.00	20.00
<b>➤ Increase in annual net revenues made by beneficiary cooperatives (from SAIP I intervention areas) (Percentage)</b>			
	Sep/2025		
	15.00		
<b>➤ Increase in annual net revenues made by beneficiary cooperatives (from the scaled-up areas) (Percentage)</b>			
			Sep/2026
			15.00
<b>Matching grants allocated to women led business plans (Percentage)</b>			
<b>Area provided with new/improved irrigation or drainage services (CRI, Hectare) _ GAFSP Tier 2, indicator no. 2 (Hectare(Ha))</b>			
	Sep/2024	Sep/2025	
	3,300.00	4,150.00	
<b>➤ Area provided with new irrigation or drainage services (Hectare(Ha))</b>			
<b>➤ Area provided with improved irrigation or drainage services (Hectare(Ha))</b>			
<b>Farmers benefiting from the project supported small-scale irrigation interventions (Number)</b>			
Sep/2023			
2,400.00			



<b>➤ Farmers benefiting from the project supported small-scale irrigation technologies - Female (Number)</b>			
Sep/2023	Sep/2025		
1,008.00	1,400.00		
<b>Users paying water fees to the water users associations (Number)</b>			
Sep/2023	Sep/2025		Sep/2026
9,330.00	9,795.00		10,000.00
<b>➤ Users paying water fees to the water users associations – Female (Number)</b>			
Sep/2023	Sep/2024	Sep/2025	
3,904.00	4,092.00	4,194.00	
<b>Increment of Water Use Efficiency (Percentage)</b>			
Sep/2023	Sep/2024		Sep/2026
75.00	77.00		80.00
<b>Increase in women's representation in decision making positions in participating WUAs. (Percentage)</b>			
<b>Volume of agricultural production processed by post-harvest facilities established with project support -GAFSP core 9 (Metric ton)</b>			
Sep/2023			Sep/2026
23,088.00			35,000.00
<b>Farmers organization - buyer linkages established (Number)</b>			
Sep/2023	Sep/2024	Sep/2025	
52.00	58.00	64.00	
<b>➤ Value of contracts/agreements negotiated through linkages established (Amount) (Number)</b>			
Sep/2023			
1,970,000.00			
<b>Amount of private financing mobilized by beneficiaries (Amount(USD))</b>			
	Sep/2025		Sep/2026
	2,500,000		3,000,000
<b>➤ Amount of credit mobilized by beneficiaries (Amount(USD))</b>			
<b>➤ Amount of cash contributions mobilized by beneficiaries to match the Project grants (USD) (Amount(USD))</b>			
Sep/2023			Sep/2026
0			2,400,000
<b>Knowledge products produced by the project (Number)</b>			



<b>Beneficiaries satisfied with the services provided by the project (Percentage)</b>			
<b>Component 1: Institutional Strengthening, Agriculture Productivity Enhancement, and Nutrition Improvement</b>			
<b>Component 2: Irrigation and Water Use Efficiency</b>			
<b>Component 3: Market Linkages and Value Addition Investments Support</b>			
<b>Component 4: Project Management and Technical Assistance</b>			



**Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes**

<b>Increase in harvested yield of targeted crops.</b>	
<b>Increase in harvested yield of targeted crops (Percentage)</b>	
Description	Weighted average of yield increase across crops in targeted value chains (maize, beans, Irish potatoes, and some of the most cultivated horticulture crops (chili, tomatoes, onions, french beans, tree-tomatoes, and avocado).
Frequency	Annual
Data source	Project agriculture seasonal surveys
Methodology for Data Collection	Randomly selected and representative sample plots in each targeted District
Responsibility for Data Collection	RAB SPIU
<b>Increase in harvested yield of targeted crops (from SAIP I intervention areas) (Percentage)</b>	
Description	Weighted average of yield increase across crops in targeted value chains (maize, beans, Irish potatoes, and some of the most cultivated horticulture crops (chili, tomatoes, onions, french beans, tree-tomatoes, and avocado).
Frequency	Annual
Data source	Project agriculture seasonal surveys
Methodology for Data Collection	Randomly selected and representative sample plots in each targeted District (9 Districts)
Responsibility for Data Collection	RAB SPIU
<b>Increase in harvested yield of targeted crops (from the scaled-up areas) (Percentage)</b>	
Description	Weighted average of yield increase across crops in targeted value chains (maize, beans, Irish potatoes, and some of the most cultivated horticulture crops (chili, tomatoes, onions, french beans, tree-tomatoes, and avocado).
Frequency	Annual
Data source	Project agriculture seasonal surveys
Methodology for Data Collection	Randomly selected and representative sample plots in each targeted District (11 Districts)
Responsibility for Data Collection	RAB SPIU
<b>Increase of produced commodities in targeted value chains marketed by participating producers.</b>	
<b>Increase of produced commodities in targeted value chains marketed by participating producers (Percentage)</b>	
Description	Weighted average of the increase of the marketed portion of produce across crops in targeted value chains (maize, beans, Irish potatoes, and some of the most cultivated horticulture crops (chili, tomatoes, onions, french beans, tree-tomatoes, and avocado).
Frequency	Annual
Data source	Project agriculture seasonal surveys
Methodology for Data Collection	Data from randomly selected and representative sample plots in each targeted District
Responsibility for Data Collection	RAB SPIU
<b>Increase of produced commodities in targeted value chains marketed by participating producers (from SAIP I intervention areas) (Percentage)</b>	
Description	Weighted average of the increase of the marketed portion of produce across crops in targeted value chains (maize, beans, Irish potatoes, and some of the most cultivated horticulture crops (chili, tomatoes, onions, french beans, tree-tomatoes, and avocado).
Frequency	Annual
Data source	Project agriculture seasonal surveys
Methodology for Data Collection	Data from randomly selected and representative sample plots in each targeted District (9 Districts)
Responsibility for Data Collection	RAB SPIU



Collection	
<b>Increase of produced commodities in targeted value chains marketed by participating producers (from the scaled-up areas) (Percentage)</b>	
Description	Weighted average of the increase of the marketed portion of produce across crops in targeted value chains (maize, beans, Irish potatoes, and some of the most cultivated horticulture crops (chili, tomatoes, onions, french beans, tree-tomatoes, and avocado).
Frequency	Annual
Data source	Project agriculture seasonal surveys
Methodology for Data Collection	Data from randomly selected and representative sample plots in each targeted District (11 Dsistricts)
Responsibility for Data Collection	RAB SPIU
<b>Food Consumption Score</b>	
<b>Food Consumption Score (Number)</b>	
Description	FCS score in intervention areas
Frequency	Annual
Data source	Survey report
Methodology for Data Collection	Household survey
Responsibility for Data Collection	RAB SPIU
<b>Food Consumption Score (from SAIP I intervention areas) (Number)</b>	
Description	FCS score in the SAIP I intervention areas.
Frequency	Annual
Data source	Survey report
Methodology for Data Collection	Household survey
Responsibility for Data Collection	RAB SPIU
<b>Food Consumption Score (from the scaled-up areas) (Number)</b>	
Description	FCS in the scale-up areas by SAIP II
Frequency	Annual
Data source	Survey report
Methodology for Data Collection	Household survey
Responsibility for Data Collection	RAB SPIU
<b>Farmers adopting improved agricultural technology (Number) <sup>CR1</sup></b>	
Description	Adoption of improved agriculture technologies is defined as adoption of at least two of the following: soil fertility management, use of (not-re-used) seeds, IPM, conservation tillage, contour bunding, crop rotation, agroforestry practices, and irrigation water saving technologies.
Frequency	Annual
Data source	Survey report
Methodology for Data Collection	Household survey
Responsibility for Data Collection	RAB SPIU
<b>Farmers adopting improved agricultural technology - Female (Number) <sup>CR1</sup></b>	
Description	Adoption of improved agriculture technologies is defined as adoption of at least two of the following: soil fertility management, use of (not-re-used) seeds, IPM, conservation tillage, contour bunding, crop rotation, agroforestry practices, and irrigation water saving technologies (female beneficiaries).



Frequency	Annual
Data source	Survey report
Methodology for Data Collection	Household survey
Responsibility for Data Collection	RAB SPIU
<b>Farmers adopting improved agricultural technology - male (Number) <sup>CRI</sup></b>	
Description	Adoption of improved agriculture technologies is defined as adoption of at least two of the following: soil fertility management, use of (not-re-used) seeds, IPM, conservation tillage, contour bunding, crop rotation, agroforestry practices, and irrigation water saving technologies (male beneficiaries).
Frequency	Annual
Data source	Survey report
Methodology for Data Collection	Household survey
Responsibility for Data Collection	RAB SPIU

**Monitoring & Evaluation Plan: Intermediate Results Indicators by Components**

<b>Component 1: Institutional Strengthening, Agriculture Productivity Enhancement, and Nutrition Improvement</b>	
<b>Producer-based organizations supported by GAFSP (GAFSP core 4) GAFSP Tier 2, indicator no. 4 (Number)</b>	
Description	Number of cooperatives, SHGs and WUAs benefiting from Project interventions
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>People receiving improved nutrition services and products (GAFSP core 11) _ GAFSP Tier 2, indicator no. 12 (Number)</b>	
Description	Project beneficiaries receiving nutrition services, including both mobilization for increased consumption of nutritious foods, and interventions to facilitate access to plant based nutritious foods and animal protein based foods.
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>People receiving improved nutrition services and products - Female (Number)</b>	
Description	Project beneficiaries receiving nutrition services, including both mobilization for increased consumption of nutritious foods, and interventions to facilitate access to plant based nutritious foods and animal protein based foods (women)
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Farmers reached with agricultural assets or services (CRI)_ GAFSP Tier 2, indicator no. 13 (Number)</b>	
Description	Household beneficiaries reached with extension services, facilitated to access irrigation equipment, production and postharvest assets through the matching grant facility.
Frequency	Annual





Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Farmers reached with agricultural assets or services - Female (CRI) (Number)</b>	
Description	Household beneficiaries reached with extension services, facilitated to access irrigation equipment, production and postharvest assets through the matching grant facility (women).
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Number of improved institutions supported by the Project (Number)</b>	
Description	Number of SHG, cooperatives and WUA supported by the Project which have improved their organizational capacity
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Land area with climate smart agriculture practices implemented</b>	
Description	Land with adoption of at least two of the following practices: use of climate resilient seeds, IPM, conservation tillage, contour bunding, crop rotation, agroforestry practices, and irrigation.
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Increase in annual net revenues made by beneficiary cooperatives. (Percentage)</b>	
Description	Weighted average of the increase of net revenues made by cooperatives supported by the Project
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Increase in annual net revenues made by beneficiary cooperatives (from SAIP I intervention areas) (Percentage)</b>	
Description	Weighted average of the increase of net revenues made by cooperatives supported by the Project
Frequency	Annual
Data source	Project monitoring reports(9 Districts)
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Increase in annual net revenues made by beneficiary cooperatives (from the scaled-up areas) (Percentage)</b>	
Description	Weighted average of the increase of net revenues made by cooperatives supported by the Project
Frequency	Annual



Data source	Project monitoring reports(11 Dsitricks)
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Matching grants allocated to women led business plans (Percentage)</b>	
Description	Proportion of women led business plans among all business plans supported by the Project with matching grants.
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Component 2: Irrigation and Water Use Efficiency</b>	
<b>Area provided with new/improved irrigation or drainage services (CRI, Hectare) _ GAFSP Tier 2, indicator no. 2 (Hectare(Ha))</b>	
Description	This indicator measures the total area of land provided with irrigation and drainage services under the project, including in (i) the area provided with new irrigation and drainage services, and (ii) the area provided with improved irrigation and drainage services, expressed in hectare (ha).
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Area provided with new irrigation or drainage services (Hectare(Ha)) <sup>CRI</sup></b>	
Description	This indicator measures in hectares the total area of land provided with new irrigation and drainage services under the project
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Area provided with improved irrigation or drainage services (Hectare(Ha)) <sup>CRI</sup></b>	
Description	Measures in hectares the total area of land provided with improved irrigation or drainage services in operations supported by the World Bank (water use efficient technologies promoted by the Project).
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Farmers benefiting from the project supported small-scale irrigation interventions (Number)</b>	
Description	Measures the number of beneficiares acquiring and installing equipment for small-scale irrigation technologies
Frequency	Annual
Data source	Project monitoring reports(11 Dsitricks)
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU



<b>Farmers benefiting from the project supported small-scale irrigation technologies - Female (Number)</b>	
Description	Measures the number of beneficiaires acquiring and installing equipment for small-scale irrigation technologies
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Users paying water fees to the water users associations (Number)</b>	
Description	Number of farmers paying water fees to their WUAs
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Users paying water fees to the water users associations – Female (Number)</b>	
Description	Number of farmers paying water fees to their WUAs(women)
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Increment of Water Use Efficiency (Percentage)</b>	
Description	Increase in area covered by water use efficient technologies
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Increase in women's representation in decision making positions in participating WUAs. (Percentage)</b>	
Description	The indicator measures women participation in executive committees and other elected committees in WUAs. This indicator is in response to the identified constraint to women's access to irrigation services.
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Component 3: Market Linkages and Value Addition Investments Support</b>	
<b>Direct employment generated through projects supported investments (Number)</b>	
Description	Number of employment positions created as a result of projects supported by the Project through its grants program
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU



<b>Number of postharvest facilities constructed with Project support</b>	
Description	Number of processing, storage, collection center, and/or market facilities constructed
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Volume of agricultural production processed by post-harvest facilities established with project support -GAFSP core 9 (Metric ton)</b>	
Description	Volume in metric tons the agricultural production aggregated in collection or storage facilities, or processed in processing factories established with Project support
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Farmers organization - buyer linkages established (Number)</b>	
Description	Number of linkages between beneficiary producers and off-takers/buyers/processors of agricultural produce
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Value of contracts/agreements negotiated through linkages established (Amount) (Number)</b>	
Description	Value of sales through contracts negotiated through linkages between beneficiary producers and off-takers/buyers/processors of agricultural produce
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Amount of private financing mobilized by beneficiaries (Amount(USD))</b>	
Description	Amount of credit mobilized by farmers and their organizations from formal financial institutions, or cash contributions mobilized by farmers to access the Project's grant program
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Amount of credit mobilized by farmers and farmers organization (Amount) (Amount(USD))</b>	
Description	Amount of credit mobilized by farmers and their organizations from formal financial institutions
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data	RAB SPIU



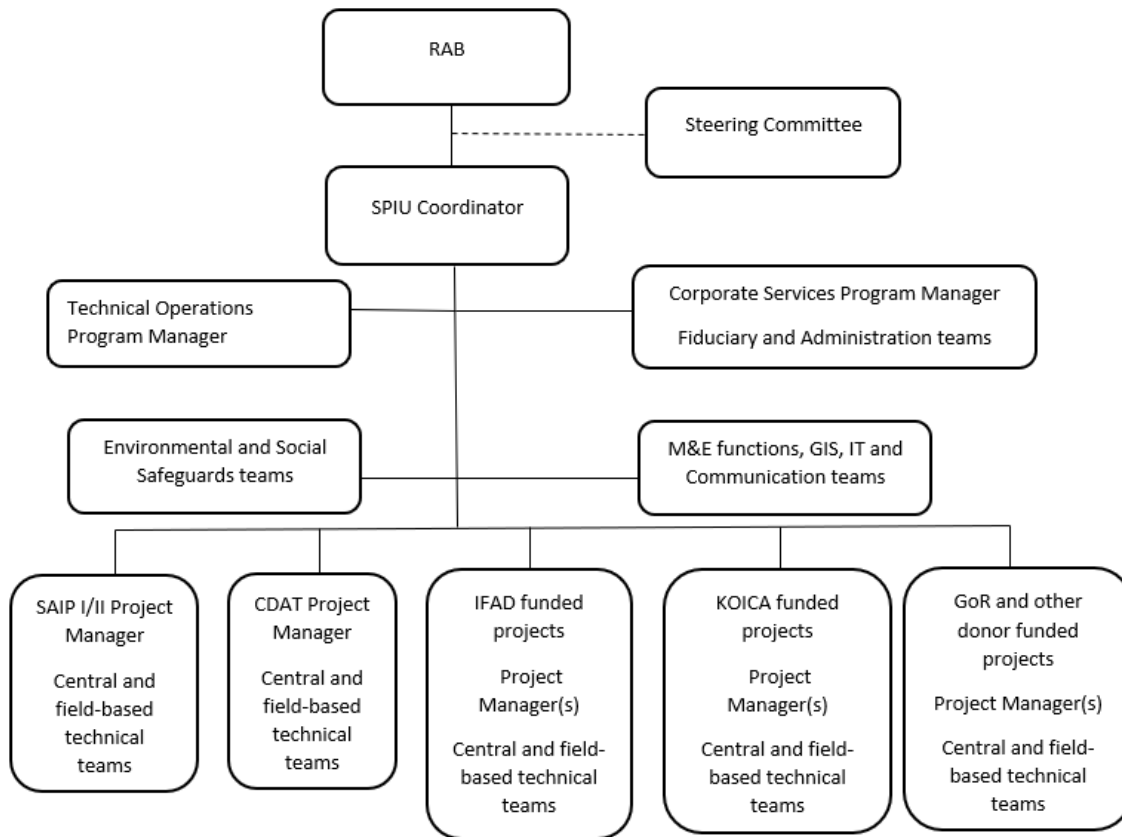
Collection	
<b>Amount of cash contributions mobilized by beneficiaries to match the Project grants (USD)</b>	
Description	Amount of cash contributions mobilized by farmers to access the Project's grant program
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Component 4: Project Management and Technical Assistance</b>	
<b>Knowledge products produced by the project (Number)</b>	
Description	Number of knowledge products produced by the Project, including capacity building manuals, video content produced to provide extension services, dissemination document materials on lessons learned from project implementation, mobilization document or video content materials for technologies promoted by the Project, etc.
Frequency	Annual
Data source	Project monitoring reports
Methodology for Data Collection	Administrative data
Responsibility for Data Collection	RAB SPIU
<b>Beneficiaries satisfied with the services provided by the project (Percentage)</b>	
Description	Proportion of beneficiaries satisfied with the Project interventions including GRM mechanisms.
Frequency	Annual
Data source	Project survey reports
Methodology for Data Collection	Household survey
Responsibility for Data Collection	RAB SPIU



ANNEX 1: Implementation Arrangements and Support Plan

1. The Rwanda Agriculture and Animal Resources Development Board (RAB) will ensure the overall coordination of the project, through its current Single Projects Implementation Unit (SPIU). The SPIU will be responsible for day-to-day project management and implementation, including FM, procurement, and monitoring. The SPIU will have a coordinator, a Technical Operations Program Manager, a Financial Program Manager, a fiduciary, environment and social, technical (including a specific Project Manager for each project in the SPIU), and M&E teams to coordinate the implementation of different components of the project.

Figure 1.1: Project implementation arrangements



2. The different projects in the SPIU will be feeding into five programs led by Lead Specialists, namely: (i) Land Husbandry, Irrigation & Mechanization; (ii) Agriculture, Horticulture & Commodity Chain Development; (iii) Animal Resources Development; (iv) Research and Innovation; and (v) Value chain development, Access to Finance and Agricultural Insurance. While each project may not cover all the 5 programs, the organization of the SPIU along these programs will facilitate an efficient coordination of how each project contributes to different sectoral objectives.

3. RAB SPIU has long-term experience in managing World Bank-financed projects, including the RSSP, LWH, SAIP I, and CDAT. The same SPIU also coordinates the International Fund for Agriculture Development, Korea



International Cooperation Agency (KOICA) and other donor funded projects, in addition to Government funded projects.

**4. A Steering Committee (SC) will be established to provide strategic guidance during project implementation.** The Committee, chaired by the Permanent Secretary of MINAGRI, will be composed of multiple stakeholders, including various ministries and other relevant agencies, representatives of farmers organization and civil society organizations. The Steering Committee will have the following key responsibilities:

- a. Review and approval of action plans.
- b. Review and approval of financial plans.
- c. Review and approval of project implementation reports.
- d. Provide strategic guidance on addressing any challenges or bottlenecks in the Project implementation .

### **Financial Management arrangements**

**5. An FM has been carried out for the project in accordance with the World Bank policy and directives on IPF.** The assessment was carried out at RAB as the main implementing entity which will ensure: (a) that funds are used for the intended purposes in an effective, efficient, and economical way; (b) financial reports will be prepared in a reliable, accurate and timely manner; and (c) project assets will be appropriately safeguarded.

### **Country Public Financial Management**

**6. Rwanda’s public financial management (PFM) system is anchored in solid legal frameworks including:** the 2003 Rwanda Constitution, revised on December 24, 2015, Articles 162 to 166; the Organic Law<sup>28</sup> N° 12/2013 of 12/09/2013 on State Finances and Property that establishes principles and modalities for sound management of State finances and property; the Ministerial Order<sup>29</sup> N°001/16/10/TC dated 26/01/2016 on financial regulations that regulates the structure and functioning of public FM, the preparation and implementation of the state budget, the accounting and reporting of all financial transactions, and financial control; government Accounting Policies Manual and Articles 165-166 of the Rwanda revised Constitution and the Law N° 79/2013 of 11/9/2013 which determines the mission, organization and functioning of the Office of the Auditor General of State finances .

**7. The public financial management system had gone through a series of reforms since 2008,** guided by the PFM strategy plan 2008–2012, the PFM SSP 2013–2018 and the 2018–2023 PFM strategy. At the national level, progress has been made in budget planning, expenditure efficiency, enhancement of the internal audit function, external audit coverage, and financial reporting. The Public Expenditure and Financial Accountability (PEFA) 2022 confirmed these strengths. Nevertheless, areas for improvement include the weak consultative approach to budget preparation, access to fiscal information, lack of critical mass of qualified PFM staff and low alignment of budget with policies. The project’s arrangements will rely on the existing PFM system at central and decentralized levels,

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<sup>28</sup> The organic law applies to all budget entities at the central and decentralized levels and sets up fundamental public finance management principles as comprehensiveness, transparency, accountability, uniformity, consolidation, and gender balance in public State finance management.

<sup>29</sup> The Order applies to the management of public finances of all public entities, including of the central government, decentralized entities, public institutions, and subsidiary entities.



and on the individual FM Systems in each of the implementing agencies with some amendments to consider the project's and the World Bank's FM requirements. The detailed modalities will be presented in the PIM.

### **FM Arrangements of the Project**

8. **Planning and budgeting.** The RAB SPIU for World Bank and KOICA funded Projects will be responsible for coordinating the budget and compiling one Annual Work Plan and Budget (AWPB) for the project on an annual basis. The SPIU will follow the government's planning and budgeting procedures including its approval by the parliament every year. The project budgets will also be presented to the project Steering Committee for approval. The approved budgets will be monitored on a monthly and quarterly basis by the preparation and analysis of budget execution reports including: (a) budget for the period and for the year; (b) actual expenditure for the period and to date; (c) future expenditure commitments; and (d) balance of period budget remaining (actual expenditure and commitments together compared to period budget). The annual workplan and budget will be submitted to the World Bank for no-objection.

9. **Accounting and staffing.** The project financial records shall be maintained at the SPIU using the government Integrated Financial Management Information and System, which will be modified to accommodate any special financial reporting requirements for the project to enable clear reporting for all the components. The RAB SPIU is adequately staffed currently with Head of Finance and Administration; chief accountant and two Financial management specialists<sup>30</sup> (FMSs). All project staff will require capacity building on managing World Bank financed operations which will be provided at project launch and regularly thereafter.

10. **Internal control and internal audit.** The implementing entity is governed by the legal frameworks and manuals prescribed above. The project will continue to use the PIM and FM manual prepared under SAIP I. Currently there is a Matching Grant Manual with all guidelines (eligibility criteria, Preparation and approval of Business Plans and Matching Grant agreements, implementation of approved Business plans, procurement, ineligible expenditure, conflict of interest) which is under use. These manuals will continue to be in use with any updates incorporated for the needs of SAIP II. The FM manual reflects detailed internal control arrangements for the project, including the extent of segregation of functions in payment processing and internal check mechanisms, in addition to payment approval and authorization arrangements. To enhance internal control arrangements for the project, internal audit reviews will be conducted by the RAB SPIU internal auditor at least on an annual basis over project activities and submit reports to the project management team and to the World Bank during implementation support missions.

11. **Financial reporting.** The SPIU will submit one consolidated quarterly IFR to the World Bank within 45 days after the end of the quarter. The interim financial reports will be used to monitor project financial progress, including the rate of budget execution and level of disbursements. RAB will also prepare annual project financial statements, which will be submitted for external audit within 45 days after the end of the financial year. Financial reports shall at a minimum include consolidated sources and uses of funds (revenues and expenditures statement); consolidated financial position statement; consolidated cash flow statement; consolidated budget execution report; designated Account activity statement; Notes on accounting policies and appendices.

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<sup>30</sup> One fully dedicated to SAIP and another to CDAT which is also a World-bank funded Project.





12. **External audit.** The project activities will be subject to external audit by the Office of the Auditor General. The audit reports and management letters (compliance audit reports) will be submitted to the World Bank within six months after the end of the financial year. The audit reports will be publicly disclosed in accordance with the World Bank Access to Information Policy. Upon receipt of the audit reports, the RAB will be expected to prepare an action plan to address the audit findings. Follow up on the implementation of audit recommendations will be conducted as part of regular World Bank FM supervision missions and quarterly reviews of Interim audited financial Reports by the audit committee. Experience from SAIP I indicates that the audit committee meets every quarter and reviews status of audit findings.

13. **Funds flow arrangements.** The project will maintain one segregated Designated Account at the RAB which will be maintained at the National Bank of Rwanda and will be denominated in US dollars. For the technical support to be provided by FAO, UN advance will be opened as was the case under SAIP I. Disbursements will follow the Report-based disbursement method. However, the project may also use direct payments, advances to the Designated Account, reimbursement and special commitments depending on the case. Upon effectiveness, the project will submit to the World Bank a request for withdrawal of funds based on two quarters forecast as will be reflected in the Disbursement and Financial Information Letter (DFIL). Based on the request, the World Bank will transfer the proceeds of the trust fund to the Designated Account. Subsequent replenishment of the Designated Accounts will be based on the submission of application of withdrawal accompanied by the quarterly IFRs which are cleared by the World Bank. The detailed fund flow modalities will be presented in the PIM and the DFIL.

#### **FM risk and Action Plan**

14. **The FM risk of the project is rated Moderate.** The key risks identified are: (a) double dipping of expenditure due to the overlap period between SAIP I and II as the project implements similar activities in the projects; and (ii) inadequate and delayed implementation of external and internal audit recommendations.

15. **Mitigating measures include the following:** (a) the SPIU will update the current FM guidelines to incorporate the new districts and activities of the project; (b) the project will continue to use the existing manual with updates and modifications as needed for SAIP II; (c) the SAIP II will finance new interventions and activities in the 9 districts of SAIP I interventions only after SAIP I is closed so as to avoid double count of expenditure; and (d) the World Bank will support and provide training on World Bank FM and disbursement procedures to project FM staff before effectiveness and as needed during project implementation.

**Table 1.1: FM Risks and Mitigation Measures**

Risk	Risk Mitigating Measures Incorporated into Project Design	Residual Risk Rating
Inherent risk		Substantial
<p>Country level</p> <p>The country's political environment is deemed stable with ongoing judicial and legislative reforms. Governance challenges include retaining adequate accounting and internal audit capacity across government, and weak linkage between budgeted and actual performance.</p>	<p>Establishment of Medium-Term Expenditure Framework as a basis for government budgeting, adoption of International Public Sector Accounting Standards, implementation of smart Integrated Financial Management Information System. Regular oversight through the Office of the Auditor General, which is deemed independent and effective. Ongoing World Bank support on public financial management and accountability.</p>	Moderate
<p>Entity level</p> <p>RAB has experience in implementing various World bank financed operations and performance has been satisfactory. 11 new districts have been introduced in the project</p>	<p>The World Bank to provide support and training on World Bank FM and disbursement procedures to all project staff before effectiveness and as needed during project implementation.</p>	Moderate
<p>Project level</p> <p>There may be challenges executing, monitoring, and coordinating the various project activities. Activities such as matching grants require clear guidelines</p>	<p>The existing PIM/FM Manual will be updated with the introduction of new activities and districts. Manuals for matching grants will clearly lay out the eligibility criteria, fund flow and accountability arrangements.</p> <p>Dedicated accountants will be placed at the SPIU</p>	Moderate
Control Risk		Moderate
<p>Budgeting</p> <p>Unreliable budget forecast</p>	<p>The RAB to strictly follow national budget procedures and timelines. Engage all project stakeholders effectively early during the planning and budgeting process (Steering Committee, districts, and the World Bank).</p> <p>Ensure that annual work plans and budgets are in line with the procurement plan to prevent any delays.</p>	Substantial
<p>Accounting</p> <p>Existing accounting capacity at each of the implementing agencies needs to be enhanced through the recruitment of additional FM staff.</p>	<p>Existing staff at SPIU will continue for SAIP II.</p>	Moderate



Risk	Risk Mitigating Measures Incorporated into Project Design	Residual Risk Rating
<p>Internal controls and internal audit Due to overlap period of SAIP I and II, there is a risk of double dipping/counting of risk</p> <p>The project may not get adequate internal audit coverage</p>	<p>Use the existing PIM and FM manual for SAIP II</p> <p>SAIP II implementation to be focused on new activities and new districts until SAIP I is closed.</p> <p>RAB internal audit functions must include the project activities as part of their annual work plans and produce a report at least once a year.</p>	Substantial
<p>Funds flow Potential funds flow delays may affect delivery of critical project activities.</p>	<p>Open Designated Accounts denominated in US dollars in National Bank of Rwanda for SAIP II.</p> <p>Funds disbursed by the World Bank on six-month cash flow forecast which will be detailed out on the DFIL.</p>	Moderate
<p>Financial reporting and monitoring Unreliable interim financial report (IFRs) and delay in submitting the IFRs.</p>	<p>RAB to enroll the project activities into the Integrated Financial Management Information System and produce reports from thereon.</p> <p>Monthly management reviews of FM reports should mitigate unreliability of IFRs and templates for reporting were agreed during project negotiation</p>	Moderate
<p>External auditing Delay in submitting the audit report.</p>	<p>The Auditor General should be engaged on time to ensure the audit reviews start early so that reports are delivered on time.</p>	Moderate
<p>Fraud and corruption Risk of fraud and corruption.</p>	<p>Any instances of suspected fraud are reported to the Rwanda Investigation Bureau (RIB) for proper investigation and prosecution. These could be reported by the Internal Auditor, a whistle blower or any staff of the organization. There is a RIB hotline for reporting any suspicions of fraud. There is no public record of court decisions. The Auditor General's reports and presented to the Public Accounts committee of the Parliament. Any cases of Fraud are taken up by the Ministry of Justice for prosecution.</p>	Moderate
<p>Overall Risk</p>		Moderate

16. Based on the risk assessment, on site semi-annual FM implementation support and supervision missions will be carried out. During these visits, follow up will be made on internal and external audit reports and action taken thereon; transaction reviews and overall assessment of the adequacy of the FM Systems will be carried out. Desk reviews of quarterly IFRs and annual audit reports will be conducted. Capacity building initiatives will be carried out at project effectiveness and regularly thereon.

### Procurement arrangements

17. Procurement for the project will be conducted in accordance with the 'World Bank Procurement Regulations for Borrowers under Investment Project Financing,' dated September 2023. The project will be subject



to the World Bank’s Anticorruption Guidelines, dated July 1, 2016, and beneficiary disclosure requirements. The project will use Systematic Tracking of Exchanges in Procurement (STEP), a planning and tracking system that will provide data on procurement activities, establish benchmarks, monitor delays, and measure procurement performance.

18. **A Project Procurement Strategy for Development (PPSD)** has been prepared by the client. It reviews the market, procurement risks, procurement options and sets out the selection methods to be followed in the procurement of goods, works, and non-consulting and consulting services financed by the project. The PPCS includes a Procurement Plan for the first 18 months which will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

**Box 1. Summary of the PPCS**

The Project allocation is US\$20 million; This PPCS only addresses the non-financial intermediary part which will be implemented following World Bank procurement regulation.

The project procurement profile comprises of Rehabilitation of Irrigation Schemes, Post-Harvest Infrastructures, New Irrigation Technology, Supply & Installation of Small-Scale Irrigation Technologies, Agriculture Inputs, Technical Assistance and Environmental Impact Assessment.

The assessment revealed that RAB-SPIU has extensive experience in implementing similar projects and is staffed with three well experienced and qualified procurement specialists.

Competitive bidding, transparent and fair public procurement systems give satisfaction to suppliers and contractors and encourage them to participate in procurement opportunities. The analysis indicates there is no high risk of market, both in terms of competitiveness of the market and quality of the services. As a result, market soundness of the project is assessed to be adequate. The PPCS identified internal and external risks: (i) Gap in domestic production of construction materials and irrigation equipment relative to the demand generated by Rwanda’s construction sector can delay the completion of works and award contract on high cost; Mitigation measure are: Indicate the estimated quantities of materials that will be needed so that the successful bidder make order of materials/equipment at once rather than making frequent purchases, Starting early procurement process to enable contractors’ ample time to know where to get the required construction materials and equipment, these will allow them sufficient time for preparing bids, Using international competitive procurement and encouraging contractors to employ local labor with necessary job skills will ultimately reduce reliance on expensive foreign experts. It is also important to note that, in Rwanda, most irrigation equipment is exempted from Value Added Tax. (ii) Environmental risk: the risk associated with the external forces from the surroundings or environment, these are uncontrollable events (Example: Floods); mitigation measure is: Promotion of high technology in land protection and work hard in dry season rather than rain season. (iii) Financial risk: bankrupt and currency exposure: mitigation: Deep analysis of bidders and risk transfer (insuring against risk). Since the project will continue to finance investments and agricultural inputs to support improved productivity; procurement activities are considered as low risk and there will be no high-risk contracts that will require a high level of analysis.

The PPCS identified the most appropriate approach and methods for the project. An open competitive approach to market is preferred as it provides all eligible prospective Bidders/Proposers an equal opportunity to bid. After analysis of various options for the procurement approach and contracting strategy, international market approach using QCBS, and ICB would be the most appropriate selection arrangement for procurement of the identified consultancy services, Goods and works because the participation of foreign firms will increase



competition and may assure the achievement of best VfM. The National Market approach using NCB and RFQ will be used depending on value and risk of the specific procurement activities. Mainly International and national market approach for Works, Goods and non-consultancy services and consultancy services are recommended, whereas other methods will be used as may be found appropriate in rate cases.

Duly considering the procurement profile and contract management arrangements, based on the perceived risks and proposed mitigation measures, the project's overall procurement risk rating is determined as '**Moderate.**' The risk rating on procurement will be reviewed and updated periodically by the World Bank.

19. **E-Procurement system:** Implementing agencies of the project will be using the Rwanda e-Procurement system (Umucyo) for “post” procurement activities, in parallel with Bank STEP system.

20. **Beneficial Ownership:** Beneficial Ownership Disclosure is now required for all new procurement advertised or invited on or after July 1, 2022, subject to open or limited international competition under all IPF projects, which are governed by the Procurement Regulations, and hence will apply to the project accordingly.

21. **Procurement risk assessment.** A procurement capacity and risk assessment has been carried out by the World Bank for RAB to review the organizational structure and functions, experience, staff skills and capacity, procurement cycle management, quality, and adequacy of supporting and control systems and record keeping. Based on the assessment, the following risks are identified: (i) Gap in domestic production of construction materials and irrigation equipment relative to the demand generated by Rwanda’s construction sector can delay the completion of works and award contract on high cost; (ii) Environmental risk: the risk associated with the external forces from the surroundings or environment, these are uncontrollable events (Example: Floods); (iii) Financial risk: bankrupt and currency exposure.

22. **The proposed mitigation measures for the identified risks are:** (a) Indicate the estimated quantities of materials that will be needed so that the successful bidders make order of materials/equipment at once rather than making frequent purchases, Starting early procurement process to enable contractors’ ample time to know where to get the required construction materials and equipment, these will allow them sufficient time for preparing bids, Using international competitive procurement and encouraging contractors to employ local labor with necessary job skills will ultimately reduce reliance on expensive foreign experts. It is also important to note that, in Rwanda, most irrigation equipment is exempted from Value Added Tax; (b) Promotion of high technology in land protection and work hard in dry season rather than rainy season; (c) Deep analysis of bidders and risk transfer (insuring against risk). Since project will continue to finance investments and agricultural inputs to support improved productivity; procurement activities are considered as low risk and there will be no high-risk contracts that will require a high level of analysis.

23. **Project Procurement Risk Rate:** Based on a procurement assessment of the implementing agencies, market practice and nature of anticipated procurement activities of the project, the project procurement risk is rated “**Moderate**”.

24. **RAB-SPIU** is well-established and is staffed by a SPIU Coordinator, three procurement staffs, Public Tender Committee (PTC) composed of seven members, a finance team, and other technical staffs. The procurement staff have the required qualifications and experience to manage project procurement. RAB-SPIU has acquired extensive



experience in procurement and contract management of various sizes and similar projects financed by development partners including the World Bank.

25. The project procurement profile comprises of Rehabilitation of Irrigation Schemes, Post-Harvest Infrastructures, New Irrigation Technology, Supply & Installation of Small-Scale Irrigation Technologies, Agriculture Inputs, Technical Assistance and Environmental Impact Assessment. No high value or high risk or complex procurement activity involved under the project.

26. Suppliers of goods, works and services are available in the country. In case of market limitation for specialized items, alternative measures will be recommended by the PPSD, regarding market approach and selection methods.

27. There is an adequate procurement oversight mechanism in place within all the five implementing agencies. The agencies have a strong internal audit structure, in addition to external procurement audit by Office of Auditor General (OAG) which conducts annual procurement and finance audits of all implementing agencies. In addition, Rwanda has a robust complaint review and resolution mechanism. The procurement law provides for a National Independent Review Panel independent of government, which deals with complaints received from bidders and consulting firms or individuals. The E-Procurement system includes a feature for submitting and addressing complaints electronically in the system and hence all complaints and responses are available in the system for public disclosure and auditing.

28. The assessment concluded that in general, RAB-SPIU's track record of procurement performance is satisfactory. The existing three procurement specialists are adequate to manage procurement of the project in addition to their current work at hand.

29. **Use of borrowers' procurement procedures.** The implementing agencies shall follow World Bank procurement regulation as required by the financing agreement. When approaching the national market, the borrower's own procedures will be used as appropriate and as provided by World Bank procurement regulation. When approaching the national market, the national standard procurement documents used subject to incorporating additional requirements provided in the World Bank Standard Procurement Documents (SPD) for small works, and the agencies' SPD will be reviewed by the World Bank to make sure the provision for application of World Bank Anti-Corruption guidelines and the World Bank's right to audit and all ESF, climate, SEA/SH and ESHS requirements are included.

30. **Procurement of Works, Goods and Non-Consultancy Services:** For procurement of works, goods, and non-consultancy service contract, the implementing agencies' own procurement procedures and SBDs as agreed with and deemed satisfactory to the World Bank will be used when approaching the national market. Procurement while approaching the international market will be done using the latest version of the World Bank's Standard Procurement Documents. Small value works, goods and non-consultancy service will be undertaken through request for quotation procedures. The request for quotation will indicate the specifications of works, goods, and non-consultancy service as well as the delivery/completion time and the contract award will be based on comparing price quotations from several qualified contractors/suppliers, with a minimum of three, to ensure competition.



When the value of the contract of such works, goods and non-consultancy service exceeds the request for quotation threshold and when procured through NCB procedures, the IA SBDs acceptable to the World Bank will be used. Direct contracting shall be used where the PPSD informs so and it is to the benefit of the project and in accordance with the procurement regulation.

31. **Procurement of consultancy services.** Procurement methods to be used are specified in the PPSD. Project staff required for the implementation will be hired following World Bank regulation for positions identified as consultant (IC) and following Project implementation Support Personnel, paragraph 7.32 of Procurement Regulations, for positions not identified as consultants (IC). Paragraph 7.32 of the procurement regulation provides, that, "Project implementation staff, individuals contracted by the Borrower to support project implementation, other than individual consulting positions identified in the Legal Agreement, may be selected by the Borrower according to its personnel hiring procedures for such activities, as reviewed, and found acceptable by the World Bank.", applies to the project.

32. **Operating costs.** The items to be identified as operating costs in the PPSD will be procured using the Borrower's procurement and administrative procedures subject to review and acceptable to the World Bank including selection of project implementation, non-professional, support personnel not identified as consultant (IC).

33. **Record keeping.** All records pertaining to award of tenders, including bid notification, register pertaining to sale and receipt of bids, bid opening minutes, bid evaluation reports and all correspondence pertaining to bid evaluation, communication sent to/with the World Bank in the process, bid securities, and approval of invitation/evaluation of bids will be retained by respective agencies and in electronic or hard copy and uploaded in STEP.

34. **Disclosure of procurement information.** The following documents will be disclosed on the agencies' websites: (a) a Procurement Plan and updates; (b) an invitation for bids for goods and works for all contracts; (c) Request for Expression of Interest for selection/hiring of consulting services; (d) contract awards of goods, works, and non-consulting and consulting services; (g) a monthly financial and physical progress report of all contracts; and (h) an action taken report on the complaints received on a quarterly basis.

35. When approaching the international market (ICB), the following details shall also be published in the United Nations Development Business and the World Bank's external website: (a) an invitation for bids for procurement of goods and works following open international market approaches, (b) Request for Expression of Interest for selection of consulting services following open international market approaches, and (c) contract award details of all procurement of goods and works and selection of consultants using open international market approaches.

36. **Fiduciary oversight by the World Bank.** The World Bank shall prior review contracts according to prior review thresholds set forth in the PPSD/Procurement Plan. All contracts not covered under prior review by the World Bank shall be subject to post review during implementation support missions and/or special post review missions, including missions by consultants hired by the World Bank or third-party independent auditor delegated by the World Bank. To avoid doubts, the World Bank may conduct, at any time, independent procurement reviews



of all the contracts financed under the grant. All procurement post reviews are carried out online in STEP. For this reason, uploading of procurement documents of post review contracts should be done in a timely manner and always kept up to date.

37. **Contract Management.** High-risk, and high-value procurement is identified and hence increased contract management support through TA under the project support component is needed. In addition, the agency will develop key performance indicators (KPIs) for such contracts to be identified in the PPSD, and the KPIs will be monitored during actual execution of contracts. The World Bank team will provide additional due diligence and independent review of the contract performance of such identified procurements. A fully staffed PIU will be responsible for overall project/contract management.

#### **Environment and Social risk management arrangements**

38. The project's environmental risk rating is "**Substantial**" under the World Bank ESF. The rating is based on the proposed activities which will result in negative and positive impacts. The project implementation arrangements related to the environmental and social standards requirements, national legislation, and World Bank environmental and social framework, will be under responsibility of the SPIU. The SPIU will have in its team one Social Specialist and one Environmental Specialist to assess, approve, monitor, and report on environment and social compliance to each activity to be financed under the project that could potentially generate environmental and social impacts on natural resources or/and communities, as well as to train other SPIU staff, district staff, and communities on issues related to environment and social standards to monitor the implementation of ESF instruments that will help in minimization of negative impacts.

#### **Monitoring and evaluation arrangements, reporting, and knowledge management**

39. **Monitoring and Evaluation:** The SPIU is staffed with an experienced MIS team, which in addition to M&E functions, also coordinates communication, IT functions and collects necessary data for its GIS system. The same team is also in charge of the same functions for the CDAT project. The SPIU will dedicate at least one M&E specialist for the World Bank funded projects. The Project M&E arrangements will ensure there is adequate monitoring, data collection and reporting across all technical components to capture key information on the project performance, which can be beyond what is tracked in the Results Framework. Based on SAIP I experience, the collected information will also help to capture lessons learned during implementation, so that any corrective and timely actions are taken.

40. **Baseline, midterm, and program evaluation: a Baseline survey will be conducted in the first year of the project implementation to provide the status on a set of performance indicators which will be used to track the Project's outcomes and impacts.** GAFSP has its own M&E framework, and the baseline survey as well as the project's M&E plan will integrate specific GAFSP core indicators as they will be required for both the GAFSP six-monthly reports and ex post impact assessment. Independent consultants will be required to conduct surveys required for project evaluation, including establishing the baseline at the start of the project, midterm technical audit and beneficiary assessment, and end-of-project evaluation.





41. **Communication and knowledge management.** The centrality of knowledge sharing and learning as a platform for technical change and innovation rather than the increased use of inputs, is the essential driver of productivity and improved rural livelihoods. It is recommended that the SPIU develop and constantly improve its knowledge services and platforms, stimulate higher rates of engagement and willingness to collaborate in creation of high-value content, and generate new insights that contribute to the established knowledge base and documenting lessons learned for sharing and feeding into policy reforms that can further enhance performance of the agricultural sector.